

**STATE OF MISSOURI
PUBLIC SERVICE COMMISSION
JEFFERSON CITY
December 14, 2001**

CASE NO: MX-2000-444

Office of the Public Counsel
P.O. Box 7800
Jefferson City, MO 65102

General Counsel
Missouri Public Service Commission
P.O. Box 360
Jefferson City, MO 65102

Enclosed find certified copy of a ORDER OF RULEMAKING in the above-numbered case(s).

Sincerely,

A handwritten signature in black ink that reads "Dale Hardy Roberts". The signature is written in a cursive, slightly slanted style.

**Dale Hardy Roberts
Secretary/Chief Regulatory Law Judge**

CSR 240-123.040 shall specify the Seismic Zone for which the unit is built as well as the location where the unit will be placed. If a unit is built for open placement throughout the state of Missouri, it must be built to Seismic Zone Three requirements.

(6) Each modular unit shall bear a data plate affixed in a permanent manner near the main electrical panel or other readily accessible and visible location. Each data plate must be covered with a material that will make it possible to clean the data plate of ordinary dirt without obscuring the information. Each data plate shall include the following information at a minimum: name and address of manufacturer, serial and model number of the unit, date the unit was manufactured, code the unit was built to, Seismic Zone listing, name and address of third party engineering agency that reviewed and approved the plans submitted by the manufacturer under 4 CSR 240-123.040.

(7) All modular units manufactured on or after July 1, 1976, shall be set up or installed according to the manufacturer's installation manual.

Title 4—DEPARTMENT OF ECONOMIC DEVELOPMENT

Division 240—Public Service Commission

Chapter 124—Manufactured Home Tie-Down Systems

ORDER OF RULEMAKING

By the authority vested in the Missouri Public Service Commission under section 700.076, RSMo 2000, the commission amends a rule as follows:

4 CSR 240-124.010 Definitions is amended.

A notice of proposed rulemaking containing the text of the proposed amendment was published in the *Missouri Register* on July 16, 2001 (26 MoReg 1446-1447). No changes have been made in the text of the proposed amendment, so it is not reprinted here. This proposed amendment becomes effective thirty (30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: No comments were received.

Title 4—DEPARTMENT OF ECONOMIC DEVELOPMENT

Division 240—Public Service Commission

Chapter 124—Manufactured Home Tie-Down Systems

ORDER OF RULEMAKING

By the authority vested in the Missouri Public Service Commission under section 700.076, RSMo 2000, the commission amends a rule as follows:

4 CSR 240-124.040 is amended.

A notice of proposed rulemaking containing the text of the proposed amendment was published in the *Missouri Register* on July 16, 2001 (26 MoReg 1447). Changes have been made in the text of the proposed amendment and are reprinted here. This proposed amendment becomes effective thirty (30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: Written comments were submitted by the Missouri Manufactured Housing Association (Association). There was no public hearing held. The Association submitted comments concerning amended rule: 4 CSR 240-124.040. As a result

of the Association's comments, changes have been made to five sections of 4 CSR 240-124.040.

COMMENT: 4 CSR 240-124.040(2)(E) sets out the requirements for approval of anchor systems. Paragraph (2)(E)1., provides for the submittal of detailed drawings of proposed anchor systems. The Association believes that installation instructions should also accompany all approval applications.

RESPONSE AND EXPLANATION OF CHANGE: The Commission agrees that installation instruction should accompany all anchoring system approval applications. The Commission proposes that (2)(E)1. be revised to reflect this change.

COMMENT: 4 CSR 240-124.040 (2)(E)1.B., requires each drawing to bear a seal of a registered professional engineer, registered in the State of Missouri. The Association believes it is an unnecessary duplication of effort and unnecessary expense to require the seal of a Missouri registered engineer, and that the Commission should allow certification reciprocity with other States. Therefore, the Association proposes to reword subparagraph (2)(E)1.B. as follows: Each drawing and installation instruction shall bear the seal of a registered professional engineer.

