

## DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

### 24 CFR Parts 3280 and 3282

[Docket No. FR-4552-F-02]

RIN 2502-AH48

### Manufactured Home Construction and Safety Standards: Smoke Alarms

**AGENCY:** Office of the Assistant Secretary for Housing—Federal Housing Commissioner, HUD.

**ACTION:** Final rule.

**SUMMARY:** This rule amends the Federal Manufactured Home Construction and Safety Standards to revise the requirements for the location and placement of smoke alarms. The purposes of these amendments are to improve the effectiveness and performance of smoke alarms in early warning detection of manufactured home fires and to reduce the rate of fire fatalities in new manufactured housing.

**EFFECTIVE DATE:** September 16, 2002. The incorporation by reference of certain publications in this rule is approved by the Director of the Federal Register as of September 16, 2002. Manufacturers are not required to modify their floor plans and wiring diagrams and obtain DAPIA approval until March 19, 2003. In those cases where modified DAPIA-approved designs are not available, IPIAs will use this rule, rather than DAPIA-approved designs, to inspect smoke alarm placement and interconnection until March 19, 2003.

**FOR FURTHER INFORMATION CONTACT:** Elizabeth A. Cocke, Acting Director, Office of Consumer and Regulatory Affairs, Room 9156, U.S. Department of Housing and Urban Development, 451 Seventh Street, SW, Washington, DC 20410; telephone (202) 708-0502 (this is not a toll-free number). Persons who have difficulty hearing or speaking may access this number via TTY by calling the toll-free Federal Information Relay Service at (800) 877-8339.

#### SUPPLEMENTARY INFORMATION:

##### I. Background

On May 18, 2000, the Department published a proposed rule to amend the Federal Manufactured Home Construction and Safety Standards (Standards) to revise the requirements for location and placement of smoke alarms. The amendments will improve the effectiveness and performance of smoke alarms in early warning detection of manufactured home fires and, as a result, reduce the rate of fire fatalities in new manufactured housing.

One of the most significant factors in reducing fire-related fatalities in manufactured homes, from the perspective of fire safety, is the requirement in the Standards for the installation of permanently wired smoke detectors in manufactured homes (24 CFR 3280.208). The enforcement program for this requirement is designed to ensure that a manufactured home is not labeled or shipped without such smoke alarms. Nevertheless, fire data studies conducted for HUD by the National Fire Protection Association (NFPA) have continued to indicate that in about 35–40% of manufactured home fires occurring in post-standard manufactured homes, smoke alarms were not present or operational.

This fact suggests a high rate of occupant disabling of smoke alarms. This may be a result of frequent false and nuisance alarms caused, for example, by the close proximity of these devices to cooking appliances. In addition, findings from the National Smoke Detector Project conducted by the Consumer Product Safety Commission (CPSC) indicated that for all homes investigated only about 70% of the smoke alarms were working. For permanently wired smoke alarms, the type used in HUD code manufactured homes, the CPSC study estimated the number of working smoke detectors to be approximately 85%.

The NFPA also reported that the rate of fire fatalities for all manufactured homes was cut nearly in half when alarms were operational. This emphasizes the importance of reducing the occupant-disabling problem and improving the reliability and effectiveness of smoke alarms.

HUD had previously designated the NFPA to undertake a consensus process to develop recommendations for revising and updating the manufactured housing standards. The Department has received a proposal (TIA 97-1) and the NFPA 501 Standard (1999, 2000 editions) developed through that process. The proposal and relevant provisions in NFPA 501 contain recommendations to revise the present smoke alarm requirements in HUD's Standards. The Department also commissioned the National Institute of Standards and Technology (NIST) to evaluate the adequacy of the current requirements for smoke alarms in the Standards and to recommend alternatives that are consistent with national fire safety standards for other types of housing and that would reduce the incidence of nuisance alarms.

The findings and recommendations from the NFPA and NIST evaluations are compatible, and together with

comments received from the public have formed the basis for the revised smoke alarm requirements contained in this final rule.

As a result of the implementation of the final rule, the percentage of manufactured homes without smoke alarms or without functioning smoke alarms is expected to gradually reduce over time, as homes complying with the new requirements replace older homes in the inventory. The Department projects that it will take between 20–32 years to replace all occupied manufactured homes in the existing inventory. (Based on the 1999 American Housing Survey, there are approximately 8 million occupied manufactured homes; the estimate of 20–32 years assumes between 250,000–400,000 manufactured homes produced annually and that homes are being replaced at approximately the same rate as they are entering the inventory.) The increased presence of working smoke alarms resulting from the final rule is expected to save as many as 30 lives annually, when the current inventory of homes has been replaced.

