

**DEPARTMENT OF HOUSING AND  
URBAN DEVELOPMENT**

**24 CFR Part 3280**

[Docket No. FR-5222-P-01]

RIN 2502-A172

**Manufactured Home Construction and  
Safety Standards, Test Procedures for  
Roof Trusses**

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

**ACTION:** Proposed rule.

**SUMMARY:** This proposed rule would amend the Federal Manufactured Home Construction and Safety Standards by adopting proposals made by the Manufactured Home Consensus Committee (MHCC), as modified by HUD. The National Manufactured Housing Construction and Safety Standards Act of 1974 requires HUD to publish in the **Federal Register** any proposed revised Manufactured Home Construction and Safety Standard submitted by MHCC. Changes to the existing roof truss testing procedures were part of the first group of MHCC proposals submitted to HUD in 2003 to revise various aspects of the standards. However, in response to public comments on the proposed rule, including those submitted by MHCC, HUD returned the proposal on roof truss testing to MHCC for further consideration.

After further consideration, MHCC has submitted an amended version of its 2003 proposal on roof truss testing to HUD. HUD is in agreement with the majority of MHCC's current recommendations on roof truss testing. This proposed rule contains the recommendations on which HUD and MHCC agree. This proposed rule also includes HUD's modifications to the MHCC proposal, together with HUD's reasons for not accepting those particular revisions proposed by the MHCC.

**DATES:** *Comment Due Date:* August 16, 2010.

**ADDRESSES:** Interested persons are invited to submit comments regarding this rule to the Regulations Division, Office of General Counsel, 451 7th Street, SW., Room 10276, Department of Housing and Urban Development, Washington, DC 20410-0500. Communications must refer to the above docket number and title. There are two methods for submitting public comments. All submissions must refer to the above docket number and title.

1. *Submission of Comments by Mail.* Comments may be submitted by mail to the Regulations Division, Office of General Counsel, Department of Housing and Urban Development, 451 7th Street, SW., Room 10276, Washington, DC 20410-0500.

2. *Electronic Submission of Comments.* Interested persons may submit comments electronically through the Federal eRulemaking Portal at <http://www.regulations.gov>. HUD strongly encourages commenters to submit comments electronically. Electronic submission of comments allows the commenter maximum time to prepare and submit a comment, ensures timely receipt by HUD, and enables HUD to make them immediately available to the public. Comments submitted electronically through the <http://www.regulations.gov> Web site can be viewed by other commenters and interested members of the public. Commenters should follow the instructions provided on that site to submit comments electronically.

**Note:** To receive consideration as public comments, comments must be submitted through one of the two methods specified above. Again, all submissions must refer to the docket number and title of the rule.

*No Facsimile Comments.* Facsimile (FAX) comments are not acceptable.

*Public Inspection of Public Comments.* All properly submitted comments and communications submitted to HUD will be available for public inspection and copying between 8 a.m. and 5 p.m. weekdays at the above address. Due to security measures at the HUD Headquarters building, an advance appointment to review the public comments must be scheduled by calling the Regulations Division at 202-708-3055 (this is not a toll-free number). Individuals with speech or hearing impairments may access this number through TTY by calling the Federal Information Relay Service at 800-877-8339. Copies of all comments submitted are available for inspection and downloading at <http://www.regulations.gov>.

**FOR FURTHER INFORMATION CONTACT:** The Office of Regulatory Affairs and Manufactured Housing, Office of Housing, Department of Housing and Urban Development, 451 7th Street, SW., Room 9162, Washington, DC 20410-8000; telephone number 202-708-2121 (this is not a toll-free telephone number). Persons with hearing or speech impairments may access this number through TTY by calling the toll-free Federal Information Relay Service at 1-800-877-8339.

**SUPPLEMENTARY INFORMATION:**

**I. Background**

The National Manufactured Housing Construction and Safety Standards Act of 1974 (42 U.S.C. 5401-5426) (the Act) authorizes HUD to establish and amend the Federal Manufactured Home Construction and Safety Standards (Construction and Safety Standards) codified in 24 CFR part 3280. The Act was amended in 2000 by the Manufactured Housing Improvement Act of 2000 (Pub. L. 106-569), which expanded the original Act's purposes and created the MHCC.

The amended Act generally requires that HUD establish Construction and Safety Standards that are reasonable and practical, meet high standards of protection, are performance-based, and are objectively stated. Congress specifically established the MHCC to develop proposed revisions to the construction and safety standards and included specific procedures in the Act (42 U.S.C. 5403) for the MHCC process.

MHCC began considering possible revisions to the construction and safety standards in 2002 and established its own priorities for selecting revisions for HUD to consider. Included among the first set of proposals recommended to HUD by MHCC in 2003 were revisions to the current requirements for roof truss testing.<sup>1</sup> Those recommendations were included in HUD's proposed rule to amend the Construction and Safety Standards, which was published in the **Federal Register** on December 1, 2004 (69 FR 70016). After considering comments received on the proposed rule from both the public and MHCC, HUD agreed with commenters who wanted HUD to return the proposal on truss testing procedures to MHCC for further consideration. However, as indicated in the preamble of HUD's final rule published in the **Federal Register** on November 30, 2005 (70 FR 72024), which followed the December 1, 2004, proposed rule, HUD views truss testing procedures as too important a safety consideration to leave unresolved.

HUD requested the MHCC to work expeditiously to reevaluate and resubmit new proposals for truss testing procedures. As a result, the Truss Test Task Force of MHCC's Standards Subcommittee was established. Five teleconferences of this task force were held, and the full MHCC held two teleconferences to review and vote on new truss testing procedures. HUD worked closely with MHCC throughout the review and reevaluation process, and HUD agrees with the majority of the

<sup>1</sup> A truss is a triangular structure used to support a roof. Multiple trusses are used to assemble the framework for a roof.

new proposals made by MHCC. However, after careful review, HUD has made editorial revisions to the MHCC proposals and modified the MHCC's proposal regarding uplift testing. The following is a discussion of the specific revisions to the current roof truss testing requirements in § 3280.402 of the Construction and Safety Standards that are included in this proposed rule.

## II. Proposed Changes

The proposed rule would amend various paragraphs of § 3280.402, Test Procedures for Roof Trusses, of the Construction and Safety Standards.

### A. HUD Questions on Roof Trussing Presented in the November 30, 2005, Final Rule

In returning the proposal on truss testing procedures to MHCC for further consideration, HUD asked MHCC, in the preamble to the November 30, 2005, final rule, to consider the following questions during its deliberations in formulating any revised proposals. The questions asked and MHCC actions taken are as follows:

(1) *Whether the nondestructive testing procedure for roof trusses that permits a lower overall factor of safety to be used in conducting the tests based on a presumed low failure rate for roof trusses should be eliminated.*

*MHCC Recommendation:* In its previous proposal, MHCC recommended that this procedure be eliminated as a method for initially qualifying roof trusses. Further, MHCC had determined that the current requirements for providing minimum quality of materials and workmanship

associated with conducting the nondestructive qualification tests was impractical and probably not being adhered to in current testing of roof trusses. However, based on further review of economic factors and other considerations, MHCC decided to retain the nondestructive test procedure in its new proposal. MHCC also decided to change the name of the procedure to the "proof load truss test procedure" and added the requirement that trusses for the initial qualification and testing be of average quality of materials and workmanship. MHCC also provided for an increased factor of safety from 1.75 to 2.0 to be used to evaluate the trusses. MHCC also recommended a reduced load duration period for the overload test period of 6 hours, rather than the 12-hour period in the current requirements. This recommendation is based on the experience of truss fabricators who, in the task force proceedings, said that failures rarely occur after 6 hours of loading. Under MHCC's proposal, at least three consecutively tested trusses must pass all requirements of the test in order to qualify the truss design. More frequent follow-up testing was also recommended by MHCC due to the lower factor of safety permitted under this revised proof load truss testing approach.