RESPONSE: A requirement for receiving approval to become a third party engineering agency for purposes of representing the Missouri modular unit program is to have a Missouri registered engineer employed by the agency. The modular unit program has not required that drawings bear the seal of that particular engineer. However it is required that the engineering firm place its seal on all drawings being submitted for approval. Therefore, the Commission believes the text in 4 CSR 240-124.040(2)(E)1.B. is sufficient and should not be changed.

COMMENT: 4 CSR 240-124.040(2)(E)2., requires each anchor system model to be tested and verified by an "approved testing agency." The rule does not define "approved testing agency" nor does it set out a list of approved testing agencies. The Association believes a definition of "approved testing agencies," or a list of approved testing agencies be included in the rule.

RESPONSE AND EXPLANATION OF CHANGE: The Commission agrees that the term "approved testing agency" should be clarified. Therefore, the Commission proposes that this rule be revised to clarify or restate this requirement.

COMMENT: 4 CSR 240-124.040(2)(E)2.A., requires that an "authorized representative" must issue a certification concerning the pullout tests to be performed on each anchor system model. The rule does not define or identify the authorized representative and the Association believes that for the sake of clarity the term "authorized representative" should be defined.

RESPONSE AND EXPLANATION OF CHANGE: The Commission agrees that the term "authorized representative" should be clarified, and proposes that this rule be revised to clarify or restate this requirement.

COMMENT: 4 CSR 240-124.040(2)(E)2.A., also requires that each anchor tested must be "pulled at a 45 degree angle." A review of anchor manufacturer's instructions reveals that a pullout angle of between 40-degrees and 50-degrees is acceptable. The Association maintains that registered engineers have stated that a tolerance of plus or minus five degrees meets acceptable engineering standards, and that it would be virtually impossible for a testing agency to certify that a precise angle of 45-degrees was maintained throughout the tests.

RESPONSE AND EXPLANATION OF CHANGE: The Commission agrees that the above reference in subparagraph (2)(E)2.A. "pulled at a 45-degree angle," can be revised to state, "pulled at an angle between 40-degrees and 50-degrees."

COMMENT: 4 CSR 240-124.040(2)(E)2.B., provides "failure and ultimate load capacity tests shall be performed on three samples of each component part and must also be witnessed by the authorized representative." The Association believes that the testing required by this subsection duplicates the tests required by subparagraph (2)(E)2.C., and suggests that subparagraph (2)(E)2.B. be deleted.

RESPONSE: The Commission believes that subparagraph (2)(E)2.B. simply states the fact that load capacity tests must be performed on three samples of each component of an anchoring system and must be witnessed. Subparagraph (2)(E)2.C. expands further to explain the details of those tests. The Commission believes that the text in subparagraph (2)(E)2.B. is sufficient.

COMMENT: 4 CSR 240-124.040(2)(E)2.C., provides "The anchor will be approved for all soil test probe values at or above the soil test probe value in which the anchor is tested." This language applies to pullout tests conducted in the field and is inappropriately placed in the subsection dealing with laboratory tests. This sentence should be deleted from subparagraph (2)(E)2.C. and incorporated into subparagraph (2)(E)2.A.

RESPONSE AND EXPLANATION OF CHANGE: The Commission agrees that the language mentioned is out of place and should be deleted from subparagraph (2)(E)2.C. and placed in subparagraph (2)(E)2.A.

4 CSR 240-124.040 Commission Approval of Manufactured Home Tie-Down Systems

(2) Applications for an approval shall be submitted to the director and shall be executed by the owner or seller of the system on forms that shall be provided by the director upon request. To be complete, the applications shall include:

(E) A copy of the plans and specifications of the system for which the approval is sought.

1. Detailed drawings and installation instructions of each type of anchor system and for each type of component for which approval is sought must accompany the submittal;

A. Each drawing shall show model identification, all dimensions, types of welds or fastening, types of material, methods of securing strap, methods of attachment, orientation after installation in soil, direction(s) of applied load(s), and location of model number on the system and each component.

