
INTRODUCTION

Codes and ordinances fall under the broad description of laws. Laws are written and adopted on all three of the levels of government: federal, state, and local. There are clearly laid-out relationships among the different levels of government and their influence on each other.

DEFINITION OF LAWS

Laws are pieces of enacted legislation. There are different types of laws in the United States. The supreme law, and that with which all others must not conflict, is the U.S. Constitution. All legal authority for governmental action comes from the Constitution of the United States. The Congress of the United States passes legislation within the confines of the Constitution.

Statutory laws are those that are adopted by Congress (federal statutes) and laws that have been passed by state legislatures (state statutes). Statutory law also includes local laws, usually called ordinances.

Codes are systematically arranged, comprehensive collections of laws. Regulations are rules designed to implement a statute based on an agency's interpretation of that statute. Such rules provide procedural requirements for program operations. Typically, they are published through an official process that allows for public comment. Regulations have the same effect as law and must be complied with once they are published in final form.

The federal government organizes its statutes applying to a certain subject by placing them in the code of federal regulations (CFR). States do much the same thing. The laws regarding public safety may be in the health and safety code. Criminal laws are organized into the penal code. Examples of codes that are adopted by local government ordinance are the building and fire codes. The hierarchy of legal enforcement is designed so that the state laws can augment or increase provisions in federal law, but they cannot weaken the federal law. The same relationship exists between local ordinances and state or federal laws. The types of codes are not to be confused. CFRs and state legislation are not the same as the adoption, by ordinance, of a building or fire code.

The constitutionality of laws is determined by the judicial system. When a law or the enforcement of a law is questioned, it may be taken before the courts. Once these issues are decided, they are referred to as precedents. These precedents are used as the basis for future interpretation and enforcement of the laws.

Laws are only applicable as long as they have been properly adopted and not been reversed by a court decision. Through court decisions, laws are changed and in some cases

suspended until a final decision is reached. In modern times initiatives passed by voters may create a law whose enforcement is held up in the court system for years. Appeals may be made at successive levels until the Supreme Court agrees to hear the suit or refuses to hear it, thereby leaving the decision of the next lower level of court standing.

When the law is not specific in a matter, the laws and previous court decisions are reviewed to determine what is most closely the intent of the law. Laws are not created overnight and many new processes and situations occur that have not been addressed specifically in the law or in a code that has been adopted. In some states, in lieu of an existing law, a legislative counsel or attorney general's opinion governs conduct, action, or procedure.

It is important to have a good idea of what the applicable laws are in any situation. Firefighters are charged with the authority and the responsibility to only enforce laws that exist, not just what they think is a good idea. When you, acting under the authority of your position, tell someone to do something, they have two choices: to go ahead and do it or to challenge you. They can say that they want you to cite the provision of the code that requires them to have fire extinguishers serviced and maintained periodically. If you are not familiar with the code, and you are wrong, they have every reason to contact your supervisor and report your inadequacies. When you know the fire extinguisher regulations, you can produce the code section that requires compliance with your orders. A third alternative is for them to let you go ahead and issue the citation and take the matter before a judge. What they will ultimately have to do depends on the decision rendered by the court.

In some circumstances, the word of the fire department employee is not the final word, no matter what the law says. A business owner may be granted a variance to avoid complying fully with the letter of the law. A variance can be granted for a number of reasons. The code allows a variance provided that the intent of the code provisions is met. A variance allows the business owner an alternative to meeting the strict letter of the code as long as life safety and fire safety are provided. At other times, the variance may be granted for political or economic reasons.

LAWSUITS

We live in a society that increasingly likes to sue. Many people take no personal responsibility for their own actions and will sue anyone. It does not matter that you responded to the fire they caused and did the best you could. When their house burns down, they may sue the fire department for not saving it.

There are more attorneys than firefighters in this country. One of the ways that attorneys make money is to file lawsuits. Even if the matter never goes before a judge, the jurisdiction may settle out of court. This is often cheaper than defending itself. When this happens, the persons suing and their attorney both make money. In some jurisdictions, suits brought or negotiated down to a specified amount are not contested due to the cost, no matter how ridiculous the claim is.

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It used to be that the fire department was so highly regarded it seemed above being sued, but that has changed. If the modern experience of police departments is any indication, we will see a sharp increase in the number of suits filed against fire departments.

The way to avoid lawsuits is to do your job correctly every time. You must also take the time to document, through the use of reports, what you did. When lawyers approach the jurisdiction to start a suit, the evidence of a job done correctly and properly documented can often stop the proceeding in its tracks.