The above is based on an estimate of 100 fire deaths a year in HUD code homes of which 60%, or 60, fatalities occur in fires without functioning smoke alarms. The presence of functioning smoke alarms reduces the chances of dying in a fire by 50%. The likelihood that about 1 out of 6 smoke alarms may not be working or functioning has already been accounted for in these estimates. Hence an estimate of 30 lives saved annually by the full implementation of the final rule.

The revisions made in the final rule are also consistent with the revised purposes of the National Manufactured Housing Construction and Safety Standards Act of 1974 (Act), including “to protect the quality, durability, safety, and affordability of manufactured homes;” and “to provide for the establishment of practical, uniform, and to the extent possible, performance-based Federal construction standards for manufactured homes;” (42 U.S.C. 5401).

##### II. Analysis of Public Comments

The Department received 18 comments in response to the proposed rule. The commenters can generally be characterized as follows:

Home manufacturers (2)  
Industry groups (3)  
DAPIA (1)  
Governmental agencies (3)  
Individuals (1)  
Fire officials (4)  
Housing authorities (2)  
Private standards groups (1)

## National Associations (1)

All of the comments were generally supportive of the need to update and revise the Standards to improve smoke alarm performance in manufactured homes. However, many of the commenters did suggest changes to the proposed rule, a number of which are incorporated in this final rule. Some of the following comments were submitted by multiple commenters:

*Comment:* The prescriptive aspects of the proposed rule should be replaced with performance requirements.

*Response:* The prescriptive aspects of the proposed rule have been removed from the final rule where it was possible to do so without compromising the desired effect of the requirement. For example, HUD has replaced specific restrictions on locating alarms with performance-oriented criteria in § 3280.208(b)(3); thus the rule no longer needs to specify that locations within 3 feet of a door to a kitchen or a door to a bathroom are prohibited. In addition, locations for mounting a smoke alarm in a stairway are more general, requirements for visible and tactile appliances no longer specify location within 16 feet of a pillow, and the prohibition on location in specified extreme temperatures and climates has been replaced with a reference to the terms of the listing for the smoke alarm. Finally, the rule does not specify locations for smoke alarms within a room unless needed for proper operation, such as when they are mounted on a peaked sloping or a shed sloping ceiling.

*Comment:* HUD should consider adopting the NFPA 501 provisions for smoke alarms.

*Response:* As explained in the preambles of the proposed rule and this rule, the Department has considered and largely based the final rule on the provisions of the NFPA 501 Standard. In addition, as a result of comments provided by NFPA, the final rule updates proposed referenced standards in § 3280.208(a); clarifies stairway location requirements for smoke alarms for upper stories and basements; adds provisions in § 3280.208(b) for the installation of a junction box for basement designs; and requires smoke alarms to be tested operationally in § 3280.208(f) and, if the alarm does not function as designed, to be replaced if it does not function properly in the first retest. A further suggestion of the NFPA—to incorporate by reference the UL 1971 (Signaling Devices for Hearing Impaired, 1995) standard—will be referred to the Consensus Committee mandated by the Manufactured Housing

Improvement Act of 2000 (Title VI, Pub. L. 106–569, approved December 27, 2000). Although HUD agrees with the value of establishing such a standard, it cannot be included as part of the final rule because no such standard had been proposed for comment previously.

*Comment:* The term “living room” should be changed to “living area” to avoid confusion about where the smoke alarm is to be located when no specific living room is designated adjacent to a kitchen, e.g., when a kitchen is located between two living areas such as a “great room” and a family room. Also, clarify that only one smoke alarm is required to protect the “combined” living area and kitchen space, when this design configuration occurs.

*Response:* HUD has revised the final rule to reference “living area.” Because the rule now reads as requiring at least one alarm to protect the location that includes both the living area and kitchen space, HUD believes it is clear that only one smoke alarm is required to protect these areas. Whenever possible, the alarm should be located in the living area remote from the kitchen and cooking appliances.

Fires that cause fatalities in residential and manufactured homes frequently start in the living and kitchen areas. HUD is interested in continuing to receive comments on whether a smoke alarm should be installed in both the kitchen and living area when those areas are separated or isolated from each other by full-height doors and walls. For example, if the smoke alarm is installed in the living room and a door is closed between the kitchen and living room, the alert time of an unattended fire in the kitchen may be delayed. In these configurations, manufacturers should consider if the effectiveness of the alarm is impaired, and if an additional smoke alarm should be installed to protect the kitchen area. Any comments on this issue will be referred to the Consensus Committee for its consideration.