B. Each drawing shall bear the seal of a registered professional engineer, registered in the state of Missouri.

2. Each anchor system model must be tested and certified by a recognized testing agency to be in conformance with the standards promulgated by the commission and accepted engineering practice.

A. Pullout tests shall be performed on three (3) samples of each anchor system model and the failure load for all three (3) tests must equal or exceed four thousand seven hundred twenty-five (4,725) pounds. An authorized representative of the commission must certify that three (3) pullout tests were performed on each anchor system model. The anchor shall be installed with the specified tie attached, in a soil type for which the anchor is designed and pulled at an angle between forty degrees (40°) and fifty degrees (50°). The anchor will be approved for all soil test probe values at or above the soil test probe value in which the anchor is tested. The device shall be set up as required by the installation instructions. The test report shall include a photograph or drawing. The load at failure and the type of failure shall be described. The anchoring system must be capable of meeting or exceeding the Zone 1 wind load requirements of the Federal Manufactured Home Construction and Safety Standards 24 CFR 3280.306.

B. Failure and ultimate load capacity tests shall be performed on three (3) samples of each component part and must also be witnessed by an authorized representative of the commission.

C. Laboratory destruction tests shall be performed on each anchor system model and the failure load must equal or exceed four thousand seven hundred twenty-five (4,725) pounds. These tests are needed to establish the required strengths of the components and component connections of an anchor.

3. The result from each test will indicate:

- A. Point and mode of failure;
- B. Force required for failure;
- C. Description of test procedure;
- D. Test equipment used.

4. The report of the results of the test in specified soil or rock groups will also include:

- A. Method of installation;
- B. Date of installation;
- C. Date of test;
- D. Soil profile description and soil test probe values.

5. The anchor manufacturer shall furnish and ship with each anchoring system, information on the types of soil in which the anchor has been tested and certified for installation, instructions on the method of installation, and procedure for identifying soil types. A copy of the installation instructions must be filed with the director.

6. The director, upon receipt of new or additional information relating to the performance of any anchoring system, or a similar anchoring system, may request from the manufacturer of that anchoring system, additional testing or supplemental information.

7. Rock anchors shall be tested in specified rock. Rock anchors shall be field-tested in natural rock strata or in a rock sample. There must be twelve-inch (12") minimum radius of rock around the drilled hole. The natural rock strata or rock sample must be geologically described;

Title 4—DEPARTMENT OF ECONOMIC DEVELOPMENT

Division 240—Public Service Commission Chapter 124—Manufactured Home Tie-Down Systems

ORDER OF RULEMAKING

By the authority vested in the Missouri Public Service Commission under section 700.076, RSMo 2000, the commission adopts a rule as follows:

4 CSR 240-124.045 is adopted.

A notice of proposed rulemaking containing the text of the proposed rule was published in the *Missouri Register* on July 16, 2001 (26 MoReg 1447-1456). Changes have been made in the text of the proposed rule, and are reprinted here. This proposed rule becomes effective thirty (30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: Written comments were submitted by the Missouri Manufactured Housing Association (Association). There was no public hearing held. The Association submitted comments concerning the following proposed rule: 4 CSR 240-124.045.

COMMENT: 4 CSR 240-124.045(1)(C), defines anchoring systems as follows: "Anchoring systems means a combination of ties, anchoring equipment, and ground anchors that will, when properly designed and installed, resist overturning and lateral movement of the manufactured home from wind forces." The Association maintains that the use of the words "ground anchors" is too restrictive, and further maintains that the use of the word "ground" in the definition creates an unnecessary limitation. The Association suggests that the word "ground" be deleted from the definition.

STATE OF MISSOURI

OFFICE OF THE PUBLIC SERVICE COMMISSION

I have compared the preceding copy with the original on file in this office and

I do hereby certify the same to be a true copy therefrom and the whole thereof.

WITNESS my hand and seal of the Public Service Commission, at Jefferson City,

Missouri, this 14th day of Dec. 2001.

Dale Hardy Roberts

Dale Hardy Roberts
Secretary/Chief Regulatory Law Judge