NOTE The way to avoid lawsuits is to do your job correctly every time.

When you are sued, it is because of a tort. A tort is defined as a wrongful act. The term tort is used in civil, not criminal actions. Civil actions are brought with the intent of seeking monetary compensation. Torts can result from either nonfeasance, misfeasance, or malfeasance. Nonfeasance is defined as a failure to act. If you were to respond to a medical aid incident and failed to splint a broken leg before the person was moved, thereby further injuring them, that is a failure to act. Misfeasance is doing something wrong that you are lawfully allowed to do. Responding with red lights and siren is legal. It releases you from obeying the traffic laws to a certain point. It does not allow you to run stop signs at a high rate of speed without due regard to public safety, as is specified in many departments' Standard Operating Procedures and guidelines. Malfeasance is wrongdoing or misconduct. Driving the engine to a fire while intoxicated is an example of malfeasance. Yes, the engine needs to get to the fire, but when you are under the influence of alcohol you are violating the laws against driving under the influence. Using the red lights and siren does not release you from your obligation to obey the drunk driving laws. The greater public good is served by having a short delay while another person shows up to drive the engine than for you to try to operate it yourself.

The defense that you were just doing the best you could under the circumstances is often not good enough. When things do go wrong, it is our responsibility to find out what went wrong and take measures to prevent a recurrence. The ability to perform properly at incidents comes from experience and training. In many cases, you may lack the experience. If you paid attention to the training and practiced, you should be able to perform as expected. If not, your performance will be below that which is expected and you will have a hard time defending your actions in a court of law. The training must also be documented. Judges and juries are suspicious when documentation of actions taken is not available when requested.

One of the ways to address these issues is through policies. Policies clarify or provide direction for specific situations. The policies must be agency specific and regularly reviewed to ensure that they are still valid. The policies must be written and delivered to the members of the department so that they are understood. The department must be able to verify that they have been received and all personnel have not only seen them, but understand them as well. The only way to verify understanding is through regular testing.

All personnel in a supervisory capacity must follow the policies and set the example if they expect others to do the same.

There are several simple policies that you can use to limit your liability and help to protect yourself against a lawsuit:

- Develop a reminder process that will send up a notice when it is time to go back to a business to reinspect for previous problems.
- Conduct as thorough an inspection as you are capable of. In other words, do your best.
- Maintain accurate records of your inspections, variances, complaints, and so forth. These records can be used to justify the reason why you approached a business to conduct an inspection.
- In court, testify to those things you actually know.
- Have someone with you when making your inspections, preferably an employee or owner of the business. However, this action will not eliminate the possibility that someone could accuse you of misconduct.
- If you are refused entry, obtain an inspection warrant. Do not force your way in.
- Finally, treat all people fairly and honestly to eliminate the potential of a business owner claiming that she was being discriminated against or picked on.

The overriding issue is that the public pays you to do a job and do it well. It is not just done to avoid lawsuits. It is the responsibility of every firefighter to perform to the best of his or her ability and perform correctly. To you, it is may be just another incident; to the people involved it may be the most important event in their lives.

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PERSONNEL COMPLAINTS

Most departments have a standard procedure for complaints brought against members by the public or other members of the department. An example of a standard procedure is as follows:

1. The person wishing to file the complaint should speak to the accused's supervisor or the fire chief.
2. The complaint is discussed with the appropriate officer. The officer is to explain the options available to the complainant. Should they decide to pursue the matter, the personnel complaint form should be filled out.
3. The form is forwarded to the fire chief, or a designated representative, and a decision is made as to the correct investigative procedure based on the nature of the complaint.

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4. At the conclusion of the investigation, a determination is made as to the disposition of the complaint and what action, if any, is warranted against the employee.
5. The person complaining is notified by mail, in writing, of the results of the investigation, as is the accused.

The person making the complaint should be assured that the complaint will be properly investigated. Also, the department should make sure that no adverse consequences occur to any person or witness as a result of having brought a truthful complaint or provided truthful information in any investigation of a complaint.

It is standard policy that any employee who attempts to discourage, delay, or cover up any complaint received by a citizen shall incur disciplinary action.

It is the complainant's responsibility to be truthful and as accurate as possible in presenting information that he or she believes should be investigated. The complainant should understand that malicious or false complaints against department personnel could subject him or her to possible criminal and/or civil action. The department may assist in pursuing such action. The complaint form should state that the person signing the complaint does affirm under penalty of **perjury** that the facts contained therein are truthful.

perjury Making false statements in a sworn document or testimony.