(2) *Whether upright tensions tests are needed to evaluate the uplift resistance of the trusses.*

*MHCC Recommendation:* Because of the variation in test results between trusses tested in the inverted and upright positions for uplift wind loads identified in earlier tests conducted by

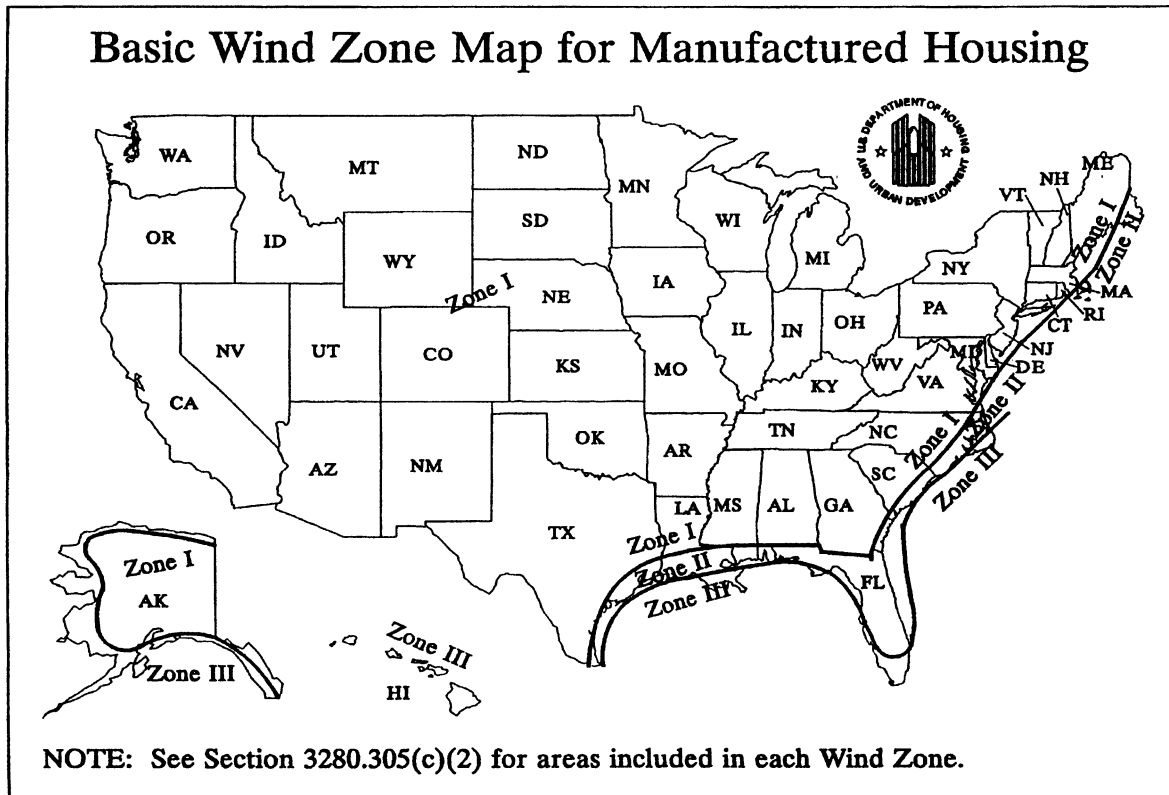
the National Association of Home Builders Research Center (NAHB-RC), MHCC recommended a factor of safety of 2.5 be used for trusses tested in the inverted position, but also recommended that the current factor of safety of 1.75 be retained for trusses tested in the upright position. Trusses tested in the inverted position consistently failed at higher average loads (30 to 40 percent), had lower mid-span deflections than trusses tested in the upright position, and in some truss designs experienced different failure modes than trusses tested in the upright position. MHCC also recommended that at least one uplift test be conducted for certain trusses designed to be used in Wind Zone I and that three consecutive uplift tests be performed for initial qualification of all trusses designed to be located in Wind Zones II or III.

*Note* that to ensure that manufactured homes survive the threats of hurricanes and other storms, HUD developed Wind Zone construction standards.

Manufactured homes may be installed only in counties where they meet the Wind Zone construction standards that apply to that county. Wind Zone I homes have the least stringent construction standards and Wind Zone III homes have the most stringent construction standards. Homes designed and constructed to a higher Wind Zone can be installed in a lower Wind Zone (a Wind Zone III home can be installed in a Wind Zone I or II location).

However, a Wind Zone I home cannot be installed in either a Wind Zone II or III area. As Figure 1 below displays, the overwhelming majority of the United States is designated as Wind Zone I.

Figure 1. Wind Zones



(3) Should the factor of safety for uplift testing be reduced from 2.5 to the current requirement of 1.75, times the design wind pressures, in consideration of comments received regarding safety during testing?

**MHCC Recommendation:** MHCC recommended the use of the higher factor of safety of 2.5 for only those trusses tested in the inverted position. The safety concerns expressed in the comments on the December 1, 2004, proposed rule were for the higher loading that would be required for trusses tested in the upright position and not for trusses tested in the inverted position and for certain methods of applying the loads.

(4) What are the costs associated with recommended revisions to the truss testing requirements?

**MHCC Recommendation:** The costs associated with its revised proposal were discussed with representatives of three truss fabricators during the discussions and deliberations of MHCC in developing its new recommendations for truss testing procedures. Two factors that would significantly reduce the cost impacts of the new MHCC proposal, from the original 2003 one, are recommendations to reinstate the nondestructive truss test procedure as the proof load truss test procedure and to generally limit the requirements for

uplift tests to trusses designed for use in Wind Zones II and III (approximately 80 percent of all homes produced are designed for use in Wind Zone I).

#### *B. Comparison Between the Two MHCC Proposals for Truss Testing*

The following is a summary of the major differences between the recommendations in the original MHCC proposal, as published in the December 1, 2004, proposed rule, and their current recommendations as incorporated in this proposed rule. (Note: HUD did not modify the MHCC proposal for truss testing in the December 1, 2004, proposed rule.)

(1) The new proposal would maintain the nondestructive testing procedure permitted by the current rule, but would rename it as the "proof load truss test procedure" and also require three consecutive passing tests, a safety factor of 2.0 rather than the current 1.75 to be used in conducting the tests, and more frequent follow-up testing to be performed. However, the new proposal would reduce the overload test period from 12 hours to 6 hours, and allow the test specimens to be of average rather than minimum quality as required by the current rule. The December 1, 2004, proposed rule would have deleted the current provision for nondestructive

tests in the Construction and Safety Standards.

(2) In general, the number of required deflection measurements in this proposed rule would be fewer than originally recommended by MHCC, which HUD incorporated in the December 1, 2004, proposed rule. Under the original MHCC recommendation, deflection measurements would have been required at each truss panel point location and at the mid-span location between each panel point. This proposed rule incorporates MHCC's current recommendation that measurements be made at least at the mid-span and quarter points of the truss. However, scissors or other unique truss configurations would require measurement at as many additional bottom truss chord panel points as necessary to obtain an accurate representation of the deflected shape of the truss, in order to locate the point(s) of maximum deflection.

