

CODE CHANGE PROPOSAL

Code Sections/Tables/Figures Proposed for Revision (3.3.2): Section 202

Name/Company/Representing (3.3.1):

Tom Neltner, National Center for Healthy Housing and Alliance for Healthy Housing

Proposal: NOTE: PLEASE READ ITEM 5) of the first page of this form for formatting instructions.

Revise as follows:

EXTERMINATION. The control and elimination of insects, rodents or other pests by eliminating their harborage places; by removing or making inaccessible materials that serve as their food or water; by trapping; and, when necessary, by use of registered pesticides consistent with label instructions in a manner that effectively controls the pest with the lowest exposure to occupants. ~~by poison spraying, fumigating, trapping or by any other approved pest elimination methods.~~

Supporting Information (3.3.4 & 3.4):

The current language has several shortcomings:

1. It does not address the need to restrict pests' access to water. Pests such as cockroaches and mice rely on regular sources of moisture to survive. Because many pests eat standard building materials, controlling food without controlling water is not effective extermination.
2. The term "poison spraying" is too narrow: some effective pesticides are not poisons. Pesticide is the more common and appropriate term.
3. In the United States and in most countries, pesticides must be registered by the federal government and used in a manner consistent with the label instructions.
4. The specification of spraying and fumigating suggests that those methods are preferred over other methods and may be interpreted as a requirement. However, current research indicates that many pests are more effectively controlled by baits containing pesticides or insect growth regulators. Spraying and fumigating are not particularly effective methods for controlling rodents and cockroaches, and exposure to pesticides through spraying and fumigation endangers human health. See Comparison of Costs and Effectiveness for Cockroach Control Case Study at http://www.healthyhometraining.org/ipm/Case_Study_Costs.pdf to compare the latest research.

The proposed language addresses these shortcomings by adding water to the list of materials that should be inaccessible; by using updated terms; by requiring compliance with the label instructions; and by setting performance standards for the selection of the pesticide. The pesticide needs to effectively control the pest and reduce exposure to occupants. Exposure is a reasonable surrogate for risk to occupants and is more easily assessed by a code inspector.

Referenced Standards (3.4 & 3.6):

None

Cost Impact (3.3.4.6):

The proposal will not increase the cost of construction or the cost of maintaining and operating existing buildings. If implemented, it should reduce the costs of maintaining and operating existing buildings.



INTERNATIONAL
CODE COUNCIL®

PUBLIC CODE CHANGE PROPOSAL FORM FOR PUBLIC PROPOSALS IN THE INTERNATIONAL CODES

2007/2008 CODE DEVELOPMENT CYCLE

- 1) **Name:** Jane Malone **Date:** August 20, 2007
Jurisdiction/Company: Alliance for Healthy Homes
Submitted on Behalf of: Alliance for Healthy Homes and National Center for Healthy Housing

Address: PO Box 75941
City: Washington **State:** DC **Zip Code:** 20002
Phone: 202.730.0880 **Ext.:** **Fax:** **E-mail address:** jmalone@afh.org

- 2) **Copyright Release:** If you have previously executed the copyright release, please check the box below:
 2007/2008 Cycle copyright release on file (faxed August 15, 2007)
- 3) **International Code(s) associated with this Public Proposal:** IPCM

CODE CHANGE PROPOSAL

Code Sections/Tables/Figures Proposed for Revision (3.3.2):

304.2

Name/Company/Representing (3.3.1):

Jane Malone for the Alliance for Healthy Homes and National Center for Healthy Housing

Proposal:

Revise as follows

304.2 Protective treatment. All exterior surfaces, including but not limited to, doors, door and window frames, cornices, porches, trim, balconies, decks and fences shall be maintained in good condition. Exterior wood surfaces, other than decay-resistant woods, shall be protected from the elements and decay by painting or other protective covering or treatment. Peeling, flaking and chipped paint shall be eliminated and surfaces repainted. All siding and masonry joints as well as those between the building envelope and the perimeter of windows, doors, and skylights shall be maintained weather resistant and water tight. All metal surfaces subject to rust or corrosion shall be coated to inhibit such rust and corrosion and all surfaces with rust or corrosion shall be stabilized and coated to inhibit future rust and corrosion. Oxidation stains shall be removed from exterior surfaces. Surfaces designed for stabilization by oxidation are exempt from this requirement.