HARASSMENT-FREE WORKPLACE

The federal government and the courts hold management responsible for harassment in the workplace. Consequently, a clear understanding of what constitutes harassment is essential to the development of a harassment-free work environment.

Harassment is defined as coercive or repeated, unsolicited, and unwelcome verbal comments, gestures, or physical contacts, including retaliation for confrontation or reporting harassment. Harassment includes:

- *Physical conduct.* Unwelcome touching; standing too close; inappropriate or threatening staring or glaring; obscene, threatening, or offensive gestures.
- *Verbal or written conduct.* Inappropriate references to body parts, derogatory or demeaning comments, jokes, or personal questions; sexual innuendoes; offensive remarks about race, gender, religion, age, ethnicity, sexual orientation, political beliefs, marital status, or disability; obscene letters or telephone calls, catcalls, or whistles; sexually suggestive sounds; loud, aggressive, inappropriate comments, or other vocal abuse.
- *Visual or symbolic conduct.* Display of nude pictures, scantily clad or offensively clad people; display of intimidating or offensive religious, political, or other symbols; display of offensive, threatening, demeaning, or derogatory drawings, cartoons, or other graphics; offensive T-shirts, coffee mugs, bumper stickers, calendars, or other articles.

- **Work environment.** Any area where employees work or where work-related activities occur, including field sites, fire stations, buildings, and facilities. Also included are vehicles or other conveyances used for travel.
- **Responsibility.** Managers, supervisors, and employees, as well as contractors, cooperating agency personnel, and volunteers are responsible for creating and sustaining a harassment-free environment by their individual conduct, through job supervision, coaching, training, and other behavior and means. All employees, contractor personnel, and visitors must take personal responsibility for maintaining conduct that is professional and supportive of this environment. Employees who witness harassment are instructed to report it to the proper authority.

Individuals who believe they are being harassed or retaliated against should exercise any one or more of the following options as soon as possible:

- Tell the harasser to stop the offensive conduct.
- Tell an officer or supervisor about the conduct.
- Contact the fire chief, or any other individual who would take action, for example, a union representative or the agency equal employment opportunity representative.

THE COURT SYSTEM

Before looking at the court system and its organization, it is necessary to understand the concept of jurisdiction. The cases that a court can hear are considered to be within its jurisdiction. When a case can be first heard in a certain court, it is considered to have original jurisdiction. When the case must first be heard in a lower court and then the lower court's decision is appealed to the higher court, that is an appellate jurisdiction. In the case of fire departments, the meaning of jurisdiction is the limits of territory within which its authority may be exercised. An example is that the city fire chief cannot go into a county fire department station and give orders to the firefighters because he is outside his jurisdiction. Jurisdiction is a very important concept to understand whenever talking about who can legally do what, where, and when. If you are acting outside your jurisdiction, you are not legally taking action, no matter how good your intentions.

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The court system is divided into different levels. As you go up the levels, the matters heard tend to be more important. On the federal level, the highest court is the U.S. Supreme Court. Most cases heard before this court are questions about the constitutionality of a law. The next lower level is the circuit court of appeals, which hears appeals from the federal district courts. The federal district courts deal with matters of federal law. When a crime—such as an illegal campfire—is committed on federal property, the person

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must appear in federal district court. The illegal act occurring on federally managed land gives the federal court jurisdiction.

On the state level, the highest court is typically the state supreme court. This court usually hears appeals from the district courts of appeal. The district courts of appeal typically hear appeals from the district or superior courts. The district or superior courts are where most of the state trials are heard. When someone is charged with arson, the case is first heard in the district or superior court. In certain cities and counties, there are municipal or county courts where **misdemeanor** offenses are heard, with the exception of those committed by juveniles, which are heard in district or superior court. If you wrote someone a citation for illegal open burning of trash, she would be required to appear in municipal court. If someone were arrested for illegal fireworks, a **felony** in some states, he would appear in superior court. Both situations may start with the issuing of a citation, but the offenses are very different in the eyes of the law.

misdemeanor A crime punishable by up to one year in a county jail or by a fine usually not to exceed one thousand dollars or both.

felony A serious crime such as murder, arson, or rape for which the punishment is either imprisonment in a state prison for more than one year, or death.

RELATIONSHIP OF FEDERAL, STATE, AND LOCAL REGULATIONS

When discussing the relationship of federal, state and local regulations, the subject of jurisdiction comes into play. The jurisdiction is the limits of territory in which authority is exercised. Territory is not strictly geographical; it can also apply to situations.