*Comment:* Manufacturers do not know if rooms not designed for sleeping are actually used as bedrooms, and should only be accountable for installing smoke alarms in rooms designed for sleeping.

*Response:* HUD agrees, and the requirement for installing smoke alarms has been revised in § 3280.208(b)(1)(ii) to read “in each room designed for sleeping.”

*Comment:* The cost analysis did not include costs to revise designs and modify production lines, costs to replace or repair alarms that do not function, increased installation costs to purchasers, and increased enforcement

costs. Breaker and crossover provisions could also result in additional costs.

*Response:* The cost analysis for the final rule does consider increased costs for updating floor plans and electrical wiring diagrams. However, the Department does not agree that other considerations mentioned in the comments result in significant changes to current production practices by manufacturers or inspections by IPIAs. The Department also believes any additional breaker or crossover costs will be offset by permitting more than one smoke alarm to be installed on an electrical circuit. The section of the preamble entitled “Impact on Small Entities” also addresses comments on the cost analysis.

*Comment:* Do not eliminate the requirement to also have a smoke alarm in hallways that lead to sleeping rooms.

*Response:* The Department recognizes that an additional alarm in the hallway areas leading to bedrooms may provide more protection, but believes that the requirement for installing an alarm in each bedroom that is also interconnected provides appropriate enhanced protection for sleeping occupants.

*Comment:* Manufacturers need adequate lead time to redesign floor plans for the new smoke alarm requirements.

*Response:* The effective date of the final rule extends the period of time for revising floor plans and electrical wiring diagrams and for obtaining DAPIA approval. Manufacturers have up to 1 year from the date of publication of today’s rule before they must modify their current designs.

*Comment:* The rule should permit multiple alarms to be placed on the same electrical circuit.

*Response:* The final rule clarifies that multiple alarms may be placed on the same circuit, in § 3280.208(d)(2).

*Comment:* Ten-year batteries with an interconnection feature may never be available and may, in fact, have to be designed for additional service life because of the interconnection requirement. The present batteries are barely capable of lasting 10 years even without considering the added circuitry required for interconnection of alarms. Testing has been going on for about 7 years and has only been conducted on ionization chamber-type alarms; therefore, it is premature to mandate the use of battery-type alarms.

*Response:* HUD agrees that batteries are likely to have to be designed for additional shelf life for interconnection requirements. But HUD also believes that making this alternative available

will encourage the development of the technology.

*Comment:* Smoke alarms for homes designed to be installed over a basement should be permitted to be shipped loose.

*Response:* HUD agrees, and § 3280.208(b) has been revised accordingly in the final rule.

*Comment:* If a sales contract entered into with a purchaser is for a home on display at a retail sales lot, a manufacturer would not be aware at the time of production of any special needs for visible and tactile appliances.

*Response:* HUD agrees, and the final rule has been revised to require the manufacturer to install visible and tactile devices only if notified by the purchaser or retailer before the home enters the first stage of production at the factory.

*Comment:* The location in the proposed rule for providing the smoke alarm manufacturers' instructions is ambiguous and should be replaced with a requirement for the instructions to be temporarily mounted to a cabinet or countertop in the kitchen.

*Response:* The final rule requires that the information be provided in the same manner and location as the consumer manual required by 24 CFR § 3282.207. While it is not required, manufacturers may incorporate the information into the consumer manual.

*Comment:* Washing dirty smoke alarms will prevent false alarms.

*Response:* Each smoke alarm manufacturer determines appropriate maintenance recommendations to include in its instructions.

*Comment:* HUD should consider applying the new rule for smoke alarms to existing homes, including those covered by HUD's Section 8 Program.

*Response:* HUD's authority under the Act does not extend to establishing regulations for used manufactured homes. However, this comment will be forwarded to the Section 8 Housing Office at HUD for consideration under its operating authority.

*Comment:* The home manufacturer should be allowed to recess mount the detector in the ceiling or wall so that it is flush with the ceiling or wall, making it more difficult to tamper with.

*Response:* This rule does not prohibit recess mounting of alarms if such mounting is permitted by the terms of the listing and does not impair the alarm's effectiveness.

*Comment:* HUD is encouraged to disseminate the "Guide for Proper Use of Residential Smoke Alarms".

*Response:* HUD does not require, but encourages dissemination of this guide, which was developed by the National

Electrical Manufacturers Association, in conjunction with other fire service organizations. NEMA can be contacted at 1300 N. 17th Street, Suite 1847, Rosslyn, VA 22209. Telephone: (703) 841-5900.

