CONDEMNATION ORDER
Findings of Fact and Conclusions of Law
Aug. 23, 2023

PROPERTY ADDRESS: 525 10th Ave., Dayton, Ky. ("Property")
PROPERTY OWNER: Michaelle Wilson ("Property Owner")
PROPERTY TENANT: Joe McGuire ("Resident")
HEARING DATE: Aug. 21, 2023

Background

On Aug. 17, Joe McGuire, Resident of the above-referenced Property, and Michaelle Wilson, his mother and Property Owner, was advised by the City of Dayton, Ky. ("City") Code Enforcement Department that the Property was unsafe and uninhabitable because the structure on the Property does not have municipal water, sewage, and gas and/or electric service ("Utility Service").

On Aug. 17, 2023, the City issued a Notice of Code Violation on the Property, which advised that the City Code Enforcement Department had determined that the Property violated Section 108.1.3 of the International Property Management Code ("Code Violation"), which has been adopted by the City of Dayton, Ky. See attached Notice of Violation, which is Exhibit "A". The City advised that if Utility Service was not restored to the Property by Aug. 17, 2023, the City would seek condemn this property for this Code Violation.

On Aug. 17, 2023, the City also hand-delivered a Condemnation Notice to both the Property Owner and Resident at their respective residences and posted it at the Property. Because the Resident requested an extension of time from the Aug. 17 deadline, the City

agreed to allow the Resident until noon on Monday, Aug. 21 to have Utility Service restored to the Property. See the Condemnation Notice, which is Exhibit "B".

Neither the Resident or the Property Owner has restored Utility Service by this deadline, so the City, as set forth in the Condemnation Notice, conducted a condemnation hearing at 2 p.m. on Monday, Aug. 21, at the Dayton Community and Meeting Center, 625 Second Avenue, Dayton, Ky. to provide both the Resident and Property Owner with due process to show cause why the City should not take action to condemn the Property.

Findings of Fact

At the administrative hearing conducted on Aug. 21, 2023, City Administrator Jay Fossett served as the hearing officer. Dayton Code Enforcement Director Cassie Patterson testified on behalf of the City. Michaelle Wilson, the Property Owner, and Joe McGuire, the Resident, also testified.

Patterson testified that on Thursday, Aug. 17, 2023, she received an anonymous complaint that the Property no longer had electric service and the Resident was using a gasoline-powered generator to provide electric to the structure. Thereafter, she verified with the Northern Kentucky Water District ("NKWD") that water service to the property had been disconnected by the district in May 2023. Patterson said the NKWD told her that, due to privacy reasons, it couldn't provide her with the exact date when the water was shut off. Patterson stated that she also spoke with Duke Energy, where a representative told her that gas and electric service to the Property was disconnected on June 19, 2023. Both the Property Owner and the Resident acknowledged to Patterson that the Property had no active Utility Service. The utilities apparently were shut off because of nonpayment of bills from these utilities.

Patterson initially gave both the Property Owner and Resident 24-hour notice that the City would condemn the property unless the Resident had Utility Service restored to the Property. After further discussion with these individuals and in a good faith effort to allow them to restore Utility Service to the Property, Patterson agreed to extend this deadline from Friday, Aug. 18, 2023, to noon on Monday, Aug. 21.

Patterson testified that she issued both a Notice of Violation to both the Property Owner and Resident for violating Section 108.1.3 of the International Property Management Code as well as a Condemnation Notice to them. She also posted the Condemnation Notice at the Property. Ms. Patterson read into the record Section 108.1.3 of the International Property Management Code, which served as a basis for the Code Violation, which is titled "A Structure Unfit for Human Occupancy."

Failure to maintain Utility Service to a structure in the City creates makes a structure inhabitable because residents are unable to use toilets as they are intended to be used, take showers or baths, to wash dishes or laundry, or use water for other household purposes. In addition, electric power from the power gird cannot be used for heating and cooling and ventilation, heating hot water, operating refrigerators and other appliances, illumination, or for other household purposes.

Patterson said that the Code Enforcement Department received several complaints from neighbors near the Property about noise emanating from a gas-powered generator that was operating at the Property 24 hours a day, seven days a week. She said that she received a complaint from a neighbor on the Monday morning of the condemnation hearing, stating that the neighbor told her that the generator could be heard running all weekend long, including throughout the night.

The Resident testified that the generator running at the house is not very loud. He blamed the issue on his neighbors, who he said had been complaining about the condition of his property for the past couple years. The Resident testified that he has "plenty of water," stating that he has brings in 15 to 25 one-gallon buckets of water into the house. He said he uses this water to flush his toilets. He said there are no feces in the house or the yard because he and his wife are flushing human waste down the toilet with this water.

The Resident testified that his air conditioning is running because of the use of the generator and that he is able to cook because he has seven tanks of propane gas for his gas grill.

The Property Owner testified that she believed that the Utility Service at the Property would be turned on in "two to three days." She said the Resident, who is her son, is seeking utility payment assistance from the Community Action Committee to restore utility service to the Property.

Conclusions of Law

Because the Property has no municipal water service from the Northern Kentucky Water District and *legal* sewer service from SD1, which bases its service rates on the amount of water a customer uses at his property, and because the Property has no current gas or electric service, the Property violates the International Property Management Code ("IPMC").[1] Section 108.1.3 of IPMC states:

[1] The City of Dayton adopted the 2021 International Property Maintenance Code in Ordinance No. 2021#19, and this ordinance is codified in Section 150.03 of the City of Dayton Code of Ordinances. See Exhibit "C". Also included in Exhibit "C" are specific IPMC provisions discussed below in this Conclusions of Law.

> A structure is unfit for human occupancy whenever the code official finds that such structure is unsafe, unlawful, or because of the degree to which the structure is in disrepair or lacks maintenance, is insanitary, vermin or rat infested, contains filth and contamination, or lacks ventilation, illumination, sanitary or heating facilities or essential equipment required by this code, or because the location of the structure constitutes a hazard to the occupancy or future occupancy of the structure or to the public.

IPMC Section 505.1 states:

> **505.1 General.** Every sink, lavatory, bathtub or shower, drinking fountain, water closet or other plumbing fixture *shall be connected to either a public water system or to an approved water system.* All kitchen sinks, lavatories, laundry facilities, bathtubs and showers shall be supplied with hot or tempered and cold running water in accordance with the International Plumbing Code.
> (Emphasis added.)

IPMC Section 505.3 states:

> **505.3 Supply.** The water supply system shall be installed and maintained to provide a supply of water to plumbing fixtures, devices and appurtenances in sufficient volume and at pressures adequate to enable the fixture to function properly, safely, and free of defects.