When several levels of laws are encountered, usually the most stringent law is enforced. This is not always the case, especially when different levels of government jurisdiction are involved. A fire prevention person for the forest service would enforce federal regulations on federal lands. She would not perform a prevention inspection in a business in an incorporated city. Conversely, a local fire department would not have jurisdiction in a federally owned post office or other federal building. This should not prevent the local fire department from performing prefire planning at federal buildings. If there is a fire, it is the responsibility of the local fire department to respond.

The jurisdictional lines get somewhat blurred in that the local fire department does have jurisdiction over a contract post office operated from a privately owned building, common in suburban or rural areas. Another example is a locally protected housing area, on private land, in the middle of a national forest. The fire department and the forest agency should work together on hazard reduction to prevent a structure fire from spreading to the forest and a forest fire from burning structures. Through cooperation, the fire prevention mission can be accomplished within jurisdictional boundaries to satisfy the needs of both parties.

The state fire marshal usually has jurisdiction in state-owned buildings, such as prisons and government office buildings. The state fire marshal may make an agreement that allows the local fire department to enforce state regulations in certain occupancies.

Other governmental agencies are involved as well. The local zoning commission regulates what types of occupancies are allowed and where. It is uncommon for a high-hazard occupancy to be allowed in a residential area. This may be as simple as stopping someone from having a woodworking business in his garage. The local building department is responsible for the enforcement of building codes, plan checks, and the inspection of buildings during construction, whether new construction or remodeling. The building department also determines occupancy types allowed in buildings, dependent on construction type. A building that was originally a restaurant may not be allowed to be used as a cabinet shop without major modification. In the average jurisdiction, the building department may only be aware of remodeling when a building permit is requested, whereas the fire department makes periodic inspections of businesses and is likely to discover evidence of major work done or a change of occupancy. When the fire department discovers alterations or changes in occupancy, it should notify the building department and work with that staff to ensure that the facility complies with construction, fire, and life safety regulations. There may be times when the business owner is reluctant or hesitant to comply with the correction notice issued by the fire department. At that point law enforcement personnel may be needed to serve an inspection or administrative warrant or to arrest persons who willfully disregard action required to correct fire code violations.

Some problems are going to be beyond the legal authority of the fire department alone to handle. It is important for fire department personnel to know where their jurisdictional authority begins and ends. The violations found may not be of the fire code, but the building code or other ordinance. In these circumstances, personnel must know how and to which department to make a referral. An example is an abandoned house. It is a health hazard if left open and may be a life hazard if used as a sleeping area by transients. The provisions of the fire code may not provide jurisdiction for fire department action. A referral can be made to the building department and the hazard abated. Another common scenario is that you are out performing weed abatement and notice an accumulation of garbage behind a house or business. If it is not an accumulation of combustibles, it is not within your jurisdiction to correct it, but by giving a referral to the health department the nuisance can be cleaned up.

NOTE Some problems are going to be beyond the legal authority of the fire department alone to handle.

It is good public relations to have a working knowledge of the responsibilities and jurisdictions of the local public agencies. That way, when someone calls to complain about the neighbor's accumulation of trash in their yard, you can assist in resolving the problem.

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In cases where the accumulation is an eyesore and not a fire hazard, no direct action can be taken by the fire department. If you can make a referral that handles the problem, the person who complained is going to remember that you, the fire department, were of assistance. You did not just say that there was nothing you could do about it because it was not your jurisdiction. By working together, the fire department and the other public agencies can assist each other and perform their functions to the public's satisfaction.

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FIRE PREVENTION

The fire prevention bureau has the legal responsibility and authority to enforce fire-related codes and ordinances. This authority does not just come about by the fire department deciding what they want to do. The fire department and its personnel cannot demand that action be taken by a property owner unless there is authority to inspect.

The most often cited case in relation to fire prevention is *See vs. City of Seattle* 387 vl. 541, 87 S. Ct 1737. In this case the U.S. Supreme Court has held that administrative entry, without consent, of the portions of commercial premises that are not open to the public, may be compelled only through prosecution or physical force within the framework of a warrant procedure.

The U.S. Supreme Court has also set forth guidelines for inspection agencies.