304.2.1 Lead-Based Paint. Deteriorated paint on the exterior of property built before 1978 shall be repaired using approved lead-safe work practices, unless documentation exists that the paint does not contain lead. The following repair methods shall not be used on painted surfaces: open flame burning or torching; machine sanding, machine grinding, abrasive blasting or sandblasting without a high-efficiency particulate air (HEPA) local exhaust control; heat guns operating above 1100 degrees Fahrenheit or charring the paint; dry sanding; dry scraping except in conjunction with heat guns or within 1.0 ft. of electrical outlets or when treating defective paint totaling no more than 10 sq. ft. on any one interior surface; and paint stripping using a solvent that contains methylene chloride without enclosure.

EXCEPTIONS (to 304.2.1):

1. Property built after lead-based paint was banned
2. Painted surfaces proven to contain no lead-based paint

Supporting Information (3.3.4 & 3.4):

The purpose of this proposed addition to Code requirements for the surfaces of the exterior structure is to incorporate measures that reflect current knowledge about managing lead-based paint and thereby prevent lead poisoning. These changes would require, only in properties likely to contain lead-based paint, safe repair of deteriorated paint that is likely to contain lead. Multiple studies have demonstrated that lead dust, which is caused by deteriorated lead-based paint and some methods of paint repair, is the major source of lead exposure for young children. The dangers associated with exposure to lead-based paint hazards are well-known: lead is associated with a range of serious health effects on children, including detrimental effects on cognitive and behavioral development with serious personal and social consequences that may persist throughout their lifetime. More than 36 million pre-1978 US housing units contain lead-based paint.

The current Code fails to specifically require, in older properties that are likely to contain lead-based paint, the use of

precautionary practices in order to prevent the dispersal of lead before, during, and after the repair work, in the course of complying with subsection 304.2's requirement to repair peeling, flaking, and chipped paint. The proposal improves the current Code by adding a health-protective requirement to perform the repair safely around lead-based paint. The addition of the proposed sub-subsection will protect children from lead poisoning by specifying the use of approved lead safe work practices in making the required repairs and prohibiting extremely dangerous methods of paint repair. "Approved" lead-safe work practices may include established methods promulgated by federal agencies and standards bodies.

The proposed new sub-sub-section contains two exceptions to the requirement: properties built after lead was banned from paint used in residential properties (1977 US; earlier in some US cities; 1909 France, Belgium, Austria), and where the deteriorated paint has been documented to not contain lead (such as by a lead-based paint inspection or risk assessment, or through completion of another government-approved test method or ANSI standard).

Referenced Standards (3.4 & 3.6):

Cost Impact (3.3.4.6):

The code change proposal will increase the cost of property maintenance.



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CODE CHANGE PROPOSAL

Code Sections/Tables/Figures Proposed for Revision (3.3.2): 305.3
Name/Company/Representing (3.3.1): Jane Malone for the Alliance for Healthy Homes and National Center for Healthy Housing
Proposal: Revise as follows 305.3 Interior surfaces. All interior surfaces, including windows and doors, shall be maintained in good, clean and sanitary condition. Peeling, chipping, flaking or abraded paint shall be repaired, removed or covered. Cracked or loose plaster, decayed wood and other defective conditions shall be corrected. <u>If moisture is the cause of paint deterioration or other defective surface conditions, the cause of the moisture shall be corrected.</u> 305.3.1 Lead-Based Paint. Deteriorated paint in property built before 1978 shall be repaired using approved lead-safe work practices, unless documentation exists that the paint does not contain lead. The following repair methods shall not be used on painted surfaces: <u>open flame burning or torching; machine sanding, machine grinding, abrasive blasting or sandblasting without a high-efficiency particulate air (HEPA) local exhaust control; heat guns operating above 1100 degrees Fahrenheit or charring the paint; dry sanding; dry scraping except in conjunction with heat guns or within 1.0 ft. of electrical outlets or when treating defective paint totaling no more than 2 sq. ft. in any one interior room or space; and paint stripping using a solvent that contains methylene chloride without powered mechanical ventilation.</u> EXCEPTIONS (to 305.3.1): 1. <u>Property built after lead-based paint was banned</u> 2. <u>Painted surfaces proven to contain no lead-based paint</u>
Supporting Information (3.3.4 & 3.4): The purpose of this proposed addition to Code requirements for the surfaces of the interior structure is to incorporate measures that reflect current knowledge about managing lead-based paint and excessive moisture and thereby prevent lead poisoning and mold. These changes would require the correction of underlying moisture problems in all properties, and, require, only in properties likely to contain lead-based paint, safe repair of deteriorated paint that is likely to contain lead. Multiple studies have demonstrated that lead dust, which is caused by deteriorated lead-based paint and some methods of paint repair, is the major source of lead exposure for young children. The dangers associated with exposure to lead-based paint hazards are well-known: lead is associated with a range of serious health effects on children, including detrimental effects on cognitive and behavioral development with serious personal and social consequences that may persist throughout their lifetime. More than 36 million pre-1978 US housing units contain lead-based paint. The current Code is inadequate by failing to specifically require correction of surface evidence of a moisture problem. The first change requires repair of underlying moisture problem: "If moisture is the cause of paint deterioration or other defective surface conditions, the cause of the moisture shall be corrected." The result of this requirement will be prevention of paint deterioration, which is hazardous in older property that may contain lead-based paint, as well as the cessation of moisture