*Comment:* Manufacturers of smoke alarms should be encouraged to produce combined smoke alarms, weather alert radios, and home intrusion sensor alarms.

*Response:* This suggestion will be forwarded to the Consensus Committee for its consideration when the committee has been established.

### III. Section-by-Section Revisions

The final rule changes the current requirements as follows:

(a) The location of where smoke alarms are to be located is changed from outside the bedroom areas to inside each room designed for sleeping;

(b) A dedicated smoke alarm to specifically protect the living and kitchen area is now required;

(c) The smoke alarm must be of the photoelectric type or incorporate a temporary silencing feature if mounted within 20 feet of a cooking appliance;

(d) A smoke alarm must be provided at a stairway to an upper level or basement;

(e) Mounting and location requirements for smoke alarms in rooms with sloping or peaked ceilings are changed to be consistent with other model and fire code requirements for single family housing;

(f) Smoke alarms must be interconnected so that activation of one alarm causes all alarms to be activated;

(g) Provisions for special devices for hearing and visually impaired persons are added;

(h) Manufacturers must operationally test each smoke alarm at the factory, provide installers with instructions on how to inspect and retest each alarm during installation of the home, and provide homeowners with operating and testing information from the alarm manufacturer; and,

(i) Each smoke alarm must be both permanently wired and be provided with battery back-up to operate in the event of a power outage.

The following is a summary of the major changes from the proposed rule and revisions to the existing requirements being made in the final rule:

1. Section 3280.202 replaces the term "smoke detector" with the term "smoke alarm". While these terms are commonly used interchangeably, other housing codes generally define a "smoke detector" as a device that detects visible or invisible particles of

combustion but does not include an alarm. By contrast, a "smoke alarm" is a self-contained unit that is responsive to smoke and incorporates a sensor, controls, and an alarm-sounding device. A conforming change is made in § 3280.112. The rule also deletes the definition of "single-station alarm device" because the term is not necessary. Additionally, the rule defines a "tactile notification appliance" in § 3280.202 as "a notification appliance that alerts by the sense of touch or vibration."

2. The standards proposed to be incorporated in § 3280.208(a) have been updated to refer to the most recent version of the incorporated standard.

3. Section 3280.208(b)(1)(i) now clarifies that manufacturers are required to install at least one smoke alarm to protect the living and kitchen areas, whether the areas are separate or combined. If a smoke alarm is installed within 20 feet of a cooking appliance, the rule also requires either that the smoke alarm include a temporary silencing feature (hush button) to provide consumers with a mechanism to shut off the alarm temporarily, usually for about 15-20 minutes (e.g., if the alarm sounds frequently during periods of cooking), or that the smoke alarm be of a photoelectric-type, which is less sensitive to cooking fumes. Whenever possible, the alarm should be located in the living area remote from the kitchen and cooking appliances.

4. Section 3280.208(b)(1)(ii) clarifies that manufacturers are to install a smoke alarm in each room "designed for sleeping", rather than outside each bedroom area, because occupants are most vulnerable when asleep.

5. Section 3280.208(b)(1)(iii) permits, exclusive of the basement, the required stairway smoke alarms in multistory homes to be installed on the ceiling near the top of a stairway or above the stairway, for the field installation and interconnection of the required smoke alarm. A separate requirement is established in § 3280.208(b)(2) for basement alarms.

6. Section 3280.208(b)(2) requires each manufacturer to provide, but not necessarily to install, a smoke alarm for every home designed to be placed over a basement. In addition, the manufacturer must install at the factory an electrical junction box that accommodates the installation and interconnection of the basement smoke alarm. The instructions and information provided by the manufacturer for the installer and homeowner must make it clear that a smoke alarm should be installed on the basement ceiling near the stairway.

7. Section 3280.208(b)(3) omits some of the specific locations in which smoke alarms could not be placed under the proposed rule, in favor of performance-oriented requirements.

8. Section 3280.208(c)(1) permits manufacturers to mount smoke alarms on ceilings. This helps manufacturers to avoid other locations that may be more vulnerable to false alarms and is consistent with locations permitted by model residential fire and building codes.

9. Sections 3280.208(c)(2) and (3) include mounting and location requirements for smoke alarms located on sloping ceilings, and distinguish between peaked sloping and shed sloping ceilings. The revisions from the proposed rule are needed to maximize the effectiveness and proper operation of smoke alarms mounted in these locations and are consistent with requirements of model residential fire and building codes.

10. Sections 3280.208(d)(1)(i) and (ii) require each smoke alarm to be powered by the home's electrical system and be provided with a battery back-up, or, alternatively, to be powered by a battery with a 10-year life.