The following recommendations are given to assist fire inspectors in operating within these guidelines:

1. Inspectors must be adequately identified. It is recommended that inspectors wear some type of uniform. Commonly recommended is a blazer, which looks professional but is not as threatening as wearing a badge.
2. Inspectors must state the reason for the inspection. Many times people at the site will joke that you are there to "shut them down." This is not always taken as funny and you must be careful about what you say.
3. Inspectors must request permission for the inspection. There are times that are inconvenient for the occupants to undergo an inspection. This does not always mean that they are trying to hide something. It might just mean that they are extremely busy. Just make arrangements to come back at a more convenient time.
4. Inspectors should invite the person in charge to walk along during the inspection. When the manager or his designee accompanies you, it is a good chance to point out problems, ask questions pertinent to the inspection, and discuss voluntary compliance with the required changes. You must remain professional at all times and complete the inspection; the persons at the business have work to accomplish as well.

5. Inspectors should carry and follow a written inspection procedure, making it less likely to overlook something important. If you are called away or otherwise interrupted during the inspection, it also is easier to pick up where you left off.
6. Inspectors should request an inspection or administrative warrant if entry is denied. This will rarely be necessary. If all other methods of gaining voluntary submission to an inspection fail, then an inspection or administrative warrant will be necessary.
7. Inspectors may issue stop orders for extremely hazardous conditions, even if entry is denied, while warrants are being issued.
8. Inspectors should develop a reliable record-keeping system of inspections. By keeping records of past inspections, the inspector can update information as to phone numbers and contact persons, owner and business name information, and record of past violations. If the system of voluntary compliance is used, it is important to know when reinspecting whether the last violations were corrected. If they were not, stronger measures may be required to ensure future compliance.
9. Inspectors should have guidelines available that define conditions whereby they may stop operations without a search warrant or obtaining permission to enter. These guidelines are necessary in that if you shut down an operation, you are costing the business money and it may very well end up in a lawsuit. It is important that these procedures be applied uniformly and impartially.
10. Inspectors should be sure that all licenses and permits indicate that compliance inspections can be made throughout the duration of the permit or license. Before any inspection is made, the inspector must be sure that he has the right to inspect the premises. After you have required expensive modifications or shut down a portion of a business is not the time to find out that you were acting outside of your authority.
11. Inspectors must be trained in fire hazard recognition and in applicable laws and ordinances. When you enter a business, it is your responsibility to make a thorough, professional inspection. Ignorance of the law is no excuse for either party, you or the owner. When an inspection is made, you may be held liable for fire, injury, or death if there is a fire resulting from something you overlooked or failed to enforce. It is just about a sure bet that you will be named in the lawsuit. For this reason, personnel assigned to the fire prevention bureau receive special training and inspect the more complex businesses and processes. Personnel on engine companies are not as highly trained and, in most cases, perform the less complex inspections. As an inspector, you need to possess the technical expertise to identify "physical illegalities" such as substandard electrical installations, excessive amounts of flammable liquids stored, and lack of or inoperative fire extinguishers. "Procedural illegalities" include failure to obtain required permits for hazardous operations, unsafe welding activities, improper smoking areas, and unrestrained flammable gas cylinders that may tip over. Structural deficiencies include inadequate or breached fire walls, improper fire exit design, and improper installation of fire doors.

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The state fire prevention laws and codes are based primarily on model national codes. In some states the codes are divided by type, such as a building code, health and safety code, welfare and institutions code, and administrative code. In most states, the state fire marshal interprets and recommends state-level legislation as it relates to fire and life safety. The state fire marshal may also be charged with the responsibility of enforcing regulations and codes in state buildings and in areas with no established fire prevention bureau, such as rural areas. The state fire marshal may delegate authority to the local jurisdiction when there is an established fire prevention bureau, usually in county, city, or district fire departments. The state fire marshal can delegate the authority to perform these inspections but still retains the responsibility to see that they are completed.

On the local level are the local fire departments and local codes and ordinances. Most jurisdictions adopt model codes through ordinance. These codes may be adopted in part or in whole, as the local jurisdiction wishes and finds politically acceptable. Adoption of the fire prevention code usually designates the fire chief as the primary enforcement authority. He then delegates that authority to his fire marshal and inspectors.

Adopting a model code does not mean that the jurisdiction cannot establish ordinances that are not addressed in the model code to deal with particular local problems. An example of this would be a weed ordinance in areas where dry vegetation is a summertime fire hazard. Another example would be regulations regarding high-rise buildings as there may not be language in the adopted model fire regulations that refer to this type of building. One area that is gaining in acceptance is a Residential Fire Sprinkler Ordinance. Another common local ordinance is one that specifies hydrant spacing in the jurisdiction. It is the responsibility of the local governing body to enact the required legislation, through ordinance, to make these requirements law.