(3) The recovery deflections limits after live loads are removed would be reduced, to L/360, for both the nondestructive and ultimate test procedures to be consistent with other test standards for truss testing. The December 1, 2004, proposed rule would have established recovery limits at a more restrictive level of L/480.

(4) The new proposed rule would permit trusses to be tested for uplift loads in either the upright or inverted position. However, the factor of safety would be reduced to 1.75 for upright tests, while maintaining the current 2.5 factor of safety for inverted tests. The new proposal would generally require only three consecutive successful uplift tests for trusses designed to be used in Wind Zones II and III. Only one test would be required for trusses designed for use in Wind Zone I, or, the design may be certified by a Registered Engineer or Registered Architect or independent third-party agency. The December 1, 2004, proposed rule would have required three uplift tests to be conducted in all Wind Zones in the upright position using a factor of safety of 2.5.

(5) The new proposed rule would require at least one follow-up test to be conducted for each truss design for every 2,500 trusses produced that are qualified using the revised proof load test procedure. One follow-up test would be required for every 4,000 trusses produced that are qualified under the ultimate load test procedure, and the same frequency of follow-up testing would be required for uplift load tests (1/2,500 for the proof load test and 1/4,000 for the ultimate load test) for trusses designed to be used in Wind Zones II and III. The December 1, 2004, proposal included provisions only for the ultimate load test procedure; in addition it would have required one test for every 4,000 trusses produced, and did not include specific requirements for follow-up testing for uplift load.

As a result of the above differences, the new MHCC recommendations in this proposed rule would have less of a cost impact than the recommendations that were included in the December 1, 2004, proposed rule. Cost analysis prepared by HUD suggests that the change in cost would primarily be due to a reduction in the estimated number of homes produced annually, from 170,000 homes to 145,000 homes, and by limiting the new truss testing provisions for uplift wind forces to Wind Zones II and III, which affects only about 20 percent of overall truss production. HUD estimates that this proposed rule would result in an overall reduction in the estimated cost impact from \$13 million annually, as stated in the December 1, 2004, proposed rule, to about \$6 million annually, and would reduce the average cost impact per home from \$77 to \$41.

### III. Modifications to MHCC Recommendations

After reviewing the proposed recommendations for the revised truss testing procedures recommended by MHCC, HUD had concerns regarding one of MHCC's recommendations for uplift load testing. MHCC and HUD had the opportunity to discuss HUD's concerns during several teleconference meetings of MHCC, its Standards Subcommittee, and the Truss Test Task Force. The regulatory text of the MHCC recommendation, as submitted to HUD, and HUD's changes to that recommendation are published in full in this proposed rule. HUD is specifically soliciting comments from the public on both MHCC's recommendation as submitted to HUD, and HUD's modification of its recommendation.

Other editorial modifications to the document HUD received from MHCC have been made throughout this proposed rule to be consistent with the formatting of **Federal Register** documents or for consistency with other requirements of the Home Construction and Safety Standards. For the convenience of the public, rather than publishing both the entire MHCC document and HUD's edited version of the document, HUD is publishing a single proposed rule with the original text of the MHCC document following HUD's discussion.

#### *HUD's Modifications to MHCC's Proposed Revision to § 3280.402(d)(3)*

HUD is modifying the proposed recommendation from MHCC on uplift testing, because the MHCC's provisions for uplift load tests would have permitted testing in either the inverted or upright position in Wind Zones II and III. HUD's modification is based in part on the findings of a study conducted by NAHB-RC, "Comparison of Methods for Wind Uplift Load Testing of Roof Trusses for Manufactured Housing," and the requirements of the National Fire Protection Association (NFPA) consensus process related to uplift testing. In particular, the NAHB-RC study found that trusses tested in the inverted position failed at higher loads, had smaller mid-span deflections, and experienced different fail modes than trusses tested in the upright position. This is because the difference in truss orientation results in the uplift load being applied by pulling up on the top chord of the truss in the upright position (in the manner in which the wind would apply load to the trusses), while, in the inverted position, the

uplift load is applied by pushing down on the bottom chord of the truss.

HUD modified the MHCC proposal by permitting use of the upright uplift load test only to evaluate trusses for use in Wind Zones II and III. HUD made this modification because resistance to high uplift wind forces is often critical in preventing major damage to the roof or structure in high-wind areas, and the inverted test may not provide appropriate assessment of the ability of certain truss designs to resist those wind loads. However, HUD did accept that part of the MHCC proposal that allowed either the upright or inverted test method to be used in Wind Zone I, using the same overload factors recommended by MHCC. This is because the wind uplift load is relatively small in Wind Zone I and rarely affects the overall design requirements for the truss.

The regulatory language submitted by MHCC on this section, including introductory language that has not been modified but which provides context for MHCC's language, is as follows:

\* \* \* \* \*

(d) \* \* \*

(3) Uplift Load Tests. Each truss design must also pass all requirements of the uplift load test, as applicable, in paragraph (i) or (ii) and paragraphs (iii) and (iv) of this section.

\* \* \* \* \*

(iii) Trusses designed for use in Wind Zone I, when tested [see (i) above], must be tested in either the inverted position to 2.5 times the net wind uplift load or in the upright position to 1.75 times the net wind uplift load. Trusses designed for use in Wind Zones II and III must be tested in the inverted position to 2.5 times the uplift load, minus the dead load, or to 1.75 times the uplift load, minus the dead load in the upright position. [See Figure 3280.402(b)(3)].

(iv) The following describes how to conduct the uplift test with the truss in the upright position. Similar procedures must be used if conducting the test in the inverted position.

\* \* \* \* \*

(D) Continue to load the truss to 1.75 times the net uplift load and maintain the full load for one minute. (When tested in the inverted position, continue to load the truss to 2.5 times the net uplift load and maintain the load for 3 hours.) See paragraph (i) for the net uplift load in Wind Zone I and paragraph (ii) for the uplift load for Wind Zones II and III. Regardless of the test position of the truss, upright or inverted, trusses maintain the overload for the specified time period without rupture, fracture, or excessive yielding.

\* \* \* \* \*

### IV. Specific Issues for Comment

The public is invited to comment on any of the specific provisions included in this proposed rule and is also invited

to comment on the following questions and on any other related matters or suggestions regarding this proposed rule:

(1) Under the proposed rule, the proof load test or the ultimate load test can be used to qualify trusses in high snow load areas. Should the more stringent and reliable ultimate load test procedure be required only to qualify roof trusses designed for use in high snow load areas such as the North and Middle Roof Load Zones, where the risk of roof and truss failure is greater?

(2) Should the spacing between hydraulic or pneumatic cylinders for the test fixture be increased from 12 inches to 24 inches in Figures 3280.402(b)(1) and 3280.402(e)(1)? Should the distance between friction pads along the top chord of the truss of the test fixture be increased from 6 inches to 12 inches in Figure 3280.402(b)(1)? Should the distance between one-inch straps attached around the cylinder shoe and the top chord of the truss of the test fixture be increased from 6 inches to 12 inches in Figure 3280.402(e)(1)?