11. Section 3280.208(d)(2) clarifies that more than one smoke alarm may be placed on the same electrical circuit.

12. Section 3280.208(d)(3) requires that the mandated smoke alarms be interconnected so that the operation of any one of those alarms activates all other required alarms in the home.

13. Section 3280.208(e) now requires manufacturers to provide visible and tactile notification appliances, in addition to the smoke alarms otherwise required, but only if ordered by the purchaser or retailer before the home enters the first stage of production. A proposed prescriptive requirement for the location of a visible notification appliance in a room designed for sleeping has been deleted as unnecessary.

14. In order to avoid damaging smoke alarms, § 3280.208(f)(1) now provides that operational tests are to be performed after dielectric testing is conducted. The rule also clarifies that retesting is required when an alarm does not function, and provides that an alarm must be replaced if it still does not function properly after being retested.

15. Section 3280.208(f)(3) requires that the smoke alarm manufacturer's information describing the operation, maintenance, and testing of the alarm be provided in the same manner and location as the consumer manual required under 24 CFR § 3282.207.

16. A conforming change is made in terminology used in 24 CFR part 3282, substituting "alarms" for "detectors".

#### IV. Findings and Certifications

##### *Paperwork Reduction Act*

The information collection requirements contained in this rule have been approved by the Office of Management and Budget in accordance with the Paperwork Reduction Act of 1995 (44 U.S.C. 3501–3520), and assigned OMB control number 2502–0253. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless the collection displays a valid control number. HUD will publish a separate Notice with the OMB approval number, when issued.

##### *Unfunded Mandates Reform Act*

Title II of the Unfunded Mandates Reform Act of 1995 (2 U.S.C. 1531–1538) establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector. This rule will not impose any Federal mandates on any State, local, or tribal governments or on the private sector within the meaning of the Unfunded Mandates Reform Act of 1995.

##### *Environmental Review*

A Finding of No Significant Impact (FONSI) with respect to the environment was made in accordance with HUD regulations in 24 CFR part 50 that implement section 102(2)(C) of the National Environmental Policy Act of 1969 (42 U.S.C. 4223). The Finding of No Significant Impact is available for public inspection between 7:30 a.m. and 5:30 p.m. weekdays in the Office of the Rules Docket Clerk, Office of the General Counsel, Department of Housing and Urban Development, Room 10276, 451 Seventh Street, SW., Washington, DC 20410.

##### *Impact on Small Entities*

The Secretary, in accordance with the Regulatory Flexibility Act (5 U.S.C. 605(b)), has reviewed and approved this final rule and in so doing certifies that the rule will not have a significant economic impact on a substantial number of small entities. The rule revises HUD's existing regulations for the placement and installation of smoke alarms in new manufactured housing. The new requirements ensure that smoke alarms installed in new homes will be more effective in warning of the presence of smoke. This is accomplished primarily by changing the location requirements to ensure that

smoke alarms operate more effectively. Because home manufacturers are already required to provide working smoke alarms in manufactured homes, the costs associated with complying with the new requirements would be minimal.

HUD has conducted a material and labor cost impact analysis for this rule including both small and large entities. For the purposes of this analysis, HUD is using the SBA definition of a small entity of 500 or fewer employees. On this basis, HUD is categorizing manufacturers with 3 or fewer production facilities as small entities in preparing this analysis.

The potential cost impact for material and labor, based on a per-home cost, does not vary significantly between the two types of entities. HUD is also aware that certain costs to revise existing floor plans and acquiring DAPIA approval are anticipated. The Department surveyed several manufacturers for design-revision cost estimates without successfully determining a dollar cost. In consultation with a third-party representative, estimated costs were determined.

The potential cost impact of material and installation labor on small entities, based on a per-home cost, estimated to be \$32.50 multiplied by 50,000 homes produced in a year (assuming conservatively that no manufacturer currently uses AC smoke alarms with battery back-up), is \$1.625 million annually. Material and labor constitutes a cost impact of about \$32,500 (\$1,625,000/50 manufacturers) per small entity per year.

In addition to the above costs, there is also a cost associated with revising designs to comply with the new requirements for smoke alarms. The design cost consists of an initial cost of revising all existing plans and the costs for preparing new designs which have been averaged over a 5-year period. The per-home cost for small entities is estimated to be \$9.00, yielding a total cost of \$450,000 (\$9.00 × 50,000 homes) annually to small entities. The design impact constitutes a cost of about \$9,000 per small entity per year for the 5-year period. Cost estimate calculation for small entities: 100 designs in first year × 4 hours per design × \$50 per hour + 25 new designs each year × 5 years × 4 hours per design × \$50 per hour = \$45,000. \$45,000/5-year period = \$9,000 per manufacturer per year. The per-home cost is based on 1000 homes per small entity per year (50,000 homes/50 manufacturers).