IPMC Section 504.1 states:

> **504.1 General.** All plumbing fixtures shall be properly installed and maintained in working order, and shall be kept free from obstructions, leaks and defects and be capable of performing the function for which such plumbing fixtures are designed. All plumbing fixtures shall be maintained in a safe, sanitary, and functional condition.

Dayton Code Enforcement Director Cassie Patterson testified that water service to the Property was shut off in May 2023. Resident also admitted that he had no public water service to the house. Instead, he testified that he was bringing 15 to 25 one-gallon buckets of water into his house to use to flush toilets and other household purposes.

Based on this testimony, the hearing officer finds that the Property has not had NKWD water service since May 2023, and therefore, the water district is no longer providing water to the Property.

IPMC Section 505.1 clearly states that "[e]very sink, lavatory, bathtub or shower, drinking fountain, water closet or other plumbing fixture *shall be connected to either a public water system or to an approved water system.* Furthermore, it requires that these plumbing fixtures must be supplied with hot or tempered and cold *running* water in accordance with the International Plumbing Code.

Based on the evidence presented at the hearing, it is crystal clear that the Property is not connected to either a public water system (i.e., NKWD) or an approved water system. In addition, the Property is not being properly maintained and/or supplied with public water and it doesn't have running water, and as a result, the water pressure necessary to provide water to the Property's plumbing fixtures, including toilets, sinks, and other plumbing fixtures is nonexistent. Accordingly, the Property violates Sections 505.1, 505.3, and 504.1 of the IPMC, which has been adopted by the City of Dayton.

IPMC Section 603.1 states:

> **603.1 Mechanical appliances.** All mechanical appliances, fireplaces, solid fuel-burning appliances, cooking appliances, and water heating appliances shall be properly installed and maintained in a safe working condition, and shall be capable of performing the intended function.

IPMC Section 604.1 states:

> **604.1 Facilities required.** Every occupied building shall be provided with an electrical system in compliance with the requirements of this section and Section 605.

IPMC Section 604.3 states:

> **604.3 Electrical system hazards.** Where it is found that the electrical system in a structure constitutes a hazard to the occupants or the structure *by reason of inadequate service*, improper fusing, insufficient receptable and lighting outlets, improper wiring or installation, deterioration or damage, or for similar reasons, the code official shall require the defects to be corrected to eliminate the hazard. (Emphasis added.)

IPMC Section 605.1 states:

> **605.1 Installation.** All electrical equipment, wiring and appliances shall be properly installed and maintained in a safe and approved manner.

Code Enforcement Director Cassie Patterson testified that Duke Energy shut off electric service to the Property on July 19, 2023. The Resident also admitted that he had no electric service to the house and that he was using a gasoline-operated generator to provide electricity to his house, primarily for his air conditioning. Patterson testified that this generator was being used at the Property on a "24/7 basis".

Based on this testimony, the hearing officer finds that the Resident has not had electrical service to his house since July 19, 2023, and that he has been using a generator for electricity in the house.

The above-referenced IPMC sections clearly require an operating electrical system in a structure to operate the mechanical appliances located there, which is not the case at the Property. A single, gasoline-operated generator used primarily for air-conditioning does not satisfy the IPMC requirements. Specifically, the structure at the Property does not have an operating electrical system required by IPMC Sections 604 and 605.

Furthermore, under IPMC Section 603.1, the temporary, generator-created electricity does not serve all mechanical appliances found in the structure and these appliances are not capable of performing their intended function because electricity is not being fed to them.

Accordingly, the hearing officer finds that an electrical system is not being provided at the Property, as required by the IPMC, and this failure means that the electrical equipment, wiring, and appliances in the structure are not being maintained in a safe and approved manner, which constitutes a hazard by reason of inadequate service being provided to these appliances.

The hearing officer further finds that the noise emanating from the electric generator that the Resident is operating at the Property on a 24/7 basis constitutes a public nuisance in violation of Section 92.11 (E) and (I) and 99.02 (C)(5) of the City of Dayton, Ky., Code of Ordinances.

The hearing officer further finds that City of Dayton ordinances require structures located within the City to have operational Utility Service, including municipal water and sewage service and electric and/or natural gas service and that the failure to maintain this Utility Service violates the IPMC, which has been adopted by the City.

Under IPMC Section 108.1, when a structure or equipment within that structure are found to be unsafe, or when the structure is found to be unfit for human occupancy, such structure shall be condemned.

The hearing officer hereby finds, pursuant to IPMC Section 108.3, that the Property located at 525 10th Ave., Dayton, Ky. is unfit for human occupancy because this Property is unsafe, unlawful, uninhabitable, and unfit for human occupancy for the primary reason that it does not have active Utility Service – and has not had such service for more than one month. The Resident is failing to use plumbing facilities and equipment in manner for which they were designed, insanitary conditions are present at the Property, and the Property lacks proper heating and cooling facilities, ventilation, and essential household appliances, illumination, and other equipment are inoperable. Accordingly, the structure is found to be unfit for human occupancy.

Therefore, the Property is hereby condemned. The Property Owner and Resident shall have until 5 p.m. on Thursday, Aug. 24 -- which is one week after the Notice of Violation Condemnation Notice were issued to them – to have Utility Service restored to the Property. Failure to do so will result in the City taking legal action to remove the Resident and any other occupants in this structure from the Property.

This Order shall be effective and remain in place for one year from the date it is entered. If Utility Service is restored by Aug. 24 or at some date thereafter, this Order shall remain in full effect thereafter until Aug. 24, 2024. If Utility Service to the Property is once again shut off during this period, the City reserves the right to take immediate legal action to move forward with condemnation proceedings and remove the Resident and any other occupants from this Property during this time period.

This Order is hereby entered on this the 23 day of August 2023.

Jay Fossett
Hearing Officer

Exhibit "A"

514 Sixth Avenue • Dayton, Kentucky 41074 Phone: (859) 491-1600 • Fax: (859) 491-3538

Notice of Code Violation

08/16/2023

WILSON ANDREW M & MICHAELLE D
525 10TH AVE
DAYTON, KY 41074

Case No.: 4239
Property Address: 525 10TH AVE, DAYTON, 41074

Dear Property Owner: WILSON ANDREW M & MICHAELLE D

An inspection by the Code Enforcement Department of the City of Dayton, Ky., has determined that the above-referenced property violates the City of Dayton Code of City Ordinances, to wit:

Code SectioN: Code Section: 108.1.3 Structure Unfit for Human Occupancy
Facts Constituting Offense: A structure is unfit for human occupancy whenever the code official finds that such structure is unsafe, unlawful or, because of the degree to which the structure is in disrepair or lacks maintenance, is insanitary, vermin or rat infested, contains filth and contamination, or lacks ventilation, illumination, sanitary or heating facilities or other essential equipment required by this code, or because the location of the structure constitutes a hazard to the occupancy or future occupancy of the structure or to the public.
If structure is occupied, it must be vacated as required by notice of violation.
Description of Violation: Code Section: 108.1.3 Structure Unfit for Human Occupancy

Corrective Action Required: If repairs are not completed by stipulated date, building will be condemned and occupancy of structure will be terminated immediately as structure will be unfit for human occupancy; if not occupied, repairs must be made before future occupancy is permitted

Copy of Code Sections: 108.1 /108.1.3
108.1 General. When a structure or equipment is found by the code official to be unsafe, or when a structure is found unfit for human occupancy, or is found unlawful, such structure shall be condemned pursuant to the provisions of this code.