(3) Should the overload period for all wind uplift tests be increased from one minute to 3 hours, as is currently required for uplift tests in the standards for the inverted test procedure?

(4) Should a wind uplift test always be required for trusses qualified for use in Wind Zone I instead of allowing the determination to be made by a Registered Engineer or Registered Architect or independent third-party agency that is certifying the design?

## V. Findings and Certifications

### *Executive Order 12866, Regulatory Planning and Review*

The Office of Management and Budget (OMB) reviewed this rule under Executive Order 12866 *Regulatory Planning and Review*. This rule was determined to be a "significant regulatory action," as defined in section 3(f) of the Order (although not an economically significant regulatory action under the Order). If adopted in final, this rule would affect costs for manufactured home manufacturers in two ways. First, the cost of roof trusses would increase in order to meet the new testing standards. Second, manufactured home manufacturers would be required to assure that their truss designs have been retested and recertified by truss fabricators to comply with the revised testing requirements. Although this rule would require at least two follow-up tests per year for each truss design, at the current low production rates, no additional testing would be needed beyond current practice. Thus, the

retesting provision would not add to the compliance cost of the rule. The evaluation of costs also depends on the final location placement of the manufactured homes; that is, in which Wind Zone a manufactured home is located. HUD has assessed the total costs and benefits of this rule to be between \$7.476 million and \$36.447 million annually.

As noted in the preamble, Wind Zone I homes have the least stringent construction standards and Wind Zone III homes have the most stringent construction standards. In addition, Figure 1 in the preamble evidences, the overwhelming majority of the United States is designated as Wind Zone I. The estimated cost impact for the proposed rule takes into consideration the impact on truss construction of the retesting requirements (which are a one-time cost and not a continuing cost), and costs for follow-up testing of roof trusses. Each of these is evaluated with respect to wind zone classifications. Eighty percent of the 55,000 units produced annually are produced to Wind Zone I standards.

The average cost to meet the new standards is \$0.50 per truss in Wind Zone I and \$1.00 per truss in Wind Zones II and III. Further, approximately 30 percent of trusses will require re-design in Wind Zone I, while all trusses (100 percent) will require redesign for placement in Wind Zones II and III. Based on an average of 34 trusses per transportable section in Wind Zone I and 51 in Wind Zone II and III, and 1.64 transportable sections per home, the total cost of this requirement is \$1.285 million (72,000 transportable sections \* 34 trusses per section \* \$0.50 increase in production cost \* 30% of homes in Wind Zone I; plus 18,000 transportable sections \* 51 trusses per section \* \$1.00 increase in production cost \* 100% of homes in Wind Zones II & III) annually.

After truss fabricators make any needed changes to truss designs, manufactured home manufacturers must ensure that all truss designs being used have been retested and re-certified. The average cost to re-test and re-certify each truss design is \$500. HUD estimates that 1,200 truss designs for Wind Zone I and 300 for Wind Zones II and III will require re-certification. Thus, the total cost for this requirement equals \$750,000 (\$500 cost of re-certification \* 1,200 truss designs in Wind Zone I; plus \$500 cost of re-certification \* 300 truss designs in Wind Zones II and III). Totaling the increased construction cost and the cost of re-certification, this proposed rule, if adopted in final, would impose a total one-time cost of \$2,035,200 on manufacturers of manufactured housing. Both the re-

design and re-certification costs are one-time costs borne at the time of production. This rule would not impose any recurring costs.

With respect to benefits, the proposed standards will make manufactured housing less susceptible to wind damage and downward pressure by enhancing roof construction. In addition, there will be less collateral damage to housing and other structures adjacent to manufactured housing. HUD estimates that the median annual property damage from hurricanes and tropical storms is \$1,879.5 million. Based on 2008 housing data from the U.S. Postal Service and the Census Bureau's Survey of Manufactured Housing, newly shipped manufactured housing accounts for 0.076 percent of the total housing stock in States prone to hurricane strikes. An approximation of the damage occurring to manufactured housing totals \$1.42 million (\$1,879.5 million \* 0.076 percent). If this proposed rule were adopted in final, a portion of this \$1.42 million would be avoided annually. Assuming an annual reduction of the expected property damage by one-fourth (\$355,922) to one-half (\$711,904) because of the stronger trusses, the discounted present value of the annual benefits of the rule would range from \$12.221 to \$34.442 million, assuming a 3 percent discount rate, and from \$5.441 to \$20.882 million, assuming a 7 percent discount rate. In addition to avoiding property damage, this rule would also prevent injuries and deaths that occur during hurricanes, tropical storms, and other high wind events; although it is difficult to estimate the number of injuries and deaths that would be prevented. However, it is reasonable to expect that deaths and injuries would decrease in response to these proposed standards.

In summary, this proposed rule, if implemented in final, would impose one-time costs totaling \$2.035 million, and create discounted benefits of \$5.441 million to \$34.442 million, depending on the discount rate. Thus, the total impact of this rule—the sum of the total costs and benefits—would be between \$7.476 million and \$36.447 million annually.

The docket file is available for public inspection in the Regulations Division, Office of General Counsel, Department of Housing and Urban Development, 451 7th Street, SW., Room 10276, Washington, DC 20410-0500. Due to security measures at the HUD Headquarters building, please schedule an advance appointment to review the public comments by calling the Regulations Division at 202-402-3055

(this is not a toll-free number). Individuals with speech or hearing impairments may access this number through TTY by calling the Federal Information Relay Service at 800-877-8339.

#### *Environmental Impact*

A Finding of No Significant Impact with respect to the environment has been made in accordance with HUD regulations at 24 CFR part 50, which implement section 102(2)(C) of the National Environmental Policy Act of 1969 (42 U.S.C. 4332(2)(C)). That finding is available for public inspection between the hours of 8 a.m. and 5 p.m. weekdays in the Regulations Division, Office of General Counsel, Department of Housing and Urban Development, 451 7th Street, SW., Room 10276, Washington, DC 20410-0500. Due to security measures at the HUD Headquarters building, please schedule an appointment to review the finding by calling the Regulations Division at 202-708-3055 (this is not a toll-free number).

#### *Regulatory Flexibility Act*

The Regulatory Flexibility Act (RFA) (5 U.S.C. 601 *et seq.*) generally requires an agency to conduct a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements, unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. This rule would regulate establishments primarily engaged in making manufactured homes under North American Industry Classification Standard (NAICS) 32991. The Small Business Administration's size standards define as small an establishment primarily engaged in making manufactured homes if it does not exceed 500 employees. Of the 137 manufactured home operations included under this NAICS definition, 60 are small manufacturers that fall below the small business threshold of 500 employees. The rule would apply to all of the manufacturers and would, therefore, affect a substantial number of small entities. For the reasons stated below, HUD knows of no instance in which a manufactured home manufacturer with fewer than 500 employees would be significantly affected by this rule.

HUD, with the concurrence of the MHCC, conducted an economic cost impact analysis for this rule. A copy of the analysis is available for public

inspection and copying between 8 a.m. and 5 p.m. weekdays at the Regulations Division, Office of General Counsel, Department of Housing and Urban Development, 451 7th Street, SW., Room 10276, Washington, DC 20410-0500. The analysis determined the average potential cost impact, based on a per-home cost, to be approximately \$37, multiplied by an estimated number of 55,000 homes produced in a year, which equals about \$2.035 million annually. The per-home cost impact would range from approximately \$22 in Wind Zone I, based on an annual production estimate of 44,000 manufactured homes, to \$97 in Wind Zone II and Wind Zone III, based on a production estimate of 11,000 manufactured homes. This does not represent a significant economic effect on either an industry-wide or per-unit basis.