Therefore, a total cost of approximately \$2.08 million (\$41.50 × 50,000 homes) annually is projected for

small entities. On average, the entire cost impact represents an estimated cost increase of about \$41,500 (\$32,500 + \$9,000) per small entity per year (based on approximately 50 small entities within the industry). Although 50% of manufactured home producers may be classified as small entities, their home production comprises about 17% of the industry's annual home production. An analysis of this cost impact as a percentage of profits was not completed, as profit information was not available for small entities.

The potential cost impact of material and installation labor on large entities, based on a per-home cost, estimated to be \$31.40 multiplied by 250,000 homes produced in a year (assuming conservatively that no manufacturer currently uses AC smoke alarms with battery back-up), is \$7.85 million annually. Material and labor constitutes

a cost impact of about \$157,000 (\$7.85 million/50 manufacturers) per large entity per year.

In addition to the above costs, there is also a cost associated with revising designs to comply with the new requirements for smoke alarms. The design cost consists of an initial cost of revising all existing plans and the costs for preparing new designs which have been averaged over a 5-year period. The per-home cost for large entities is estimated to be \$6.00, yielding a total cost of \$1.5 million (\$6.00 × 250,000 homes) annually to large entities. The design impact constitutes a cost of about \$30,000 per large entity per year for the five-year period. Cost estimate calculation for large entities: 500 designs in first year × three hours per design × \$50 per hour + 100 new designs each year × five years × three hours per design × \$50 per hour =

\$150,000. \$150,000/five-year period = \$30,000 per large entity per year. The per-home cost is based on 5000 homes per manufacturer (250,000 homes/50 manufacturers).

Therefore, a total cost of approximately \$9.35 (\$7.85 million + \$1.5 million) million annually is projected for large entities. On average, the entire cost impact represents an increase of about \$187,000 (\$9.35 million/50 manufacturers) per large entity per year (based on approximately 50 large entities within the industry).

As a result, the total annual estimated cost impact is \$11.43 million for all small and large manufacturers (\$9.35 million + \$2.08 million). The following charts provide a comparison of, and estimates for all costs, based on HUD's existing regulation and this final rule, for small and large entities.

Cost factor	Current rule requirements	New rule requirements	Change in cost	Cost impact
<b>Impact on Small Entities</b>				
Smoke Alarm .....	2 × \$5.50=\$11.00 (2 AC powered smoke alarms).	4 × \$8.75=\$35.00 (4 AC+battery back-up smoke alarms).	\$35.00–11.00 .....	\$24.00
Wiring .....	50' × \$0.065=\$3.25 (14–2 Wire) .....	70' × \$0.075=\$5.25 (14–3 Wire) .....	\$5.25–3.25 .....	2.00
Installation Labor .....	\$6.50 .....	\$13.00 .....	\$13.00–6.50 .....	6.50
Design-revision .....	\$0 .....	\$9.00 .....	\$9.00–0 .....	9.00
Total .....	.....	.....	.....	41.50
<b>Impact on Large Entities</b>				
Smoke Alarm .....	2 × \$5.50=\$11.00 (2 AC powered smoke alarms).	4 × \$8.50=\$34.00 (4 AC+battery back-up smoke alarms).	\$34.00–11.00 .....	\$23.00
Wiring .....	50 × \$0.06=\$3.00 (14–2 Wire) .....	70 × \$0.07=\$4.90 (14–3 Wire) .....	\$4.90–3.00 .....	1.90
Installation Labor .....	\$6.50 .....	\$13.00 .....	\$13.00–6.50 .....	6.50
Design-revision .....	\$0 .....	\$6.00 .....	\$6.00–0 .....	6.00
Total .....	.....	.....	.....	37.40

In estimating costs under the current regulation and new regulation, HUD used the following assumptions (1) an average home (28' × 60') contains three bedrooms; (2) the home has a smoke alarm in each bedroom and one in the common area (all smoke alarms have battery backup); (3) installation under the current rule involves about 50 feet of 14–2 wiring for two smoke detectors, an additional 20 feet of wiring for the required alarms in each bedroom (total of 70' of 14–3 wire); (4) the cost of 14–2 wiring=\$0.06 per lineal foot for large entities, and the cost for small entities=\$0.065 per lineal foot; (5) the cost of 14–3 wiring=\$0.07 per lineal foot for large entities and the cost for small entities=\$0.075 per lineal foot; (6) the installation labor costs are average lump sum costs obtained from a spectrum of manufactured home builders; (7) the prices reflected in the table were

obtained from manufactured home producers representing small and large entities; (8) costs obtained from smoke alarm manufacturers are generally higher than costs paid by home producers as large quantity discounts are not included; (9) an estimated 100 designs for each small entity and approximately 500 designs for each large entity are in need of revision; (10) industry production is estimated at 300,000 homes annually.