108.1.3 Structure unfit for human occupancy. A structure is unfit for human occupancy whenever the code official finds that such structure is unsafe, unlawful or, because of the degree to which the structure is in disrepair or lacks maintenance, is insanitary, vermin or rat infested, contains filth and contamination, or lacks ventilation, illumination, sanitary or heating facilities or other essential equipment required by this code, or because the location of the structure constitutes a hazard to the occupants of the structure or to the public.

This correspondence serves as an official notification that the above-stated violations must be corrected before 08/17/2023. Fines, fees, and/or liens may be placed on this property for noncompliance and/or the costs of abatement, repair, or demolition by the City.

For more information, you may contact me at (859) 491-1600

Sincerely,

Exhibit "B"

CONDEMNATION NOTICE
AUG. 17, 2023

PROPERTY ADDRESS: 525 10TH AVE., DAYTON, KY. ("PROPERTY")

On Aug. 16, the residents of above-referenced Property were advised by the City of Dayton, Ky. ("City") Code Enforcement Department that the Property was unsafe and uninhabitable because it does not have water, sewage, and gas and electric service ("Utility Service").

On Aug. 16, 2023, the City advised the residents that if Utility Service was not restored to the Property by Aug. 17, 2023, the City would condemn this property. (See attached Notice of Violation.) The residents of the Property requested an extension of this deadline, which the City hereby grants until noon on Monday, Aug. 21.

Failure to restore Utility Service by this deadline will result in a condemnation action being undertaken by the City on this Property. The City shall conduct a condemnation hearing at 2 p.m. on Monday, Aug. 21, at the Dayton Community and Meeting Center, 625 Second Avenue, Dayton, Ky. to provide due process to the residents and property owner show cause why the City should not take this action.

Cassie Patterson
Director of Code Enforcement
City of Dayton, Kentucky

THIS NOTICE WAS HAND-DELIVERED AND POSTED AT THE PROPERTY.

Exhibit "C"

CITY OF DAYTON, KENTUCKY
ORDINANCE NO. 2021#19

AN ORDINANCE AMENDING CHAPTER 150 OF THE DAYTON CODE OF ORDINANCES TO READOPT THE 2021 INTERNATIONAL PROPERTY MAINTENANCE CODE AND ADOPT THE 2021 INTERNATIONAL ENERGY CONSERVATION CODE AND AMEND OTHER PROVISIONS TO CONFORM WITH THE CITY CODE OF ORDINANCES.

NOW, THEREFORE BE IT ORDAINED BY THE CITY OF DAYTON, CAMPBELL COUNTY, KENTUCKY AS FOLLOWS:

Section I

That Chapter 150.03 of the City of Dayton code of ordinances is amended as follows:

§150.03 Readoption of International Property Maintenance Code and Adoption of the International Energy Conservation Code; Amendments.

(A) Adoption. That certain document, a copy of which is on file in the office of the City, being marked and designated as "The 2021 International Property Maintenance Code" and "the 2021 International Energy Conservation Code," as published by the International Code Council, Inc. (ICC) is hereby adopted as the property maintenance code and the energy conservation code, respectively, for buildings and structures within the city as herein provided. Each and all of the regulations of 2021 International Property Maintenance Code" ("Property Maintenance Code") and "the 2021 International Energy Conservation Code" ("Energy Conservation Code") are hereby referred to, readopted, adopted, and made a part hereof, as if fully set forth herein. If any conflicts that arise between the Property Maintenance Code and/or the Energy Conservation Code with the City of Dayton Code of Ordinances, the language in the city's Code of Ordinances shall prevail.

(B) Suits pending, etc. Nothing in this section or in the Property Maintenance Code or the Energy Conservation Code hereby adopted shall be construed to affect any suit or proceeding impending in any court, or any rights acquired, or liability incurred, or any cause or causes of action acquired or existing under any act or ordinance hereby repealed; nor shall any just or legal right or remedy of any character be lost, impaired, or affected by this section.

(C) Amendments to Property Maintenance Code. Under the Property Maintenance Code, the term "code official" refers to the City of Dayton Director of Code Enforcement and/or his or her deputies. The following sections of the 2021 International Property Maintenance Code, are hereby revised as follows:

(1) Section 101.1, Insert: "the City of Dayton, Campbell County Kentucky"

(2) Section 102.3, Delete in its entirety and replace with "Repairs, additions or alterations to a structure, or changes of occupancy, shall be done in accordance with the procedures and provisions of the Kentucky Building Code, Kentucky Residential Code, the Uniform State

Building Code as is established by the Board of Housing, Buildings and Construction of the State of Kentucky, National Electrical Safety Code, the National Electric Code and City of Dayton Code of Ordinances.

(3) Section 103.1, Insert: "the City of Dayton, Kentucky, Code Enforcement Department"

(4) Section 103.2, Delete "chief appointing authority" and replace with "Mayor."

(5) Section 107.1, Delete in its entirety and replace with "Any person directly affected by a decision of the code official or a notice or order issued under this code shall be subject to the civil penalties outlined in Section § 38.15 of the Dayton Code of Ordinances ("City Code") and shall have the right to appeal to the City of Dayton Code Enforcement Board, provided that a written application for appeal is filed with the City Clerk within 10 days after the day the decision, notice, or order was served. See Chapter 38 of the City Code.

(6) Section 107, including subsections .1, .2, .3, and .4, Delete in its entirety.

(7) Section 108, including subsection .1, Delete in its entirety, including subsection .1.

(8) Section 109, including subsections .1, .2, .3, .4, and .5, Delete in its entirety.

(9) Section 201.3, Delete in its entirety and replace with "Where terms are not defined in this code and are defined in the Kentucky Building Code, Kentucky Residential Code, City of Dayton Code of Ordinances, National Electrical Code or any applicable code adopted and enforced by the Commonwealth of Kentucky, Campbell County, Kentucky, and the City of Dayton, Kentucky, such terms shall have the meanings ascribed to them as stated in those codes."