These two relatively small increases in cost would not impose a significant burden for a small business for homes that typically cost the purchaser between \$40,000 and \$100,000. Therefore, although this rule would affect a substantial number of small entities, it would not have a significant economic impact on them. Accordingly, the undersigned certifies that this rule will not have a significant economic impact on a substantial number of small entities.

Notwithstanding HUD's view that this rule will not have a significant effect on a substantial number of small entities, HUD specifically invites comments regarding any less burdensome alternatives to this rule that will meet HUD's objectives as described in this preamble.

#### *Executive Order 13132, Federalism*

Executive Order 13132 (entitled "Federalism") prohibits an agency from promulgating a regulation that has federalism implications and 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 or preempt State law within the meaning of the Executive Order.

#### *Unfunded Mandates Reform Act*

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

#### *Catalog of Federal Domestic Assistance*

The Catalog of Federal Domestic Assistance number for Manufactured Home Construction and Safety Standards is 14.171.

#### **List of Subjects in 24 CFR Part 3280**

Housing standards, Incorporation by reference, Manufactured homes.

Accordingly, for the reasons stated in the preamble, HUD proposes to amend 24 CFR part 3280 to read as follows:

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

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

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

2. Revise § 3280.402 to read as follows:

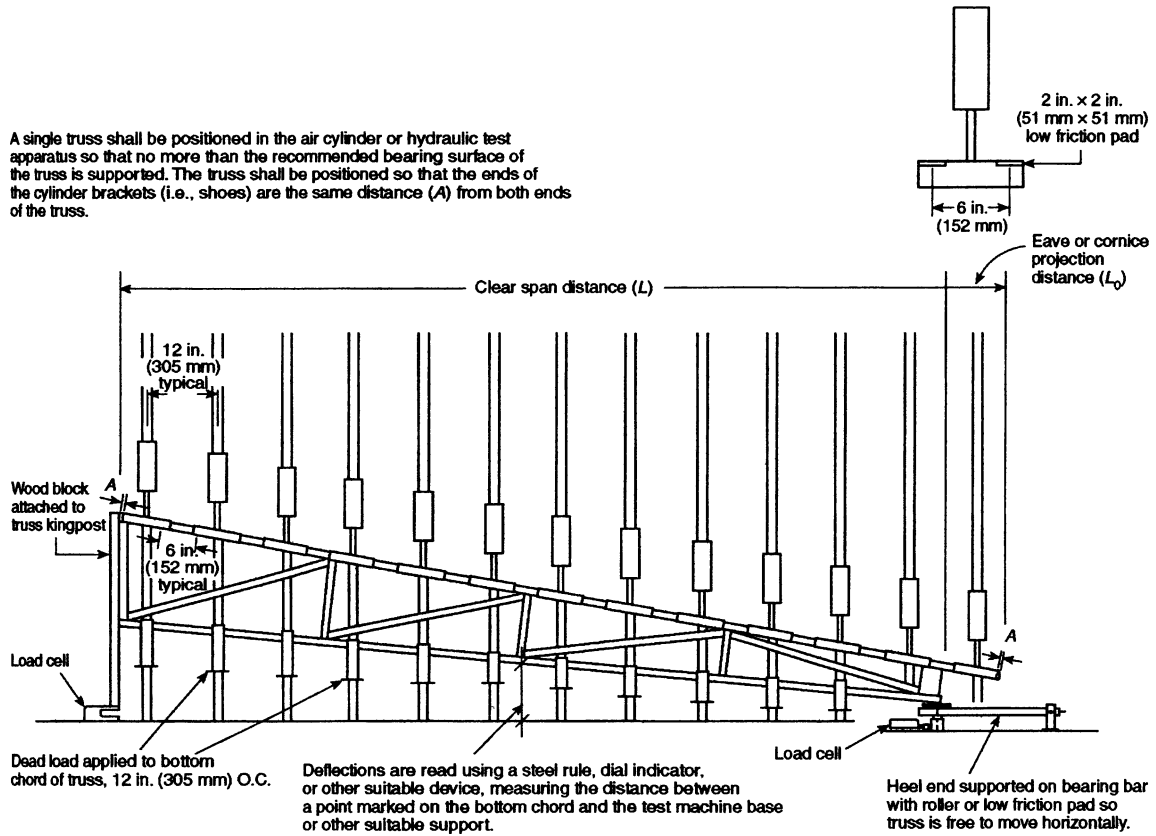
#### **§ 3280.402 Test procedures for roof trusses**

(a) *Roof load tests.* This section provides the roof truss test procedure for vertical loading conditions. Where roof trusses act as support for other members, have eave or cornice projections, or support concentrated loads, roof trusses must also be tested for those conditions.

(b) *General.* Trusses must be tested in a truss test fixture that replicates the design loads, and actual support points, and does not restrain horizontal movement. When tested singly or in groups of two or more trusses, trusses shall be mounted on supports and positioned as intended to be installed in the manufactured home in order to give the required clear span distance (L) and eave or cornice distance (Lo), if applicable, as specified in the design.

(1) When trusses are tested singly, trusses shall be positioned in a test fixture, with supports properly located and the roof loads evenly applied. *See* Figure 3280.402(b)(1).

Figure 3280.402(b)(1) – Test fixture for testing trusses singly.



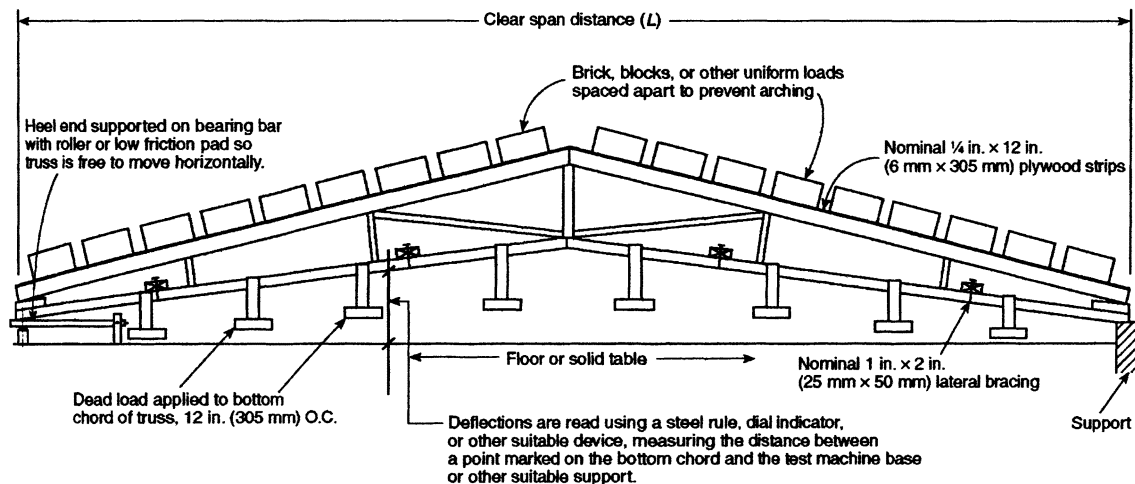
(2) When tested in groups of two or more, the top chords are permitted to be sheathed with nominal 1/4-inch x 12-inch plywood strips. The plywood strips shall be at least long enough to cover the top chords of the trusses at the designated design truss spacing. Adjacent plywood strips shall be

separated by at least 1/8-inch. The plywood strips shall be nailed with 4d nails or equivalent staples no closer than 8 inches on center along the top chord. The bottom chords of the adjacent trusses shall be permitted to be one of the following:

- (i) Unbraced; or

- (ii) Laterally braced together (not cross-braced) with 1-inch x 2-inch stripping no closer than 24 inches on center, nailed with only one 8d nail at each truss. See Figure 3280.402(b)(2).