problems in wall coverings and other building materials that can lead to mold, infestation, and structural problems in any property.

305.3.1. The current Code fails to specifically require, in older properties that are likely to contain lead-based paint, the use of precautionary practices in order to prevent the dispersal of lead before, during, and after the repair work, in the course of complying with subsection 305.3's requirement to repair peeling, chipping, flaking or abraded paint. The proposal improves the current Code by adding a health-protective requirement to perform the repair safely around lead-based paint, a subject currently acknowledged in the Commentary but not in the Code. The addition of the proposed sub-subsection will protect children from lead poisoning by specifying the use of approved lead safe work practices in making the required repairs and prohibiting extremely dangerous methods of paint repair. "Approved" lead-safe work practices may include established methods promulgated by federal agencies and standards bodies.

The proposed new sub-sub-section contains two exceptions to the requirement: properties built after lead was banned from paint used in residential properties (1977 US; earlier in some US cities; 1909 France, Belgium, Austria), and where the deteriorated paint has been documented to not contain lead (such as by a lead-based paint inspection or risk assessment, or through completion of another government-approved test method or ANSI standard).

Referenced Standards (3.4 & 3.6):

Cost Impact (3.3.4.6):

The code change proposal will increase the cost of property maintenance.

CODE CHANGE PROPOSAL

Code Sections/Tables/Figures Proposed for Revision (3.3.2): 306.1.1

Name/Company/Representing (3.3.1):

Tom Neltner, National Center for Healthy Housing and Alliance for Healthy Housing

Proposal:

Revise as follows:

2007 - 306.1.1 Unsafe conditions. Where any of the following conditions cause the component or system to be beyond its limit state, the component or system shall be determined as unsafe and shall be repaired or replaced to comply with the International Building Code or the International Existing Building Code as required for existing buildings:

1. Soils that have been subjected to any of the following conditions:
 - 1.1. Collapse of footing or foundation system;
 - 1.2. Damage to footing, foundation, concrete or other structural element due to soil expansion;
 - 1.3. Adverse affects to the design strength of footing, foundation, concrete or other structural element due to a chemical reaction from the soil;
 - 1.4. Inadequate soil as determined by a geo-technical investigation;
 - 1.5. Where the allowable bearing capacity of the soil is in doubt; or
 - 1.6. Adverse affects to the footing, foundation, concrete or other structural element due to the ground water table.
2. Concrete that has been subjected to any of the following conditions:
 - 2.1. Deterioration;
 - 2.2. Ultimate deformation;
 - 2.3. Fractures;
 - 2.4. Fissures;
 - 2.5. Spalling;
 - 2.6. Exposed reinforcement; or
 - 2.7. Detached, dislodged or failing connections.
3. Aluminum that has been subjected to any of the following conditions:
 - 3.1. Deterioration;
 - 3.2. Corrosion;
 - 3.3. Elastic deformation;
 - 3.4. Ultimate deformation;
 - 3.5. Stress or strain cracks;
 - 3.6. Joint fatigue; or
 - 3.7. Detached, dislodged or failing connections.
4. Masonry that has been subjected to any of the following conditions:
 - 4.1. Deterioration;
 - 4.2. Ultimate deformation;
 - 4.3. Fractures in masonry or mortar joints;
 - 4.4. Fissures in masonry or mortar joints;
 - 4.5. Spalling;
 - 4.6. Exposed reinforcement; or
 - 4.7. Detached, dislodged or failing connections.
5. Steel that has been subjected to any of the following conditions:
 - 5.1. Deterioration;
 - 5.2. Elastic deformation;
 - 5.3. Ultimate deformation;
 - 5.4. Metal fatigue; or
 - 5.5. Detached, dislodged or failing connections.
6. Wood that has been subjected to any of the following conditions:
 - 6.1. Ultimate deformation;