(10) Section 202, Insert the following definition: "OUTDOOR STORAGE. The keeping of personal or business property in any open space or outdoor area outside of a building or structure. For the purpose of this definition, property shall not include items that were originally designed for continuous outdoor use (e.g., lawn furniture, grills, playground equipment)."

(11) Section 302.1, Insert: "and all outdoor storage shall be removed."

(12) Section 302.4, Insert: "six (6) inches"

(13) Section 302.8, Delete in its entirety and replace with "No inoperative, abandoned, or unlicensed motor vehicle, trailer, recreational vehicle, camper, boat or similar equipment shall be parked, kept or stored on any premises, and no vehicle shall at any time be in a state of major disassembly, disrepair, or in the process of being stripped or dismantled. Painting of vehicles is prohibited unless conducted inside an approved spray booth. All motor vehicles, trailers, recreational vehicles, campers, boats and similar equipment shall be parked, kept or stored on a paved surface. All trailers, recreational vehicles, campers, boats and similar equipment shall be parked, kept or stored in the rear yard and may be parked, kept or stored in the side yard behind the front structure line of the principal structure if approved by the Board of Adjustment. In no case shall more than one trailer, recreational vehicle, camper,

boat or similar equipment be permitted outside of an enclosed building on any premises.

Exception: A vehicle of any type is permitted to undergo major overhaul, including body work, provided that such work is performed inside a structure or similarly enclosed area designed and approved for such purposes."

(14) Section 303.2, Delete in its entirety and replace with "Enclosures for swimming pools, hot tubs, and spas shall be regulated by the Kentucky Building Code, Kentucky Residential Code, the City of Dayton Zoning Ordinance, and any applicable codes adopted and enforced by the Commonwealth of Kentucky."

(15) Section 304.14. Insert: "April 1 to October 31"

(16) Section 401.3, Replace "International Building Code" with "Kentucky Building Code, Kentucky Residential Code, or any applicable code adopted and enforced by the Commonwealth of Kentucky"

(17) Section 602.3, Insert: "October 1 to April 1"

(18) Section 602.4, Insert "October 1 to April 1"

(19) Section 702.1, Delete: "International Fire Code" and replace with "Kentucky Building Code, City of Dayton Code of Ordinances, and the International Fire Code"

(20) Section 702.2, Delete: "International Fire Code" and replace with "Kentucky Building Code, City of Dayton Code of Ordinances, and the International Fire Code"

(21) Section 702.3, Delete: "International Building Code" and replace with "Kentucky Building Code, City of Dayton Code of Ordinances, and the International Fire Code"

(22) Section 702.4, Delete: "International Building Code" and replace with "Kentucky Building Code, City of Dayton Code of Ordinances, and the International Fire Code"

(23) Section 703.7, Delete: "International Building Code" and replace with "Kentucky Building Code, City of Dayton Code of Ordinances, and the International Fire Code"

(24) Section 704.1, Delete: "International Fire Code" and replace with "Kentucky Building Code, City of Dayton Code of Ordinances, and the International Fire Code"

(25) Section 704.1.2, Delete: "International Building Code" and replace with "Kentucky Building Code, City of Dayton Code of Ordinances, and the International Fire Code"

(26) Section 704.4.2, Delete: "International Building Code" and replace with "Kentucky Building Code, City of Dayton Code of Ordinances, and the International Fire Code"

(27) Section 705.1, Delete: "International Residential Code" and replace with "Kentucky Building Code, Kentucky Residential Code, City of Dayton Code of Ordinances, and the International Fire Code"

(D) Amendments Energy Conservation Code. Under the Energy Conservation Code, the term "code official" refers to the City of Dayton Director of Code Enforcement and/or his or her deputies. The 2021 International Energy Conservation Code, excluding appendices, are hereby adopted by the City of Dayton, Kentucky, with the following revision:

(1) Section C101.1, Insert: "the City of Dayton, Campbell County Kentucky"

(E) Severability. That if any section, subsection, sentence, clause or phrase of this legislation is, for any reason, held to be unconstitutional, such decision shall not affect the validity of the remaining portions of this ordinance. The City Council for the City of Dayton hereby declares that it would have passed this law, and each section, subsection, clause or phrase thereof, irrespective of the fact that any one or more sections, subsections, sentences, clauses and phrases be declared unconstitutional.

Section II

This ordinance shall be in full force and effect from and after its adoption, approval and publication as is required by law.

PASSED by City Council of the City of Dayton, Campbell County, Kentucky assembled in regular session.

First Reading: Nov. 16, 2021
Second Reading: DEC. 7, 2021

MAYOR BEN BAKER

ATTEST:
Donna Leger
DONNA LEGER
CITY CLERK/TREASURER

the public or the *occupants* of the structure by not providing minimum safeguards to protect or warn *occupants* in the event of fire, or because such structure contains unsafe equipment or is so damaged, decayed, dilapidated, structurally unsafe or of such faulty construction or unstable foundation, that partial or complete collapse is possible.

❖ Any building that endangers life, health, safety or property is unsafe. A building is considered dangerous if it meets one or more of the following conditions:

- It lacks adequate protection from fire;
- It contains unsafe equipment; or
- All or part of the building is likely to collapse.

Only structures with major defects or life-threatening conditions are considered unsafe. Minor defects, such as an inadequate number of electrical outlets or damaged plaster, do not necessarily create an unsafe structure, even though they are violations of the code.

108.1.2 Unsafe equipment. Unsafe equipment includes any boiler, heating equipment, elevator, moving stairway, electrical wiring or device, flammable liquid containers or other equipment on the *premises* or within the structure which is in such disrepair or condition that such equipment is a hazard to life, health, property or safety of the public or *occupants* of the *premises* or structure.

❖ Equipment may become unsafe when it is a hazard to life, health, property or safety.

The judgment of the code official is critical in determining when equipment should be deemed unsafe. If uncertain about appropriate enforcement action, he or she should seek additional expertise and advice and, if necessary, err on the side of safety.

108.1.3 Structure unfit for human occupancy. A structure is unfit for human *occupancy* whenever the *code official* finds that such structure is unsafe, unlawful or, because of the degree to which the structure is in disrepair or lacks maintenance, is insanitary, vermin or rat infested, contains filth and contamination, or lacks *ventilation*, illumination, sanitary or heating facilities or other essential equipment required by this code, or because the location of the structure constitutes a hazard to the *occupants* of the structure or to the public.

❖ The following conditions are reasons for declaring a building unfit for occupancy: unsafe; unlawful; lacks maintenance to a serious degree; disrepair; insanitary; vermin or rat infested; contains filth; lacks essential equipment and its location is hazardous to the occupants or the public.