MODEL FIRE CODES

The Building Officials and Code Administrators (BOCA), the International Conference of Building Officials (ICBO), and the Southern Building Code Congress International (SBCCI) have all developed model fire prevention codes. ICBO publishes the *Uniform Fire Code*,¹ BOCA publishes the *Basic Fire Prevention Code*,² and SBCCI publishes the *Standard Fire Prevention Code*.³ Additionally, the National Fire Protection Association publishes a series of codes and standards known as the National Fire Codes; one of these is the NFPA 1, *Uniform Fire Code*.⁴

The three organizations, ICBO, BOCA, and SBCCI, recently teamed together to create a nationwide fire code together with a nationwide building code to go hand-in-hand with the fire code. This task was undertaken in an effort to create uniformity and ease of use of the fire codes across the nation. These two documents will replace the individual building and fire codes that each of the three model code organizations previously published. The benefit of creating a set of national codes is that building designers and architects can use the same set of regulations in Tennessee, Alaska, or California. In the year 2000, the first

editions of the *International Fire Code* and the *International Building Code* were published by the newly formed International Code Council. This new set of codes is quickly gaining in popularity and has been adopted in all or part of 46 states across the country.

The use of a nationally recognized model fire prevention code is usually more desirable than a locally written code because the model codes have been nationally developed and represent a broad spectrum of fire prevention experience. The nationally recognized codes also give building experts, such as architects and engineers, a familiar base from which they can design a structure's built-in fire protection features. The national codes also offer a means to gain formal interpretations of the code's intent if a local inspector does not clearly understand a particular code requirement. Additionally, nationally recognized codes undergo a constant review process with a new, updated edition published every three years, which makes them more in line with current fire protection theories and technology.

NOTE The use of a nationally recognized model fire prevention code is usually more desirable than a locally written code.

Perhaps one of the single most important factors in adopting one of the model codes is that they are companion codes to the publishing organization's building codes. This fact is very important in that it minimizes the likelihood that there will be conflicting code requirements.

The model fire prevention codes are typically divided into sections or chapters that deal with certain topics of fire protection. Typically, the first chapters deal with administrative items, such as a model ordinance that officials can use to adopt the code. The codes typically then define the authority of the fire official and define the responsibilities of property owners to maintain their premises in a firesafe condition. One of the more important code sections usually follows next, and this section defines the fire protection terminology used in the code. The following chapters typically deal with the proper installation and maintenance of fire protection features, and lastly they offer specific requirements for the use and protection of equipment, processes, occupancies, and hazardous materials.

One important point is the recognition of the National Fire Protection Association's National Fire Codes. (A list of these is contained in Appendixes C and D). Many jurisdictions have, by ordinance, adopted the whole set of codes and standards, which has the positive effect of having almost any fire protection problem covered by a code or standard. It has the disadvantage of making the inspector responsible for the knowledge and research capabilities to understand many separate fire protection regulations.

At this point, it is important that you understand the difference between a code and a standard. A code is written in language that mandates what should be done and is written such that it can be enforced as a law. Standards, on the other hand, express how something should be accomplished and are typically written as recommendations. In other

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words, the codes stipulate when to install a fire sprinkler system in a particular building; the standards address how to design and install the sprinkler system. When standards are adopted as part of an ordinance, these recommendations have the force of law and may be enforced as such.

When a certain model code is adopted, it is imperative that a certain edition (year) be adopted. It is illegal for the ordinance to simply state, "Adopt the most recently published edition" of a code, as this denies the public its right to due process. The specific edition must be identified in the ordinance. This will give the public the opportunity to comment on, or protest, the enforcement requirements that are identified.

Occupancy Classification

When the building or fire code is to be applied, the first thing that must be determined is the occupancy classification of the building. It is important to select the classification that most accurately fits the use of the building. Most requirements of the code come from this classification. Several examples of occupancies are:

Occupancy	Letter Designation
Assembly	A
Business	B
Educational	E
Institutional	I
Mercantile	M
Residential	R
Storage	S

NOTE When the building or fire code is to be applied, the first thing that must be determined is the occupancy classification of the building.