Figure 3280.402(b)(2) – Test set-up for roof trusses tested in groups of two or more.



(c) *Measuring and loading methods.* Deflections must be measured at the free end of an eave or cornice projection and at least at the truss mid-span and quarter points. Scissors or other unique truss configurations are to be measured at as many additional bottom chord panel points as necessary to obtain an accurate representation of the deflected shape of the truss so as to be able to locate and record the point(s) of maximum deflection. Deflections must be read and recorded relative to a fixed reference datum. Deflections must be read and recorded to the nearest 1/32-inch. Dead load must be applied to the top and bottom chord, and live load must be applied to the top chord through a suitable hydraulic, pneumatic, or mechanical system or weights to simulate design loads. Load unit weights for uniformly distributed top chord loads must be separated so that arch action does not occur and spaced not more than 12 inches on center so as to simulate uniform loading. Bottom chord loading must be spaced as uniformly as practical. Truss gravity loads must be calculated based on the overall truss length (horizontal projection), including eave or cornice projections.

(d) *Testing procedures.* Either the testing method in paragraph (d)(1) or (d)(2) of this section may be used, and the testing method in paragraph (d)(3) of this section must be used, to test trusses to establish compliance with the provisions of these standards.

(1) *Proof load truss test procedure.* At least three average quality/consecutively tested trusses must pass all requirements of the test, for initial qualification of the truss design. All tests for initial qualification of the truss designs evaluated by this procedure must be certified by a Registered Engineer or Registered Architect, or by an independent third-party agency. An in-house quality control and follow-up testing program (see paragraphs (e) and (f) of this section) must be approved prior to entering production of any truss design evaluated by this procedure.

(i) *Dead load.* Measure and record initial elevation of the truss or trusses in the test position at no load. Apply dead loads to the top and bottom chords of the truss that are representative of the actual weights of materials to be supported by the truss. However, the dead load may be applied as indicated in paragraph (e)(4) of this section for ongoing follow-up testing only. Dead loads to be applied to the truss test assembly are permitted to include only the weights of materials supported by the truss and not the weight of the truss itself. However, readings from load cells

(when used) on which the test truss rests must reflect the sum of the applied load plus the weight of the truss. Apply dead loads and hold for 5 minutes. Measure and record the deflections.

(ii) *Live load.* Maintaining the dead loads, apply live load to the top chord in approximate 1/4 live load increments until dead load plus the live load is reached. Measure and record the deflections no sooner than one minute after each 1/4 live load increment has been applied and 5 minutes after the full live load has been reached.

(iii) *Initial recovery phase.* Remove the design live load but not the dead load. Measure and record the deflections 5 minutes after the total live load has been removed.

(iv) Continue to load the truss to dead load plus 2.0 times the design live load. Maintain this loading for 6 hours and inspect the truss for failure. Failure is rupture, fracture, or excessive yielding.

(v) *Final recovery phase.* Remove 2.0 times the design live load, but not the dead load. Measure and record deflections within 4 hours after removing 2.0 times the design live load.

(vi) *Acceptance criteria.* The truss design shall be considered to have passed if all of the following conditions are met:

(A) The maximum deflection between no load and dead load must be  $L/480$  or less for simply supported clear spans and  $L_0/180$  or less for eave and cornice projections; and

(B) The maximum deflection between dead load and design live load must be  $L/180$  or less for simply supported clear spans and  $L_0/90$  or less for eave and cornice projections; and

(C) After the design live load is removed and with the dead load still applied, the maximum recovery deflection must be  $L/360$  or less for simply supported spans and  $L_0/180$  or less for eave and cornice projections; and

(D) The truss must maintain the overload condition for 6 hours without rupture or fracture, or excessive yielding; and

(E) After 2.0 times the design live load has been removed, and with the dead load still applied, the maximum recovery deflection must be  $L/180$  or less for simply supported clear spans and  $L_0/90$  or less for eave and cornice projections; and

(F) As applicable, each truss design must also meet all requirements for uplift loads required by paragraph (d)(3) of this section. For Wind Zone I uplift load requirements, see paragraph (d)(3)(i) of this section. For Wind Zones II and III uplift load requirements, see paragraph (d)(3)(ii) of this section.

(2) *Ultimate load truss test procedure.*

(i) At least three average quality/consecutively tested trusses must pass all requirements of the test, for initial qualification of the truss design. All tests for initial qualification of the truss designs evaluated by this procedure must be certified by a Registered Engineer or Registered Architect, or by an independent third-party agency. An in-house quality control and follow-up testing program (see paragraphs (e) and (f) of this section) must be approved prior to entering production of any truss design evaluated by this procedure.

(ii) *Dead load.* Measure and record initial elevation of the truss or trusses in the test position at no load. Apply dead loads to the top and bottom chords of the truss that are representative of the actual weights of materials to be supported by the truss. However, the dead load may be applied as indicated in paragraph (e)(4) of this section for ongoing follow-up testing only. Dead loads to be applied to the truss test assembly shall be permitted to include only the weights of materials supported by the truss, and not the weight of the truss itself. However, readings from load cells (when used) on which the test truss rests must reflect the sum of the applied load plus the weight of the truss. Apply dead loads and hold for 5 minutes. Measure and record the deflections.

(iii) *Live load.* Maintaining the dead loads, apply live load at a uniform rate to the top chord in approximate 1/4 live load increments until the dead load plus the live load is reached. Measure and record the deflections no sooner than one minute after each 1/4 live load increment has been applied and 5 minutes after the full live load has been reached.

(iv) *Initial recovery phase.* Remove the design live load but not the dead load. Measure and record the deflections 5 minutes after the design live load has been removed.

(v) *Overload phase.* After the recovery phase is completed, reapply the full live load to the truss assembly. Additional loading shall then be applied continuously until the dead load plus 2.5 times the design live load is reached. This overload condition must be maintained for at least 5 minutes.

(vi) *Final recovery phase.* Remove 2.5 times the design live load but not the dead load. Measure and record deflections within 4 hours after 2.5 times the design live load has been removed.

(vii) *Acceptance criteria.* The truss design is considered to be acceptable if all of the following conditions are met:

(A) The maximum deflection between no load and dead load must be  $L/480$  or less for simply supported clear spans and  $Lo/180$  or less for eave and cornice projections; and

(B) Dead load-to-design live load deflections shall be  $L/180$  or less for simply supported clear spans and  $Lo/90$  or less for eave and cornice projections; and

(C) After the design live load is removed and with the dead load still applied, the maximum recovery deflection must be  $L/360$  or less for simply supported spans and  $Lo/180$  or less for eave and cornice projections; and

(D) The truss shall maintain the overload condition for 5 minutes without rupture, fracture, or excessive yielding; and

(E) After 2.5 times the design live load is removed and with the dead load still applied, the truss must recover to at least  $L/180$  for simply supported clear spans, and  $Lo/90$  for eave and cornice within 4 hours after the total live load has been removed; and

(F) As applicable, each truss design must also meet all requirements for uplift loads in Wind Zone I or Wind Zone II and III, as required by paragraph (d)(3) of this section. For Wind Zone I uplift load requirements, *see* paragraph (d)(3)(i) of this section. For Wind Zones

II and III uplift load requirements, *see* paragraph (d)(3)(ii) of this section.