The list of reasons for declaring a structure unfit requires subjective judgement. Because the consequences of declaring a structure unfit for occupancy are severe, the code official should carefully and thoroughly document all conditions that contributed to that determination.

108.1.4 Unlawful structure. An unlawful structure is one found in whole or in part to be occupied by more persons than permitted under this code, or was erected, altered or occupied contrary to law.

❖ An unlawful structure is one that has serious deficiencies such that an unsafe condition or a condition that is unfit for human occupancy exists. An unlawful structure does not mean one where there are criminal activities.

108.1.5 Dangerous *structure* or *premises*. For the purpose of this code, any structure or *premises* that has any or all of the conditions or defects described below shall be considered dangerous:

1. Any door, aisle, passageway, stairway, exit or other means of egress that does not conform to the *approved* building or fire code of the jurisdiction as related to the requirements for existing buildings.
2. The walking surface of any aisle, passageway, stairway, exit or other means of egress is so warped, worn loose, torn or otherwise unsafe as to not provide safe and adequate means of egress.
3. Any portion of a building, structure or appurtenance that has been damaged by fire, earthquake, wind, flood, *deterioration*, *neglect*, abandonment, vandalism or by any other cause to such an extent that it is likely to partially or completely collapse, or to become *detached* or dislodged.
4. Any portion of a building, or any member, appurtenance or ornamentation on the exterior thereof that is not of sufficient strength or stability, or is not so *anchored*, attached or fastened in place so as to be capable of resisting natural or artificial loads of one and one-half the original designed value.
5. The building or structure, or part of the building or structure, because of dilapidation, *deterioration*, decay, faulty construction, the removal or movement of some portion of the ground necessary for the support, or for any other reason, is likely to partially or completely collapse, or some portion of the foundation or underpinning of the building or structure is likely to fail or give way.
6. The building or structure, or any portion thereof, is clearly unsafe for its use and *occupancy*.
7. The building or structure is *neglected*, damaged, dilapidated, unsecured or abandoned so as to become an attractive nuisance to children who might play in the building or structure to their danger, becomes a harbor for vagrants, criminals or immoral persons, or enables persons to resort to the building or structure for committing a nuisance or an unlawful act.
8. Any building or structure has been constructed, exists or is maintained in violation of any specific requirement or prohibition applicable to such building or structure provided by the *approved* building or fire code of the jurisdiction, or of any law or ordinance to such an extent as to present either a substantial risk of

The required toilet facilities shall be located not more than one story above or below the employees' working area and the path of travel to such facilities shall not exceed a distance of 500 feet (152 m). Employee facilities shall either be separate facilities or combined employee and public facilities.

Exception: Facilities that are required for employees in storage structures or kiosks, which are located in adjacent structures under the same ownership, lease or control, shall not exceed a travel distance of 500 feet (152 m) from the employees' regular working area to the facilities.

❖ Employers are required to provide toilet facilities for employees within the employees' regular work areas. Employees should not have to travel more than 500 feet (152 m) or beyond the next adjacent story to reach the toilet room.

Employee toilet facilities can be for employees' use only or they can share customer facilities.

If toilet rooms are inconvenient or located too far from the work area, they create a physical hardship for employees.

This section does not require storage buildings and kiosks to contain toilet facilities, as long as there are toilet facilities in an adjacent building such that the distance from the work area to the toilet facilities does not exceed 500 feet (152 m). The building with the toilet facilities must be under the same ownership, lease or control as the storage area. Employers cannot expect their employees to depend upon neighborhood gas stations, stores or other businesses to provide access to toilet facilities.

503.4 Floor surface. In other than *dwelling units*, every *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.

❖ A toilet room floor is much easier to maintain if the surface is smooth, hard and nonabsorbent. In areas such as toilet rooms where the public is likely to enter a facility, the primary concern remains keeping the floor area as clean as possible to safeguard against the spread of disease.

[P] SECTION 504
PLUMBING SYSTEMS AND FIXTURES

504.1 General. All plumbing fixtures shall be properly installed and maintained in working order, and shall be kept free from obstructions, leaks and defects and be capable of performing the function for which such plumbing fixtures are designed. All plumbing fixtures shall be maintained in a safe, sanitary and functional condition.

❖ All plumbing fixtures must operate adequately and perform their intended function. Fixtures must drain quickly without permitting sewer gases to enter the structure. Fixtures are not to leak from either the water supply piping or the waste discharge piping.

Fixtures must not be worn or deteriorated so that they cannot be adequately cleaned. Kitchen sinks and lavatories that have defects that prevent them from being kept clean increase the likelihood that disease-causing organisms can be spread to food sources or from person to person. Fixtures with structural cracks can fail suddenly, possibly causing personal injury and further property damage.

504.2 Fixture clearances. Plumbing fixtures shall have adequate clearances for usage and cleaning.

❖ Inadequate clearance between fixtures and adjacent surfaces can create confined spaces that allow disease and odor-causing bacteria to multiply. For proper sanitation, the fixture must have sufficient clearances for proper use and cleaning.

Although the code does not specify exact clearances between fixtures and adjacent surfaces, the code official must use good judgment and must review the required clearances for compliance with the IPC.

504.3 Plumbing system hazards. Where it is found that a plumbing system in a structure constitutes a hazard to the *occupants* or the structure by reason of inadequate service, inadequate venting, cross connection, backsiphonage, improper installation, *deterioration* or damage or for similar reasons, the *code official* shall require the defects to be corrected to eliminate the hazard.

❖ Any plumbing system having a deficiency or condition that is deemed by the code official as hazardous to the occupants or to the structure must be repaired or altered to eliminate the hazard. Hazards in a plumbing system include, but are not limited to, the following:

- Undersized piping;
- Inadequate venting;
- Cross connections;
- Lack of backflow prevention means;
- Lack of sufficient fixtures;
- Improperly installed piping, fixtures or fittings;
- Deteriorated, damaged, worn or otherwise defective piping, fixtures or fittings;
- Inadequately supported fixtures or piping; and
- Inadequate water pressure or volume.

One of the most commonly encountered hazards is a submerged outlet in older-style fixtures in water closets, bathtubs, lavatories, laundry tubs and water softeners. Cross connections and improperly protected outlets greatly increase the likelihood that contaminated water will be introduced into the potable water supply.

SECTION 505
WATER SYSTEM

505.1 General. Every sink, lavatory, bathtub or shower, drinking fountain, water closet or other plumbing fixture shall be properly connected to either a public water system or to an *approved* private water system. All kitchen sinks, lavatories, laundry facilities, bathtubs and showers shall be supplied with

hot or tempered and cold running water in accordance with the *International Plumbing Code*.