- 6.2. Deterioration;
- 6.3. Damage from insects, rodents and other vermin;
- 6.4. Fire damage beyond charring;
- 6.5. Significant splits and checks;
- 6.6. Horizontal shear cracks;
- 6.7. Vertical shear cracks;
- 6.8. Inadequate support;
- 6.9. Detached, dislodged or failing connections; or
- 6.10. Excessive cutting and notching.

7. Lead-based paint

7.1. Peeling, flaking, chipping, cracking, or chalking paint on a dwelling unit built before 1978 unless the paint has been determined to have less than 0.5 percent or 1 milligram per square centimeter of lead;

7.2. Lead dust at levels greater than 40 micrograms of lead per square foot on the floor or 250 micrograms of lead per square foot on an interior window sill; or

7.3. Lead contamination in bare soil at levels greater than 400 milligrams of lead per kilogram of soil in children's play areas or 1200 milligrams of lead per kilogram of soil in other areas.

8. Carbon monoxide at levels that exceed:

8.1. 100 milligrams per cubic meter (90 parts per million) for 15 minutes;

8.2. 60 milligrams per cubic meter (50 parts per million) for 30 minutes;

8.3. 30 milligrams per cubic meter (25 parts per million) for 1 hour; or

8.4. 10 milligrams per cubic meter (10 parts per million) for 8 hours.

Exceptions:

- 1. When substantiated otherwise by an approved method.
- 2. Demolition of unsafe conditions shall be permitted when approved by the code official.

Supporting Information (3.3.4 & 3.4):

The World Health Organization has determined that that carbon monoxide levels in excess of the ones described in the proposal are unhealthy and dangerous. See www.euro.who.int/document/aig/5_5carbonmonoxide.pdf

The U.S. Environmental Protection Agency has determined that lead-based paint conditions described above dangerous to children. See 40 CFR Part 745 Subpart D. Subsequent research confirms that children living a home at levels in excess of the lead dust levels have a 1 in 7 chance of being lead poisoned.

These conditions are unsafe and need to be corrected pursuant to 306.1.1.

Referenced Standards (3.4 & 3.6):

Cost Impact (3.3.4.6):

The proposal will not increase the costs of new construction and in existing buildings.

CODE CHANGE PROPOSAL

<u>Code Sections/Tables/Figures Proposed for Revision (3.3.2):</u> 308.4
<u>Name/Company/Representing (3.3.1):</u> Tom Neltner, National Center for Healthy Housing and Alliance for Healthy Housing
<u>Proposal:</u> NOTE: PLEASE READ ITEM 5) of the first page of this form for formatting instructions. Revise as follows: 308.4 Multiple occupancy. The owner of a structure containing two or more dwelling units, a multiple occupancy, a rooming house or a nonresidential structure shall be responsible for extermination in the public or shared areas of the structure and exterior property. If infestation is caused by failure of an occupant to prevent such infestation in the area occupied, the occupant shall <u>also</u> be responsible for extermination.
<u>Supporting Information (3.3.4 & 3.4):</u> The current language creates an implication that the occupant and not the owner is responsible for pest control in a multi-unit building if the occupant caused the infestation. While this result may be just, it has two serious shortcomings. <ol style="list-style-type: none">1. It is often difficult to identify who caused an infestation. While an occupant may provide food and water for the infestation. Another occupant could provide harborage. And the owner may have failed to maintain the building to exclude the pest. Assigning blame is not a particularly effective pest control strategy. It puts the code inspector in an awkward position.2. Even if one occupant is the cause of the infestation, all occupants are impacted and must work together to address the problem. Changes may be needed by all occupants. Cockroach nests are typically in the walls. They easily travel between walls and often between floors. Through the lease, the owner is better positioned to control the activities of all occupants. <p>The proposal makes it clear that the owner is always responsible for eliminating the infestation. The occupant who caused the infestation shares this responsibility.</p>
<u>Referenced Standards (3.4 & 3.6):</u> None
<u>Cost Impact (3.3.4.6):</u> The proposal will not impact the cost of construction or the cost of maintaining and operating existing buildings.