#### *Regulatory Planning and Review*

The Office of Management and Budget (OMB) reviewed this rule under Executive Order 12866, Regulatory Planning and Review. OMB determined that this rule is a "significant regulatory action" as defined in section (3)(f) of the Order, although not an economically significant regulatory action under the Order. As discussed under the heading,

"Impact on Small Entities," above, the rule is estimated to have an annual cost impact of only \$11.43 million. However, as also discussed above in this preamble, the full implementation of this rule is estimated to result in 30 lives saved annually. Any changes made to this rule as a result of review under the Order are identified in the docket file, which is available for public inspection in the office of the Department's Rules Docket Clerk, Room 10276, 451 Seventh Street, SW, Washington, DC 20410–0500.

#### *Executive Order 13132, Federalism*

Executive Order 13132 ("Federalism") prohibits an agency from publishing any rule that has Federalism implications if the rule either imposes substantial direct compliance costs on State and local governments and is not required by statute, or the rule preempts State

law, unless the agency meets the consultation and funding requirements of section 6 of the Executive Order. This rule does not have Federalism implications and does not impose substantial direct compliance costs on State and local governments nor preempts State law within the meaning of Executive Order 13132.

#### *Catalog of Federal Domestic Assistance*

The Catalog of Federal Domestic Assistance number is 14.171.

#### **List of Subjects**

##### *24 CFR Part 3280*

Fire prevention, Housing standards, Incorporation by reference, Manufactured homes.

##### *24 CFR Part 3282*

Administrative practice and procedure, Consumer protection, Intergovernmental relations, Investigations, Manufactured homes, Reporting and recordkeeping requirements, Warranties.

Accordingly, for the reasons stated in the preamble, HUD amends 24 CFR parts 3280 and 3282 as follows:

#### **PART 3280—MANUFACTURED HOME CONSTRUCTION AND SAFETY STANDARDS**

1. The authority citation for 24 CFR part 3280 continues to read as follows:

**Authority:** 42 U.S.C. 3535(d), 5403, and 5424.

##### **§ 3280.112 [Amended]**

2. Section 3280.112 is amended by removing the word “detectors” and adding in its place the word “alarms”.

3. Section 3280.202 is amended by removing the definition of “Single-station alarm device” and the definition of “Smoke detector”, and by adding the definition of “Smoke alarm” and “Tactile Notification Appliance” to read as follows:

##### **§ 3280.202 Definitions.**

\* \* \* \* \*

*Smoke alarm:* An alarm device that is responsive to smoke.

*Tactile notification appliance:* A notification appliance that alerts by the sense of touch or vibration.

4. Section 3280.208 is revised to read as follows:

##### **§ 3280.208 Smoke alarm requirements.**

(a) *Labeling.* Each smoke alarm required under paragraph (b) of this section must conform with the requirements of UL 217, Single and Multiple Station Smoke Alarms, dated

January 4, 1999 (incorporated by reference, see § 3280.4), or UL 268, Smoke Detectors for Fire Protective Signaling Systems, dated January 4, 1999 (incorporated by reference, see § 3280.4), and must bear a label to evidence conformance.

(b) *Required smoke alarm locations.* (1) At least one smoke alarm must be installed in each of the following locations:

(i) To protect both the living area and kitchen space. Manufacturers are encouraged to locate the alarm in the living area remote from the kitchen and cooking appliances. A smoke alarm located within 20 feet horizontally of a cooking appliance must incorporate a temporary silencing feature or be of a photoelectric type.

(ii) In each room designed for sleeping.

(iii) On the ceiling of the upper level near the top or above each stairway, other than a basement stairway, in any multistory home completed in accordance with this part or part 3282 of this chapter. The alarm must be located so that smoke rising in the stairway cannot be prevented from reaching the alarm by an intervening door or obstruction.

(2) For each home designed to be placed over a basement, the manufacturer must provide a smoke alarm for the basement and must install at the factory an electrical junction box for the installation of this smoke alarm and for its interconnection to other smoke alarms required by this section. The instructions for installers and information for homeowners required in paragraph (f) of this section must clearly indicate that a smoke alarm should be installed and is to be located on the basement ceiling near the stairway.