(3) *Uplift load tests.* Each truss design must also pass all requirements of the uplift load test, as applicable, in paragraph (d)(3)(i) or (d)(3)(ii) and paragraphs (d)(3)(iii) and (d)(3)(iv) of this section.

(i) *Wind Zone I uplift load test.* Where there are engineered connectors between the top chord and web members of the truss, such as metal connector plates or wood gussets or their equivalents, uplift testing in Wind Zone I is at the discretion of the Registered Engineer or Registered Architect or independent third-party agency certifying the truss design. When testing is deemed necessary by the Registered Engineer or Registered Architect or independent third-party agency certifying the truss design, a minimum of one average quality uplift load test is to be conducted for each such truss design and must pass all requirements of the test for initial qualification of the truss design. The net uplift load for trusses designed for use in Wind Zone I is 9 psf for the clear span of the truss and 22.5 psf for eave or cornice projections.

(ii) *Wind Zones II and III uplift loads test.* This test is required for all trusses designed for use in Wind Zones II and

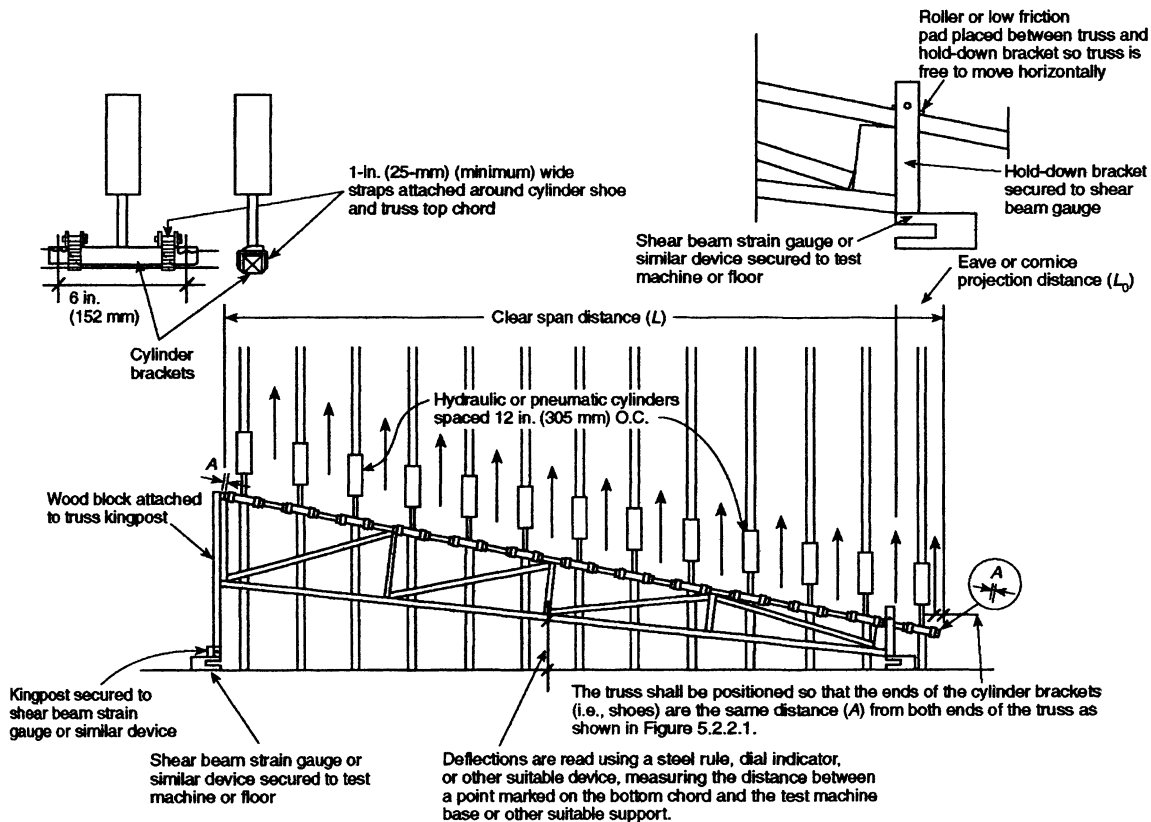
III. A minimum of three average quality/consecutive uplift load tests are to be conducted for each truss design, and the trusses must pass all requirements of the test for initial qualification of the truss design. The uplift load for trusses designed to be used in Wind Zones II and III for the clear span or eave cornice projections is to be determined by subtracting the dead load applied to the truss from the uplift load provided in the Table of Design Wind Pressures in § 3280.305(c)(1)(ii)(B).

(iii) Trusses designed for use in Wind Zone I, when tested (*see* paragraph (d)(3)(i) of this section), must be tested in either the inverted position to 2.5 times the net wind uplift load or in the upright position to 1.75 times the net wind uplift load. Trusses designed for use in Wind Zones II and III (*see* paragraph (d)(3)(ii) of this section) must be tested to 1.75 times the uplift load minus the dead load in the upright position. (*See* Figure 3280.402(b)(3).)

(iv) The following describes how to conduct the uplift test with the truss in the upright position. Similar procedures must be used if conducting the test in the inverted position.

(A) Place the truss in the test fixture and position as it is intended to be installed in the manufactured home. *See* Figure 3280.402(b)(3).

Figure 3280.402(b)(3) – Test set-up for roof trusses tested for uplift in the upright position.



(B) Position the load measurement devices to register the wind uplift loads that will be applied to the top chord of the truss. The uplift loads shall be applied through tension devices not wider than one inch and spaced not greater than approximately 12 inches on center and shall be applied as uniform as possible, so as to simulate uniform loading. Gravity and wind uplift load tests may be performed on the same truss in this single set-up mode. For the wind uplift test, it is permissible to stabilize the bottom chord of the truss in the test fixture to simulate ceiling materials or purlin supports. Measure and record the initial elevation of the bottom chord of the truss in the test position at the mid-span and quarter points of the truss, and at the free end of an eave or cornice projection greater than 12 inches. Scissors or other unique truss configurations are to be measured at as many additional bottom chord panel points as necessary to obtain an accurate representation of the deflected shape of the truss, so as to be able to locate and record the point(s) of maximum deflection. Eave or cornice projection loads are applied separately for eaves or cornice projections greater than 12 inches. For eave or cornice projections greater than 12 inches, the

additional required load must be applied to the eave simultaneously with the main body load. For eave or cornice projection 12 inches or less, add the additional required load to the main body load and apply it to the entire top chord.

(C) Measure and record the deflection 5 minutes after the net uplift load has been applied. Design load deflection shall be  $L/180$  or less for a simply supported clear span and  $L_e/90$  or less for eave or cornice projections.