CODE CHANGE PROPOSAL

Code Sections/Tables/Figures Proposed for Revision (3.3.2): 403.5

Name/Company/Representing (3.3.1):

Tom Neltner, National Center for Healthy Housing and Alliance for Healthy Homes

Proposal: NOTE: PLEASE READ ITEM 5) of the first page of this form for formatting instructions.

Revise as follows:

403.5 Clothes dryer exhaust. Clothes dryer exhaust systems shall be independent of all other systems and shall be exhausted outside the structure in accordance with the label. ~~manufacturer's instructions~~

Exception: Listed and labeled condensing (ductless) clothes dryers.

Supporting Information (3.3.4 & 3.4):

The current requirement is difficult to enforce, especially in dwelling units. Often the manufacturer's instructions are not available. They may be lost, in a file cabinet, or in an off-site location. If the owner or the occupant claims that a clothes dryer is installed consistent with the manufacturer's instructions, the inspector may have difficulty securing the proper documentation. If the information is essential, it should be on the label. Therefore, the proposal references the label instead of the manufacturer's instructions.

The proposal also requires that clothes dryer exhaust systems be exhausted outside, excepting condensing dryers, consistent with ASHRAE 622. According to the 2005 National American Housing Survey by the U.S. Census Bureau (see www.census.gov/hhes/www/housing/ahs/ahs.html), more than 20 million of dwelling units rely on piped gas to heat a clothes dryer. The combustion by products from these dryers must be exhausted outside to avoid carbon monoxide poisoning. While the label should require this design, the code should be clear on this point given the nature of the danger. There are nearly 500 deaths annually in the U.S., according to the U.S. Centers for Disease Control and Prevention.

Where the clothes dryer relies on electricity for heat, it is still important to vent the clothes dryer exhaust outside. Exhausting the clothes dryer inside will:

- Waste energy. If the air conditioning is in use, energy will be wasted removing this moisture and heat from the structure. Where the owner or occupant has an option to exhaust it outside, they may forget to make the change.
- Add humidity to the air. This humidity can condense on surfaces, especially on basements where clothes dryers are often located. It also contributes to potential respiratory problems. In its 2004 report, the National Academy of Sciences concluded that there is sufficient evidence of an association between damp indoor environments and four respiratory problems: upper respiratory tract symptoms, coughing, wheezing, and asthma in sensitive persons. See www.nap.edu/books/0309091934/html/.
- Add unnecessary volatile organic compounds (VOCs) to the air. Many of the detergents used on clothes contain fragrances and other VOCs. These VOCs may not be thoroughly removed in the washing/rinse cycle. They will be removed in the dryer. These VOCs may have health effects. At a minimum, they represent an unnecessary exposure.

Referenced Standards (3.4 & 3.6):

ASHRAE 62.2

Cost Impact (3.3.4.6):

The proposal will require that clothes dryers be exhausted outside the structure. This is common practice, especially in new construction. In existing construction, the code change would require the installation of an exhaust. In some densely populated areas such as New York City, there are code restrictions on the exhaust of clothes dryers. In these conditions, the jurisdiction may not adopt this provision or the code official may grant a waiver using other provisions of the code.

CODE CHANGE PROPOSAL

Code Sections/Tables/Figures Proposed for Revision (3.3.2):

503.4

Name/Company/Representing (3.3.1):

Tom Neltner, National Center for Healthy Housing and Alliance for Healthy Homes

Proposal: NOTE: PLEASE READ ITEM 5) of the first page of this form for formatting instructions.