(3) A smoke alarm required under this section must not be placed in a location that impairs its effectiveness or in any of the following locations:

(i) Within 3 feet horizontally from any discharge grille when a home is equipped or designed for future installation of a roof-mounted evaporative cooler or other equipment discharging conditioned air through a ceiling grille into the living space; and

(ii) In any location or environment that is prohibited by the terms of its listing, except as permitted by this section.

(c) *Mounting requirements.* (1) Except in rooms with peaked sloping or shed sloping ceilings or as permitted pursuant to paragraph (e) of this section, smoke alarms must be mounted either:

(i) On the ceiling at least 4 inches from each wall; or

(ii) On a wall with the top of the alarm not less than 4 inches below the ceiling, and not farther from the ceiling than 12 inches or the distance from the ceiling specified in the smoke alarm manufacturer's listing and instructions, whichever is less.

(2) Except as permitted pursuant to paragraph (e) of this section, in rooms with peaked sloping ceilings, smoke alarms must be mounted on the ceiling within 3 feet, measured horizontally, from the peak of the ceiling; at least 4 inches, measured horizontally, below the peak of the ceiling; and at least 4 inches from any projecting structural element.

(3) Except as permitted pursuant to paragraph (e) of this section, in rooms with shed sloping ceilings, smoke alarms must be mounted within 3 feet of the high side of the ceiling, and not closer than 4 inches from any adjoining wall surface and from any projecting structural element.

(d) *Connection to power source.* (1) Each smoke alarm must be powered from:

(i) The electrical system of the home as the primary power source and a battery as a secondary power source; or

(ii) A battery rated for a 10-year life, provided the smoke alarm is listed for use with a 10-year battery.

(2) Each smoke alarm whose primary power source is the home electrical system must be mounted on an electrical outlet box and connected by a permanent wiring method to a general electrical circuit. More than one smoke alarm is permitted to be placed on the same electrical circuit. The wiring circuit for the alarm must not include any switches between the over-current protective device and the alarm, and must not be protected by a ground fault circuit interrupter.

(3) Smoke alarms required under this section must be interconnected such that the activation of any one smoke alarm causes the alarm to be triggered in all required smoke alarms in the home.

(e) *Visible and tactile notification appliances.* (1) In addition to the smoke alarms required pursuant to this section, the manufacturer must provide visible and listed tactile notification appliances if these appliances are ordered by the purchaser or retailer before the home enters the first stage of production. These appliances are required to operate from the primary power source, but are not required to operate from a secondary power source.

(2) A visible notification appliance in a room designed for sleeping must have a minimum rating of 177 candela, except that when the visible notification appliance is wall-mounted or

suspended more than 24 inches below the ceiling, a minimum rating of 110 candela is permitted.

(3) A visible notification appliance in an area other than a room designed for sleeping must have a minimum rating of 15 candela.

(f) *Testing and maintenance.* (1) Each required smoke alarm installed at the factory must be operationally tested, after conducting the dielectric test specified in § 3280.810(a), in accordance with the alarm manufacturer's instructions. A smoke alarm that does not function as designed during the test and is not fixed so that it functions properly in the next retest must be replaced. Any replacement smoke alarm must be successfully tested in accordance with this paragraph.

(2) Home manufacturers must provide specific written instructions for

installers on how to inspect and test the operation of smoke alarms during installation of the home. These instructions must indicate that any smoke alarm that does not meet the inspection or testing requirements needs to be replaced and retested.

(3) Home manufacturers must provide the homeowner with the alarm manufacturer's information describing the operation, method and frequency of testing, and proper maintenance of the smoke alarm. This information must be provided in same manner and location as the consumer manual required by § 3282.207 of this chapter, but does not have to be incorporated into the consumer manual. No dealer, distributor, construction contractor, or other person shall interfere with the distribution of this information.

## **PART 3282—MANUFACTURED HOME PROCEDURAL AND ENFORCEMENT REGULATIONS**

5. The authority citation for 24 CFR part 3282 continues to read as follows:

**Authority:** 42 U.S.C. 3535(d) and 5424.

### **§ 3282.203 [Amended]**

6. Section 3282.203(b)(4) is amended by removing the word “detectors” and adding in its place the word “alarms”.

### **§ 3282.203(b)(4) [Amended]**

Dated: January 2, 2002.

**John C. Weicher,**

*Assistant Secretary for Housing-Federal Housing Commissioner.*

[FR Doc. 02-6026 Filed 3-18-02; 8:45 am]

**BILLING CODE 4210-27-P**