❖ The water for all plumbing fixtures must be properly connected to either a public or an approved private water system. If there is any question about the quality of the private water source, the code official should require that the water be tested and approved by either a private testing service or a local health department. A plumbing system cannot be considered adequate if the water entering the system is contaminated or otherwise unfit for human consumption and use.

- The desired qualities for safe water are:
- Free of pathogenic organisms;
- Free of toxic chemicals;
- Free of odor, taste, color and turbidity;
- Free of excessive minerals;
- Relatively noncorrosive; and
- Adequate in quantity and pressure.

All sinks, lavatories, bathtubs and showers must be supplied with cold and hot or tempered running water as regulated by the IPC. Heated water is a basic necessity for all cleansing and bathing needs. It should be noted that the IPC only allows tempered water [water that is 85°F (29°C) to 110°F (43°C)] to be used for bathing and washing in nonresidential occupancies. The IPC requires tempered water to be supplied to hand-washing fixtures provided for those having physical disabilities.

[P] 505.2 Contamination. The water supply shall be maintained free from contamination, and all water inlets for plumbing fixtures shall be located above the flood-level rim of the fixture. Shampoo basin faucets, janitor sink faucets and other hose bibs or faucets to which hoses are attached and left in place, shall be protected by an approved atmospheric-type vacuum breaker or an approved permanently attached hose connection vacuum breaker.

❖ Cross connections and unprotected outlets are the most common sources of contamination in potablewater systems. The IPC defines a cross connection as any physical connection or arrangement between two otherwise separate piping systems, one of which contains potable water and the other water of either unknown or questionable safety or steam, gas or chemical, whereby there exists the possibility for flow from one system to the other, with the direction of flow depending on the pressure differential between the two systems.

The code official might not always be able to discover all cross connections and unprotected outlets in a building, but should become familiar with the locations where such usually occur. Many older-style plumbing fixtures were designed or installed with built-in submerged water supply outlets. A few of the more common fixtures and appliances that might have unprotected outlets include: water closets, bathtubs, lavatories, laundry tubs and hose bibbs (sill cocks). Water softener drains are often improperly connected to the drainage system, thereby creating cross connections [see Figure 505.2(1)].

There are two basic methods of preventing contamination of the potable water supply. The first is to provide an air gap between the water outlet and the flood level rim of the fixture. The second is to install backflow prevention devices in the water supply line.

An air gap is the ideal solution because it does not rely on the performance of mechanical devices to prevent backflow into the water supply. Typically, an air gap must be twice the diameter of the supply pipe to the fixture, but never less than 1 inch (25 mm) above the flood level rim. The requirements for air gap protection of fixtures are found in Table 608.15.1 of the IPC.

An example of an unprotected outlet is identified in Figure 505.2(2) when the following conditions exist:

- The third-floor water closet has the ball cock (fill valve) submerged in the water of the water closet tank.
- The water pressure within the building is low because of corrosion buildup in the water pipes or simultaneous usage of fixtures.
- The third-floor water closet is flushed, thereby opening the ball cock.
- Contaminated water can be drawn from the water closet tank into the supply pipes.

In such circumstances when the sink is filling, the pressure can be reduced to less than atmospheric at the water closet fill valve. This creates a siphon action in the water closet tank. A potentially hazardous event has occurred that could introduce contaminated water into the potable water supply.

The solution to this problem is fairly simple. The water closet fill valve (ball cock) needs to be replaced with an antisiphon fill valve that extends a minimum of 1 inch (25 mm) above the overflow tube in the water closet tank. Additionally, the water pressure throughout the building should be increased by replacing or upsizing the water supply piping.

Another common backflow hazard can result from hoses being attached to threaded outlets. Backflow can occur when the open end of the hose is submerged in any liquid. For example, the possibility of backflow exists when a homeowner uses a hose to spread chemical fertilizers, herbicides or insecticides. If negative pressure should occur in the water supply piping, the water and chemicals from the hose could be siphoned into the water supply.

The solution to this problem is to install a hose-connection-type vacuum breaker on the water supply outlet fitting. When a negative pressure occurs in the water supply, the vacuum breaker opens to the atmosphere allowing air to enter the piping system, thus "breaking" the vacuum.

A type of cross connection occurs when a water supply is connected directly to an appliance or a piece of equipment. Some examples are water supplies to

ter flow from reversing direction. Common types of protection are pressure-type vacuum breakers, barometric loops and reduced pressure principle backflow preventers.

Any time there is not an obvious air gap or visible backflow preventer device in a water supply line, the code official should attempt to determine if a hazard exists.

Cross connections between a private water supply (typically a well system) and a potable public water supply are not permitted under any circumstance. If the ground water becomes contaminated, a cross connection could affect the entire public water supply system.

The code official should work with local plumbing inspectors or water departments to identify and eliminate all cross connections and unprotected potable water outlets. (Water Pressure)

505.3 Supply. The water supply system shall be installed and maintained to provide a supply of water to plumbing fixtures, devices and appurtenances in sufficient volume and at pressures adequate to enable the fixtures to function properly, safely, and free from defects and leaks.

❖ Inadequate water pressure or insufficient volume can cause plumbing fixtures, washing machines, dishwashers and other appliances to operate improperly. Inadequate water pressure can restrict the flow of water into bathtubs, showers and sinks to the point that the fixtures are not usable. The code requires enough pressure and volume so that all fixtures and appliances are functional and free of undue hazards.

There are many causes of inadequate water pressure and lack of sufficient volume. A few of the common causes include:

- Private wells;
- Inadequate ground-water supply;
- Defective pump or a pump that has lost its prime;
- Storage tank that has lost its air cushion; and
- Sand or silt plugging the well point.

Municipal systems:

- Inadequate pressure in the public water main; and
- Sudden loss of pressure in an area caused by the use of a nearby fire hydrant, a broken main water line, etc.

Quite frequently, an inadequate water supply is the result of problems within a building. A few examples include clogged or corroded pipes, undersized piping, crimped or bent pipes and a system that is inadequately designed. A change in occupancy of a building might create demands that exceed the original water piping capacity.

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.

❖ A water heater can be dangerous if it is not properly installed and maintained. A water heater is a closed vessel that can be subjected to high temperature and pressure. Under the right conditions, a water heater can explode violently and cause extensive structural damage to buildings and personal injury or death. As such, water heaters should be thoroughly inspected. The following is a guide for the inspection of water heater systems.

1. Electric water heaters:
   - Is the electric service for the house adequate to supply the normal demands of the house as well as the increased demands of a water heater?
   - Is the electric wiring for the water heater of adequate size and properly installed in accordance with the electrical code?
   - Are all conductors properly installed and protected against physical damage?

2. Fuel-burning water heaters:
   - Which fuel is being used? Commonly used fuels include natural gas, propane gas and fuel oil.
   - Is the fuel piping constructed from approved materials, properly connected and adequately supported?
   - Is there a readily accessible, properly installed shutoff valve to stop the fuel supply?