Revise as follows:

503.4 Floor surface. ~~In other than dwelling units, every~~ In other than single family dwellings, every bathroom and toilet room floor shall be maintained to be a smooth, hard, nonabsorbent surface to permit such floor to be easily kept in a clean and sanitary condition.

Supporting Information (3.3.4 & 3.4):

The proposal expands the requirement for smooth, hard, nonabsorbent surfaces in two ways. First, it extends the requirement to dwelling units. Sanitation concerns are present and significant in dwellings since human waste can fall and accumulate on the floor surface. If the floor is not easily cleanable, the waste material will pose a serious health hazard. Installed carpeting is especially difficult to consistently maintain in a sanitary state. In addition, rooms with plumbing fixtures are likely to have water on the floor either from condensation or equipment failures. On a nonabsorbent surface, water is difficult to remove in a timely and effective manner and may result in mold growth. The moisture may attract insects and rodents. It may also rot the underlying floor.

Second, the proposal extends the requirements to bathrooms that have a shower or bathtub but no toilet. In this circumstance, sanitation concerns are still significant. If the floor surface is not smooth and cleanable, bacteria and fungus will not be removed.

Surfaces that are difficult to clean are especially problematic for residential rental properties since tenants may lack the resources and equipment to maintain a carpeted floor in a bathroom or toilet room or lack the authority to replace it. Therefore, the proposal is limited to multi-family dwellings.

For these reasons, all codes should address the issue of floor surfaces require smooth, hard, nonabsorbent surfaces in bathrooms and toilet rooms.

There is a companion proposal to revise the IRC to require smooth, hard, nonabsorbent surfaces in all bathrooms.

Referenced Standards (3.4 & 3.6):

None

Cost Impact (3.3.4.6):

The proposal will require the use of cleanable surfaces in bathrooms without a toilet and in residences. Most new construction does not use carpets in these rooms. Where they do, the cost differential depends on the type of alternative flooring selected. For example, linoleum is a low cost alternative that is smooth and cleanable. In existing construction, the code change would require the removal and replacement with an alternate flooring option in these rooms. This change will initially increase the cost of maintenance but should reduce the costs in the long-run considering potential substrate failure.

CODE CHANGE PROPOSAL

Code Sections/Tables/Figures Proposed for Revision (3.3.2): 505.4

Name/Company/Representing (3.3.1):

Tom Neltner, National Center for Healthy Housing and Alliance for Healthy Homes

Proposal: NOTE: PLEASE READ ITEM 5) of the first page of this form for formatting instructions.

Revise as follows:

505.4 Water heating facilities. Water heating facilities shall be properly installed, maintained and capable of providing an adequate amount of water to be drawn at every required sink, lavatory, bathtub, shower and laundry facility at a temperature of not less than 110°F (43°C). A gas-burning water heater shall not be located in any bathroom, toilet room, bedroom or other occupied room normally kept closed, unless adequate combustion air is provided. An approved combination temperature and pressure-relief valve and relief valve discharge pipe shall be properly installed and maintained on water heaters. In dwelling units, if an existing bathtub or shower valve is being replace, the replacement valve shall limit the temperature of the water at the spout in a bathtub or shower so it does not exceed 120°F (49°C).

Supporting Information (3.3.4 & 3.4):

The current code does not set a maximum water temperature for bathtubs and showers. However, the American Society of Sanitary Engineering recommends a maximum mixed water temperature setting of 120°F (49°C).

According to the Consumer Products Safety Commission, “Each year, approximately 3,800 injuries and 34 deaths occur in the home due to scalding from excessively hot tap water. The majority of these injuries involve the elderly and children under the age of five. The U.S. Consumer Product Safety Commission (CPSC) urges all users to lower their water heaters to 120 degrees Fahrenheit. In addition to preventing injuries, this decrease in temperature will conserve energy and save money.

CPSC goes on to state “Most adults will suffer third-degree burns if exposed to 150 degree water for two seconds. Burns will also occur with a six-second exposure to 140 degree water or with a thirty second exposure to 130 degree water. Even if the temperature is 120 degrees, a five minute exposure could result in third-degree burns.” See www.cpsc.gov/CPSCPUB/PUBS/5098.pdf

Referenced Standards (3.4 & 3.6):

American Society of Sanitary Engineering (ASSE) 1016

Cost Impact (3.3.4.6):

Because this proposal involves only an adjustment to the temperature settings for hot water in residences, it is not expected to result in new costs.

