

providers and suppliers meet the provisions of the 2000 edition of the LSC with certain exceptions; and (2) remove references to all previous editions of the LSC.

#### *B. The 2000 Edition of the Life Safety Code*

Some requirements in the 2000 edition of the LSC are substantially different than earlier LSC editions. We solicited public comments regarding whether to adopt Chapter 5, "Performance Based Option," of the LSC. Specifically, we wanted to know (1) whether health care facilities are using performance based design; and (2) what benefits the facility receives by using performance based design.

The LSC fire safety goals establish outcomes to be achieved with regard to fire safety. These overall outcomes are communicated through specific requirements in the LSC. The performance based design option translates fire safety goals into performance objectives and performance criteria. Performance based design establishes broad goals and objectives with a team effort. The performance based design is applied to make the building safe as well as functional. The design is specific to the building. Computer fire models and other calculation methods are used in combination with the building design specifications, specified fire scenarios and assumptions to calculate the overall performance criteria and whether it meets the fire life safety goals and is in compliance with the intent of the LSC.

In the October 2001 proposed rule, we proposed not to adopt the roller latch provision in chapter 19, "Existing Health Care Occupancies," section 19.3.6.3.2 (exception No. 2), of the LSC for any facility. A roller latch is a type of door latching mechanism to keep a door closed. The 2000 edition of the LSC prohibits the use of roller latches on corridor doors in buildings not fully protected by an approved sprinkler system. Exception No. 2, however, allows for the use of roller latches under this prohibition, if the latch can withstand a specific level of force applied to it. We proposed not to adopt exception No. 2 regarding existing roller latches.

Through fire investigations, roller latches have proven to be an unreliable door latching mechanism requiring extensive on-going maintenance to operate properly. Many roller latches in fire situations failed to provide adequate protection to residents in their rooms during an emergency. Roller latches that are not properly maintained may be a danger to the health and safety of

patients and staff. In addition, we have found through our online survey, certification, and reporting (OSCAR) system data report that doors that include roller latches are consistently one of our most cited deficiencies. In fact, in skilled nursing facilities roller latches in corridor doors are consistently the number one cited deficiency under the life safety requirements.

The estimated cost to remove roller latches on existing doors is \$30,754,540 (\$190 per door for 161,866 doors). We derived the cost estimate from information the American Health Care Association (AHCA) gave to us.

#### *C. Analysis of Selected New Provisions in the 2000 Edition of the Life Safety Code*

In the October 2001 proposed rule, we provided the LSC citation, a description of the requirement, an explanation of why we believe the requirement is critical to the safety of beneficiaries and a brief discussion of our analysis of the burden imposed by the requirement. We derived the cost estimates from information the AHCA gave to us. The following are new provisions in the 2000 edition of the LSC from chapter 19, "Existing Health Care Occupancies."

(1) 19.1.1.4.5—Renovations, Alterations, and Modernization—This provision requires that renovations, alterations, and modernizations comply with standards applicable to new construction when possible. Existing facilities that are extensively renovated must meet the requirements of a newly constructed facility, including the installation of sprinkler systems in nonsprinklered buildings. The Fire Analysis & Research Division of the NFPA has shown that sprinklers have been the most important life safety system installed in health care facilities. The LSC generally requires sprinkler systems in renovations, regardless of construction. The estimated cost of installing sprinkler systems in buildings that presently do not have them is \$2.50 per square foot, or approximately \$125,000 for a 50,000 square foot building. This requirement is not imposed on facilities not undergoing renovations. Approximately 2,550 facilities currently do not have sprinkler systems. Because a facility does not have to comply with this provision unless the facility chooses to renovate an existing building, we estimate approximately 128 facilities may be renovated in a year. The total amount to implement this provision would be \$16,000,000 annually.

(2) 19.2.9—Emergency Lighting—This provision requires emergency lighting

for a period of 1½ hours in health care facilities, enabling those inside to move about safely in an emergency. We proposed to phase in this requirement over a 3-year period, to allow for the normal replacement cycle of batteries used in emergency lighting systems. We believe this phase-in period would not adversely impact the health and safety of the beneficiaries. We estimate the cost to install this equipment will be \$600 per light. Approximately 790 existing facilities do not have emergency lighting for 1½ hours. To be in compliance, we estimated that each building would need 12 emergency light units for a total of 9,482 units. The total amount to implement this provision over a 3-year period would be \$5,452,150 or \$1,817,383 annually.

(3) 19.3.1—Protection of Vertical Openings—Unprotected vertical openings (for example, open stairwells) permit fire and toxic gases to spread from one level to another in a building, making evacuation difficult, if not impossible. The estimated cost of compliance with this requirement is \$2,938 per vertical opening. Approximately 9,877 vertical openings in 1,976 facilities would need to be upgraded for compliance. Total cost of compliance with this provision is \$29,018,626.

(4) 19.3.4.3.2—Emergency Forces Notification—This provision requires the fire alarm system to provide automatic notification of a fire to emergency forces. This is of great importance to the protection of all patients. Any delay in the notification of fire or rescue personnel could adversely impact the health and safety of patients and expose them to a fire, smoke or toxic gases created by the fire. Approximately 2,750 buildings at \$900 per facility would need to be connected to a fire alarm retransmission system. The cost is estimated to be a total of \$2,475,000.

(5) 19.3.6.1—Corridors—This provision requires that all areas in nonsprinklered buildings be separated from the corridor by corridor walls that are fire-rated. This requirement, which provides a protected passageway for movement during an emergency, is necessary to increase the safety of the patients. The cost to upgrade a facility to meet this requirement is estimated to be approximately \$7,124 for 1,976 buildings that currently meet the 1967 LSC and approximately \$5,735 for 46 buildings meeting the 1973 LSC. The total estimated cost for compliance is \$14,341,000.

(6) 19.7.5.2 & 19.7.5.3—Upholstered Furniture—These provisions allow patient-owned furniture to be brought