Many of the occupancy examples have subcategories. These subcategories vary from code to code. An assembly occupancy may be subdivided based on the size of the occupant load or type of use, such as restaurant or theater. Educational occupancies may be subdivided into regular schools and day-care centers. Institutional occupancies may be subdivided into restrained or nonrestrained occupants. Residential occupancies may be subdivided based on the number of units or the type of residential setting (i.e., dormitory, board and care, hotel/motel, apartments). Finally, storage occupancies may be subdivided based on the combustibility of contents (fire load) stored in the building. The classification of the occupancy is important for many reasons. The building code requires limits as to the height and area of a building depending on the occupancy classification

and the types of construction materials. Generally, the greater the fire resistiveness of the structure, the larger it is permitted to be. Additional area may also be added if a building is protected throughout by automatic fire sprinklers. It is also important, from a building code standpoint, to determine the occupancy of a building so that the mixed occupancy fire separations can be determined. For example, a model building code may require only a **one-hour fire-rated separation** between a business (such as an office) and a mercantile (such as a clothing store) use, whereas it may require a three-hour fire-rated separation between a moderate-hazard storage occupancy and a business occupancy.

one-hour fire-rated separation A fire-rated assembly that should resist breakthrough for a period of one hour. An example of this type of construction is the use of 5/8-inch-thick fire-rated gypsum wallboard or a combination of wallboard and plaster. All of the electrical boxes must be metal and not plastic. Any penetrations through the assembly must be properly protected to prevent the spread of fire.

Construction Types

Both model building codes and NFPA 220, *Standard on Types of Building Construction*,⁵ can be used to determine the type of construction used in a building. This type of construction is typically denoted by a shorthand notation such as Type I, II, III, IV, and V. It may also be followed by a number or letters such as Type IV 2 HR, or Type IV Unprotected (Figures 11-1 and 11-2). These notations and numbers refer to what the building is constructed of and what the hourly ratings of its structural members are (i.e., exterior and interior bearing walls, columns, beams and trusses, floors and roofs).

The model building codes determine how close buildings of a certain construction type can be from another building or property line. The model building codes and NFPA 101, *Life Safety Code*,⁶ determine other important factors, such as the occupant load of a structure, the size of the means of egress, the number of exits, and the travel distance to those



FIGURE 11-1

Unprotected steel construction which may fail quickly when exposed to fire.

FIGURE 1
Unprotected
construction

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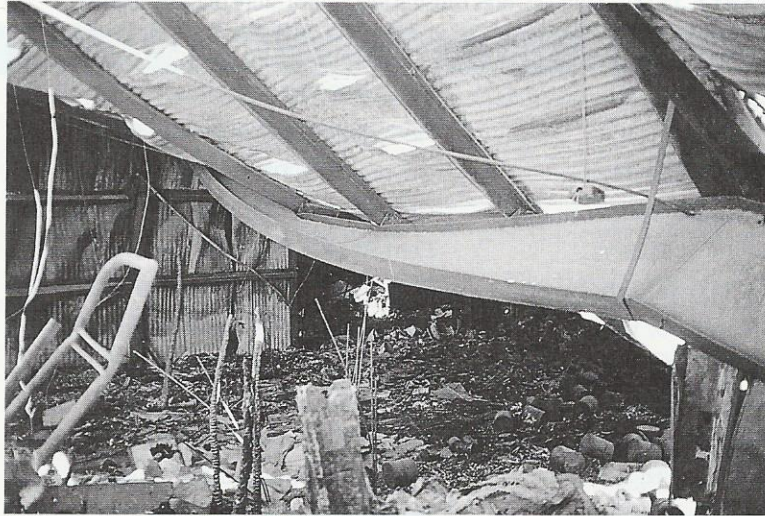
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FIGURE 11-2
Unprotected steel
construction after fire.



exits. For multistory buildings, the codes require certain hourly ratings around stairwells and building shafts such as trash chutes and elevator shafts. The codes at times mandate the installation of fire sprinkler systems, fire alarm systems, or standpipe systems. They can also be used to determine the need for emergency lighting and exit signs. Additionally, these codes require the adherence to requirements on the types of interior wall and ceiling finish that is permitted in areas of the structure. These items are only a brief overview of complex codes that can contain up to 1,000 pages of codes and interpretations.

CODE DEVELOPMENT

Codes are most often developed in response to a disaster. After a major disaster that could have been prevented, there is a public outcry as to why it was not prevented. The fire codes requiring that exits open outward and be kept unlocked were developed after numerous large life-loss fires. Building codes requiring enclosing shafts in **fire-resistive construction** were the result of rapid fire spread in buildings caused by unprotected shafts. Examples of twentieth-century high-life-loss incidents are listed by occupancy type in Table 11-1.⁷

Structural steel is commonly covered with a fire-resistive coating or materials such as gypsum board.

NOTE After a major disaster that could have been prevented, there is a public outcry as to why it was not prevented.

fire-resistive construction Construction that has been designed to resist the effects of heat from fire.

TABLE 11-1 Major U.S. fires causing loss of life (more than 25 deaths).