3. Safety controls (electric and fuel-burning):
   - Do the safety controls and devices appear to be in good condition without evidence of tampering or modification?
   - Is the thermostat (temperature control) operational and in good condition?
   - Does the water heater have a temperature and a pressure relief valve or a combination temperature and pressure relief valve? These safety valves are necessary to relieve excessive pressures, thereby preventing an explosion of the water heater. The temperature and pressure relief valves or combination temperature and pressure relief valve must be rated for a pressure not higher than the working pressure rating of the water heater, and in no case higher than 150 pounds per square inch (psi) (1034 kPa).

cause of improper use, contact with or close proximity to combustible materials; overloaded wiring and extension cords; lack of ventilation and the user's typical lack of understanding of the potential hazards.

Exception 1 recognizes the limitations of all heating systems that operate when the outdoor temperature is below the design temperature.This exception states that the minimum indoor temperature requirement of 68°F (20°C) does not apply when the outdoor temperature is below the design temperature for the heating system. The exception addresses only the circumstance where the heating system cannot keep up because the outdoor conditions exceed that for which it was designed (see Section 602.2). The exception applies only to heating systems that are operating at their full design capacity (heat output). It does not apply to improperly designed systems, undersized systems or any system operating at less than its full output for whatever reason. On those rare days when the outdoor temperature is lower than what the heating system was designed to handle, it is anticipated that the indoor temperature might not be attainable. Heating systems that were sized based on outdoor temperatures above the actual outdoor design temperature for the locality in which they are installed are improperly designed, and as such, do not comply with the intent of the exception (see commentary, Section 602.2).

Exception 2 is the same as the exception to Section 602.2.

602.4 Occupiable work spaces. Indoor occupiable work spaces shall be supplied with heat during the period from [DATE] to [DATE] to maintain a temperature of not less than 65°F (18°C) during the period the spaces are occupied.

Exceptions:

1. Processing, storage and operation areas that require cooling or special temperature conditions.
2. Areas in which persons are primarily engaged in vigorous physical activities.

❖ Mercantile, business, factory and similar occupancies in which people are employed must be kept at a temperature of at least 65°F (18°C) during the hours that employees are working. People cannot be expected to work productively and remain in good health if their workplace is uncomfortable. The 65°F (18°C) minimum is lower than required for residential occupancies and is intended to apply to the typical workplace having sedentary employee activities.

Exception 1 recognizes that some occupancies have operations and processes that require temperatures lower than 65°F (18°C), including meat-packing plants, canneries and manufacturing facilities.

Exception 2 recognizes that a minimum temperature of 65°F (18°C) is not necessary where employees are engaged in physical activities such as construction, fabrication and loading in factories.

The period of the year during which structures must comply with this section is to be established by each locality based on local climatic conditions.

602.5 Room temperature measurement. The required room temperatures shall be measured 3 feet (914 mm) above the floor near the center of the room and 2 feet (610 mm) inward from the center of each exterior wall.

❖ To determine compliance with Section 602, temperature measurements are required to be taken at multiple locations. For example, in a room with two exterior walls, a total of three measurements is required. The room temperature requirements of Section 602 must be met in all of the measurement locations. The intent is to make sure that the required temperature will be uniformly reached throughout the occupiable portions of the room or space. The coldest part of a room during the heating season will typically be at the floor level by an outside wall. The measurements are taken at points that are expected to be occupied and that do not reflect the potential temperature extremes in a space (see Figure 602.5).

Any space that cannot maintain the minimum indoor temperatures as established in Section 602 when the outdoor temperature is at or above the design temperature for the locality should be posted as unfit for human occupancy until enough heat can be supplied.

SECTION 603
MECHANICAL EQUIPMENT

603.1 Mechanical appliances. All mechanical appliances, fireplaces, solid fuel-burning appliances, cooking appliances and water heating appliances shall be properly installed and maintained in a safe working condition, and shall be capable of performing the intended function.

❖ Because appliances, mechanical equipment and fireplaces are subject to aging, wear and deterioration, periodic inspection and servicing is required to maintain performance and to verify continued safe operation. Fireplaces and solid fuel-burning appliances must be properly installed, inspected and maintained. They require frequent inspection and maintenance because of the extreme temperatures and corrosive flue gases to which they are subjected. Routine cleaning is required to remove the highly flammable creosote deposits found in chimneys and connectors. Inspections should include such related items as chimney flues, chimney caps, dampers, doors, screens, connectors, hearth extensions and clearances to combustibles.

Fireplaces and solid fuel-burning appliances must be installed and maintained in accordance with the IMC.

The appliance manufacturer's installation instructions and the IMC, *International Fuel Gas Code®* (IFGC®) and IPC should be consulted in determining if an appliance or mechanical equipment is installed properly.

Most occupants are unaware of the hazard created when they store combustibles near or in contact with heat-producing appliances.

It is imperative that adequate clearances be maintained to avoid a potential fire hazard.

603.4 Safety controls. All safety controls for fuel-burning equipment shall be maintained in effective operation.

❖ All appliances and heating equipment are equipped with safety controls and devices intended to prevent fire or explosion in the event of equipment malfunction or abnormal operation. Typical controls and devices are as follows: temperature limit switches; pressure limit switches; pressure relief valves; low-water cutoffs; stack controls; pilot safety controls; draft monitoring controls and flame supervision controls. These controls are designed to prevent such conditions as overheating, excessive pressures, loss of heat transfer medium, loss of ignition source, loss of venting means and loss of main flame, among others.

All such safety controls must be periodically tested and inspected to verify their proper functioning and assess their reliability. Such testing and inspection should be performed by trained technicians when the appliances are serviced and cleaned.

An inoperative or otherwise malfunctioning safety control or device could create an extreme life safety hazard.

603.5 Combustion air. A supply of air for complete combustion of the fuel and for *ventilation* of the space containing the fuel-burning equipment shall be provided for the fuel-burning equipment.

❖ Combustion air includes the air necessary for complete combustion of the fuel, the air required for draft hood dilution and the air necessary for ventilation of the enclosure in which the appliance is located. A lack of combustion air will result in the incomplete combustion of fuel that, in turn, causes soot production, increased CO production, serious appliance malfunction and the risk of fire or explosion. The lack of draft hood dilution air will result in improper draft and appliance venting. The incomplete combustion of fuel and improper draft and venting compound each other and greatly increase the risk of CO poisoning. The lack of ventilation air can result in excessive temperatures in the appliance enclosure, thereby introducing the risk of overheating the appliance and the risk of fire.