(D) For trusses tested in the upright position, continue to load the truss to 1.75 times the net uplift load in paragraph (d)(3)(i) of this section for Wind Zone I and 1.75 times the uplift load in paragraph (d)(3)(ii) for Wind Zones II and III, and maintain the load for one minute. For trusses tested in the inverted position (Wind Zone I only), continue to load the truss to 2.50 times the net uplift load in paragraph (i) for Wind Zone I, and maintain the full load for 3 hours. Regardless of the test position of the truss, upright or inverted, trusses must maintain the overload for the specified time period without rupture, fracture, or excessive yielding.

(E) Follow-up Testing. Follow-up testing procedures must include the following:

(1) All trusses qualifying under these test procedures must be subject to a quality control and follow-up testing program. Manufacturers of listed or labeled trusses must follow an in-house quality control program, with follow-up testing approved by an independent third party as specified in § 3280.402(f). Those home manufacturers producing trusses for their own use, and which are not listed or labeled, must have an in-house quality control program that includes follow-up testing, as specified in this section, and approved by their Design Approval Primary Inspection Agency (DAPIA).

(2) Truss designs that are qualified but not in production are not subject to follow-up testing until produced. When the truss design is brought into production, a follow-up test is to be performed if the truss design has been out of production for more than 6 months.

(3) The frequency of truss manufacturer's quality control follow-up testing for trusses must be at least:

(i) One test for every 2,500 trusses for trusses qualified under the proof load truss test procedure or once every 6

months, whichever is more frequent, for every truss design produced; or

(ii) One test for every 4,000 trusses produced for trusses qualified under the ultimate load truss test procedure or once every 6 months, whichever is more frequent, for every truss design produced.

(iii) Uplift load tests are also to be conducted at the same follow-up testing frequency in paragraph (e)(3)(i) or paragraph (e)(3)(ii) of this section for trusses designed for use in Wind Zones II and III.

(4) For follow-up testing only, the full dead load may be applied to the top chord of the truss, when the bottom chord dead load is 5 psf or less.

(F) In-house quality control program. The in-house quality control program must include, at a minimum, procedures for quality of materials including, but not limited to, grade(s) of materials, allowable splits, knots, and other applicable lumber qualities; workmanship including, but not limited to, plate placement and embedment tolerances; other manufacturing tolerances; description and calibration of test equipment; truss re-testing criteria; and procedures in the event of noncomplying results.

Dated: May 4, 2010.

**David H. Stevens,**

*Assistant Secretary for Housing—Federal Housing Commissioner.*

[FR Doc. 2010-14277 Filed 6-15-10; 8:45 am]

**BILLING CODE 4210-67-P**

## POSTAL REGULATORY COMMISSION

### 39 CFR Part 3010

[Docket No. RM2010-9; Order No. 469]

#### Postal Pricing Methods

**AGENCY:** Postal Regulatory Commission.

**ACTION:** Notice of proposed rulemaking.

**SUMMARY:** The Commission is initiating an investigation into the methodologies for estimating volume changes due to pricing incentive programs. If a change in analytical principles is warranted, the Commission may propose a specific methodology for adoption. This document announces establishment of a docket to consider this investigation and provides an opportunity for public comment.

**DATES:** Initial comments are due July 16, 2010. Reply comments are due August 16, 2010.

**ADDRESSES:** Submit comments electronically via the Commission's Filing Online system at <http://www.prc.gov>. Commenters who cannot

submit their views electronically should contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section by telephone for advice on alternatives to electronic filing.

**FOR FURTHER INFORMATION CONTACT:** Stephen L. Sharfman, General Counsel, at [stephen.sharfman@prc.gov](mailto:stephen.sharfman@prc.gov) or 202-789-6824.

#### SUPPLEMENTARY INFORMATION:

##### Table of Contents

- I. Introduction
- II. Background
- III. Established Methodology
- IV. Methodologies for Estimating Short-Term Volume Changes
- V. Comments
- VI. Ordering Paragraphs

#### I. Introduction

The Commission is initiating this proceeding to investigate methodologies for estimating volume changes due to pricing incentive programs. Upon consideration of various methodologies, the Commission may, if a change in analytical principles is warranted, propose a specific methodology for adoption. Initial comments are due 30 days from publication of this notice in the **Federal Register**.

#### II. Background

In the past year, the Postal Service has conducted two pricing incentive programs, and a third program is scheduled to begin in July. The purpose of the incentive programs is to generate new volume and additional revenue. Rebates are offered to mailers who mail more pieces than they would mail without rebates. The first of these programs occurred in the summer of 2009.<sup>1</sup> This program offered rebates of 30 percent to Standard mailers who increased their volume above the same period in 2008 (SPLY) adjusted for each mailer's volume trend. The Commission evaluated this program in the recently issued 2009 Annual Compliance Determination (2009 ACD). In the 2009 ACD, the Commission noted that the Postal Service had developed a new methodology for estimating the profitability of the program. That methodology produced an estimated \$24.1 million contribution to institutional costs, while the Commission's traditional estimating methodology produced a negative contribution of \$36.9 million. The Commission announced that it would conduct a rulemaking to "explore the

<sup>1</sup> The second incentive program occurred in the fall of 2010, and offered rebates of 20 percent to bulk First-Class mailers. Docket No. R2009-5, Order Approving First-Class Mail Incentive Pricing Program, September 16, 2009.

merits of these alternate methodologies \* \* \* ." 2009 ACD at 88.

On February 26, 2010, the Postal Service filed notice of another Standard Mail pricing incentive program. The Commission established a docket to consider the incentive program and appointed a Public Representative.<sup>2</sup> The Public Representative proposed a third methodology for estimating the profitability of pricing incentive programs.<sup>3</sup> Another commenter, Robert W. Mitchell, described several qualitative adjustments to the Commission's established methodology.<sup>4</sup>

Estimating the profitability of a pricing incentive program depends on accurately estimating what volume of mail mailers would mail in the absence of a rebate. Rebates for mail volume that would have been sent without a rebate result in a loss of contribution. However, it is not possible to know ahead of time what volume a mailer would have sent without a rebate. The Commission evaluates the profitability of rebate programs after the fact by applying a measure of price sensitivity (elasticity) to volumes actually mailed during the rebate program. This method is described in the next section.

#### III. Established Methodology

The Commission's experience with pricing incentive programs began in Docket No. MC2002-2.<sup>5</sup> The Postal Service had negotiated declining block rates with Capital One Services, Inc. (Capital One). The essential feature of a declining block rate is that a customer must purchase a minimum quantity to be eligible for a reduced rate. The reduced rate then applies only to quantity in excess of the minimum. So long as the reduced rate covers cost, the additional volume is profitable. This assumes that the minimum quantity (or threshold) is set at the quantity the customer would have purchased at regular rates.

In fact, the Postal Service cannot know what a mailer would have mailed at regular rates. There is always a possibility that the threshold is set below the volume the mailer would have mailed. In this situation, the Postal Service loses revenue on pieces that

<sup>2</sup> Docket No. R2010-3, Notice and Order Concerning Standard Mail Volume Incentive Pricing Program, March 2, 2010.

<sup>3</sup> Docket No. R2010-3, Comments of the Public Representatives, March 22, 2010, at 9-10, 15-16.

<sup>4</sup> Docket No. R2010-3, Comments of Robert W. Mitchell on Proposed Summer Sale 2010, March 22, 2010 (Mitchell Comments).

<sup>5</sup> Docket No. MC2002-2, Opinion and Recommended Decision, May 15, 2003; see also Errata Notice, May 21, 2003.