CODE CHANGE PROPOSAL

Code Sections/Tables/Figures Proposed for Revision (3.3.2): 505.5

Name/Company/Representing (3.3.1):

Tom Neltner, National Center for Healthy Housing and Alliance for Healthy Homes

Proposal:

Add new text as follows:

Section 505.5. Carbon monoxide alarms. Every dwelling unit with an attached garage or fuel burning furnace, water heater, or appliance shall install a carbon monoxide alarm. The alarm should be installed according to the manufactures instructions.

Supporting Information (3.3.4 & 3.4):

Carbon monoxide is an odorless, tasteless, invisible gas that kills more than 200 people in homes each year. Thousands more go to the hospital with carbon monoxide poisoning. People in all regions of the country experience carbon monoxide poisoning.

After several revisions directed by the Consumer Products Safety Commission and Underwriters Laboratory, carbon monoxide alarms now reliably and cost effectively warn residents of the presence of life threatening levels of carbon monoxide. The alarms cost about \$25 each.

At least 12 states and many more communities in the U.S. mandate the use of carbon monoxide alarms.

Referenced Standards (3.4 & 3.6):

Underwriters Laboratories Standard 2034

Cost Impact (3.3.4.6):

The proposal will increase the costs of new construction and in existing buildings, will require the installation of alarms in homes with gas appliances, thereby increasing costs for property owners.

CODE CHANGE PROPOSAL

Code Sections/Tables/Figures Proposed for Revision (3.3.2):

307.2

Name/Company/Representing (3.3.1):

Tom Neltner, National Center for Healthy Housing and Alliance for Healthy Homes

Proposal: NOTE: PLEASE READ ITEM 5) of the first page of this form for formatting instructions.

Revise text as follows:

R307.2 Bathtub and shower spaces. Bathtub and shower floors and walls above bathtubs with installed shower heads and in shower compartments shall be finished with a non-absorbent surface. Such wall surfaces shall extend to a height of not less than 6 feet (1829 mm) above the floor. The floor in every bathroom group shall be maintained to be a smooth, hard, nonabsorbent surface to permit such floor to be easily kept in a clean and sanitary condition.

Supporting Information (3.3.4 & 3.4):

The IPMC already requires smooth, hard, nonabsorbent surfaces on floors of toilet rooms in other than dwelling units. There is a companion proposal to modify the IPMC to extend the requirement to multi-family dwellings and include bathrooms.

Bathroom floors that are not smooth, hard and nonabsorbent, pose several problems:

1. Sanitation concerns are present and significant in dwellings since human waste can fall and accumulate on the floor surface. If the floor is not easily cleanable, the waste material will pose a serious health hazard. Installed carpeting is especially difficult to consistently maintain in a sanitary state.
2. Rooms with plumbing fixtures are likely to have water on the floor either from condensation or equipment failures. On a nonabsorbent surface, water is difficult to remove in a timely and effective manner and may result in mold growth. The moisture may attract insects and rodents. It may also rot the underlying floor.
3. Surfaces that are difficult to clean are especially problematic for residential rental properties since tenants may lack the resources and equipment to maintain a carpeted floor in a bathroom or toilet room or lack the authority to replace it.
4. If the floor is initially carpeting, the substrate under the carpeting may make it more difficult or costly to convert to a smooth, hard, and nonabsorbent surface at a later time.

For these reasons, all codes should address the issue of floor surfaces require smooth, hard, nonabsorbent surfaces in bathrooms.

Referenced Standards (3.4 & 3.6):

None

Cost Impact (3.3.4.6):

The proposal will require the use of cleanable surfaces in bathrooms. Most new construction does not use carpets in these rooms. Where they do, the cost differential depends on the type of alternative flooring selected. For example, linoleum is a low cost alternative that is smooth and cleanable. In existing construction, the code change would require the removal and replacement with an alternate flooring option in these rooms. This change will initially increase the cost of maintenance but should reduce the costs in the long-run considering potential substrate failure.