DATE	LOCATION AND OCCUPANCY	LIVES LOST
Dec. 5, 1876	New York, NY—Theater	300
June 30, 1900	Hoboken, NJ—Steamship piers	326
Jan. 12, 1903	Boyerstown, PA—Opera house	170
Dec. 30, 1903	Chicago, IL—Theater	602
June 15, 1904	East River, NY—Steamship	1,030
March 4, 1908	Collinwood, OH—Grammar school	175
March 25, 1911	New York, NY—Clothing factory	145
*April 10, 1917	Eddystone, PA—Ammunition company	133
May 15, 1929	Cleveland, OH—Clinic	125
April 21, 1930	Columbus, OH—State penitentiary	320
Sept. 8, 1934	New Jersey coast—S.S. Morro Castle	125
*March 18, 1937	New London, TX—School	294
April 23, 1940	Natchez, MS—Nightclub	207
Nov. 28, 1942	Boston, MA—Nightclub	492
July 6, 1944	Hartford, CT—Circus tent	168
*July 17, 1944	Port Chicago, CA—Munitions depot	300
*Oct. 20, 1944	Cleveland, OH—Gas company	130
June 5, 1946	Chicago, IL—Hotel	61
Dec. 7, 1946	Atlanta, GA—Hotel	119
March 25, 1947	Centralia, IL—Coal company	111
*April 16, 1947	Texas City, TX—S.S. Grand Camp	468
Dec. 21, 1951	W. Frankfort, IL—Coal company	119
Dec. 1, 1958	Chicago, IL—Grade school	95
Oct. 10, 1963	Indianapolis, IN—Fairgrounds	74
Nov. 23, 1963	Fitchville Township, OH—Nursing home	63
Feb. 7, 1967	Montgomery, AL—Restaurant	25
*April 5, 1968	Richmond, IN—Sporting goods store	41
Jan. 9, 1970	Marietta, OH—Convalescent home	32
Dec. 20, 1970	Tucson, AZ—Hotel	28
*Dec. 30, 1970	Hyden, KY—Coal mine	38
Feb. 3, 1971	Woodbine, GA—Chemical plant	25
Feb. 10, 1973	Staten Island, NY—Gas storage tank	40
June 24, 1973	New Orleans, LA—Nightclub	32

(continues)

TABLE

DATE

Nov. 11

June 3

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Oct. 24

May 28

June 2

Dec. 22

April 2

Nov. 21

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TABLE 11-1 Continued

DATE	LOCATION AND OCCUPANCY	LIVES LOST
Nov. 15, 1973	Los Angeles, CA—Apartment house	25
June 30, 1974	Port Chester, NY—Apartment house	34
*March 9, 11, 1976	Oven Fork, KY—Coal mine	26
Oct. 24, 1976	Bronx, NY—Social club	25
May 28, 1977	Southgate, KY—Supper club	165
June 26, 1977	Columbia, TN—County jail	42
Dec. 22, 1977	Westwego, LA—Grain elevator	36
April 2, 1979	Farmington, MO—Boarding home	25
Nov. 21, 1980	Las Vegas, NV—Hotel	85
†Apr. 19, 1995	Oklahoma City, OK—Federal office building	168
†Sept. 11, 2001	Arlington Co., VA—The Pentagon	189
†Sept. 11, 2001	New York, NY—World Trade Center	3,000 +
Feb. 20, 2003	Providence, RI—Nightclub	100

*Indicates explosion.

†Indicates terrorist attack.

Codes are developed by recognizing the need for increased public safety. Legislation is sponsored and passed that sets the groundwork for the process to begin. Public input is sought and ordinances are written in answer to the needs and the input. An example of this process is public "Right to Know" laws. Right to Know laws were enacted after it was discovered that many businesses were storing large amounts of hazardous materials on their premises. Many times these businesses were operating in close proximity to residential areas and schools. After a few major incidents, the public came to realize the need for disclosure of just what was being stored, manufactured, and used in their neighborhoods. These laws require businesses to disclose, through a business or management plan and hazardous materials inventory, the materials they have on-site, their use, method of storage, and location.

Committees were formed of business personnel, technical experts, and public safety agency personnel to create model legislation. The legislation was designed so that the businesses were required to disclose their materials without requiring them to give away any trade secrets.

Along with the model legislation, model regulations were developed stipulating the storage and handling of the hazardous materials. These regulations were then added to all of the model codes and later adopted by local ordinance across the nation. The development of codes and ordinances is an ongoing process that has tried to become proactive instead of reactive as needs change.