In existing structures, adequate combustion air provisions are often lacking or have been blocked, covered or otherwise defeated. Looking for proper combustion air supply is an important part of any inspection.

Fuel-burning equipment must be provided with combustion air in accordance with the IMC and IFGC.

603.6 Energy conservation devices. Devices intended to reduce fuel consumption by attachment to a fuel-burning appliance, to the fuel supply line thereto, or to the vent outlet or vent piping therefrom, shall not be installed unless *labeled* for such purpose and the installation is specifically *approved*.

❖ Energy-saving devices are required to bear the label of an approved testing agency, must be installed in accordance with the manufacturer's installation instructions and must be installed with the specific approval of the code official.

Improperly installed or applied energy-saving devices can adversely affect the operation of an appliance and cause it to become unsafe. A common example would be the improper installation of a flue damper or restrictor device in the chimney or vent connector of a fuel-burning appliance. The resultant installation could cause vent failure and subject the occupants to CO poisoning.

The installation of such devices would require a permit under the IFGC or IMC.

SECTION 604
ELECTRICAL FACILITIES

604.1 Facilities required. Every occupied building shall be provided with an electrical system in compliance with the requirements of this section and Section 605.

❖ This section prescribes the minimum electrical facilities that must be installed and maintained in all buildings used for human occupancy.

604.2 Service. The size and usage of appliances and equipment shall serve as a basis for determining the need for additional facilities in accordance with NFPA 70. *Dwelling units* shall be served by a three-wire, 120/240 volt, single-phase electrical service having a rating of not less than 60 amperes.

❖ This section prescribes the minimum size of the electrical service that must be provided for all structures. The electrical service consists of the service entrance conductors, metering devices, service grounding means, main disconnect, main overcurrent device and typically the distribution panelboard and all overcurrent devices. The size of the service is dependent upon the size of the load (demand). The total electrical usage or load must be determined as prescribed in NFPA 70.

If the actual load exceeds the capacity of the service, additional capacity must be provided. In no case is the service for a dwelling unit permitted to be less than 60 amperes. Additionally, all dwelling unit services are to be 120/240 volt (three wire). The electrical usage in a typical dwelling unit today requires a service of at least a 60-ampere capacity to meet the occupants' needs. The requirement for a three-wire (120/240 volt) service is intended to allow the use of 240-volt appliances, such as clothes dryers, air conditioners and ranges. Additionally, appliances that operate at 240 volts consume less current, thereby conserving the remaining capacity of the service.

Overloading or constant loading to capacity subjects the service to excessive heating and compo-

15. Wire or cable, not containing fillers, that is suitable for wet locations and whose ends have not been exposed to water;
16. Luminaires that are listed as submersible;
17. Motors;
18. Electronic control, signaling and communication equipment.

❖ This section lists the types of electrical equipment that must be replaced if they have been exposed to water such as being submerged. Protective components, such as circuit breakers, overload relays, low voltage or medium voltage protective devices within a switchgear assembly, and fuses are necessary for the safe operation of the distribution circuits and should be replaced when exposed to water. The ability of a transformer to operate as intended can be impaired by corrosion to the transformer core, flood debris deposited inside the transformer, or contamination of the transformer fluid. The exception to this section allows for repair of certain components of an electrical distribution system and certain electrical equipment provided that an inspection report from the equipment manufacturer or approved manufacturer's representative is submitted to the code official indicating that the level of damage to the equipment does not warrant replacement.

604.3.2 Abatement of electrical hazards associated with fire exposure. The provisions of this section shall govern the repair and replacement of electrical systems and equipment that have been exposed to fire.

❖ This section defines the scope of the section as pertaining to electrical equipment and systems that have been exposed to fire.

604.3.2.1 Electrical equipment. Electrical switches, receptacles and fixtures, including furnace, water heating, security system and power distribution circuits, that have been exposed to fire, shall be replaced in accordance with the provisions of the *International Building Code*.

Exception: Electrical switches, receptacles and fixtures that shall be allowed to be repaired where an inspection report from the equipment manufacturer or *approved* manufacturer's representative indicates that the equipment has not sustained damage that requires replacement.

❖ This section lists the type of electrical components and equipment that must be replaced, where they have been exposed to fire. The ability of electrical switches, receptacles and fixtures, including furnace, water heating, security system and power distribution circuits, to operate as intended can be impaired by exposure to fire. The exception to this section allows for repair of these components provided that an inspection report from the equipment manufacturer or approved manufacturer's representative is submitted to the code official indicating that the level of damage to the equipment does not warrant replacement.

SECTION 605
ELECTRICAL EQUIPMENT

605.1 Installation. All electrical equipment, wiring and appliances shall be properly installed and maintained in a safe and *approved* manner.

❖ This section provides necessary safety requirements for electrical equipment, wiring and appliances.

All electrical equipment, wiring and appliances must be properly installed and maintained in accordance with this code and NFPA 70 or the *International Residential Code*® (IRC®). It is the responsibility of the building owner or operator to provide and safely maintain the electrical facilities required herein.

605.2 Receptacles. Every *habitable space* in a dwelling shall contain at least two separate and remote receptacle outlets. Every laundry area shall contain at least one grounded-type receptacle or a receptacle with a ground fault circuit interrupter. Every *bathroom* shall contain at least one receptacle. Any new *bathroom* receptacle outlet shall have ground fault circuit interrupter protection.

❖ Every room or space in a dwelling unit that is used for living, sleeping, eating or cooking must be provided with at least two separate receptacle outlets. Such outlets must be as remote from each other as practicable. The quantity of receptacles required by this section is less than that required by NFPA 70 for new construction, but is considered a reasonable compromise for existing structures.

This provision is intended to minimize or eliminate the use of extension cords. The amount of electrical current that any extension cord can safely conduct is limited by the size of its conductors. This principle is not understood by much of the general population. As a result, extension cords are commonly overloaded by the connection of either too many appliances or any loads in excess of the cord's capacity. Overloading extension cords causes an increase in the conductor's temperature. This increase can exceed the temperature rating of the conductor's insulation, causing it to melt, decompose or burn. The burning insulation can easily start a fire, and the resultant loss of conductor insulation can cause a short circuit or ground fault that can also act as a source of ignition. The buildup of heat in an extension cord is often made worse by excessive cord length and by the insulating effect of rugs that often cover these cords. Extension cords are much more susceptible to physical damage than permanent wiring methods. Damage to cords increases the likelihood of shorts, ground faults and poor connections, all of which can cause a fire. In addition to the fire hazard, extension cords pose a tripping hazard to the occupants and, when damaged, pose an electric shock hazard.

Every laundry room is required to have at least one grounded-type receptacle outlet. The appliances used in a laundry room are of the type that require a grounding conductor for safe operation. The grounding of ap-