
Subchapter D Facility Construction

§19.300 General Requirements

- (a) The facility must be designed, constructed, equipped, and maintained to protect the health and ensure the safety of residents, personnel, and the public. If children are admitted to the facility, accommodations, furnishings, and equipment appropriate to children must be provided.
- (b) The requirements of this subchapter are applicable to existing nursing facilities unless otherwise stated. Refer to §§19.330-19.343 of this title (relating to Facility Construction) for additional requirements for new construction, conversions of existing unlicensed buildings, remodeling, and additions. An existing unlicensed building is defined as any building (or portion thereof) which is not presently licensed as a nursing home.

§19.301 Applicable Codes and Standards

- (a) The facility must meet the applicable provisions of the 2000 edition of the Life Safety Code of the National Fire Protection Association (NFPA). The Life Safety Code is available for inspection at the Office of the Federal Register Information Center, Washington, D.C. Copies may be obtained from the NFPA, 1 Batterymarch Park, Quincy, Massachusetts 02169. The New Health Care Occupancies chapter of the Life Safety Code is applicable to new construction, conversions of existing unlicensed buildings, remodeling, and additions. The Existing Health Care Occupancies chapter of the Life Safety Code is applicable to existing nursing homes. Life safety features and equipment that have been installed in existing buildings which are now in excess of that required by the Life Safety Code must continue to be maintained or may be completely removed if prior approval is obtained from the Texas Department of Human Services (DHS).
- (b) In addition to the Life Safety Code, facilities must meet any other codes and standards of the NFPA referenced by the Life Safety Code and those listed in this chapter, except as may be otherwise approved or required by DHS.
- (c) The following codes, standards, or guidelines generally govern their subject areas for existing construction:
 - (1) If the municipality has a building code and a plumbing code, those codes govern.
 - (2) In the absence of municipal codes, nationally recognized codes must be used. To assure continuity, all nationally recognized codes, when used, must be publications of the same group or organization.
 - (3) Heating, ventilating, and air-conditioning systems must be designed and installed in accordance with NFPA 90A and the Heating, Ventilating, and Air-Conditioning Guide of the American Society of Heating, Refrigeration, and Air-Conditioning Engineers (ASHRAE), except as may be modified in this subchapter.
 - (4) Electrical and illumination systems must be designed and installed in accordance with NFPA 70 and the Lighting Handbook of the Illuminating Engineering Society (IES) of North America, except as may be modified in this subchapter.
 - (5) Accessibility for individuals with disabilities must be designed and installed in accordance with the following laws: the Americans with Disabilities Act of 1990 (Public Law 101-336; Title 42, United States Code, Chapter 126); Title 28, Code of Federal Regulations, Part 35; Texas Civil Statutes, Article 9102; and Title 16, Texas Administrative Code, Chapter 68. Plans for new construction, substantial renovations, modifications, and alterations must be submitted to the Texas Department of Licensing and Regulation (Attn:

Elimination of Architectural Barriers Program) for accessibility approval under Texas Civil Statutes, Article 9102.

- (6) Every building and portion thereof must be capable of sustaining all dead and live loads in accordance with accepted engineering practices and standards.
- (7) Each building must be classified as to building construction type for fire resistance rating purposes in accordance with NFPA 220 and the Life Safety Code.
- (8) Building insulation materials, unless sealed on all sides and edges in an approved manner with noncombustible material, must have a flame-spread rating of 25 or less when tested in accordance with NFPA 255 and NFPA 258.
- (9) All boilers not exempted by the Texas Health and Safety Code, §755.022, must be inspected and certified for operation by the Texas Department of Licensing and Regulation.

§19.302 Waivers

The Texas Department of Human Services (DHS) may grant a waiver for certain provisions of the physical plant and environment which, in DHS's opinion, would be impractical for the facility to meet. In granting the waiver, DHS will determine that there will be no adverse effect on resident health and safety and the requirement, if not waived, would impose an unreasonable hardship on the facility. DHS may require offsetting or equivalent provisions in granting a waiver.

§19.303 Emergency Power

- (a) An emergency electrical power system must supply power adequate at least for lighting all entrances and exits, equipment to maintain the fire detection, alarm, and extinguishing systems, and life-support systems if the normal electrical supply is interrupted. Emergency electrical services by generator or battery must be provided to comply with the provisions of the National Fire Protection Association (NFPA) 70. Battery systems must be capable of sustaining power for a duration of at least one and one-half hours.
 - (1) Life safety systems must include:
 - (A) illumination for means of egress, nurse stations, medication rooms, dining and living rooms, and areas immediately outside of exit doors;
 - (B) exit signs and exit directional signs required by the Life Safety Code;
 - (C) alarm systems, including fire alarms activated by manual stations, water flow alarm devices of sprinkler systems, fire and smoke detecting systems, and alarms required for nonflammable medical gas systems if installed (where hospital -type functions are included in the nursing home facility, applicable standards apply);
 - (D) task illumination and selected receptacles at any required or provided generator set location;
 - (E) selected duplex receptacles, including receptacles in resident corridors, each resident-bed location where life-support electrical appliances are utilized, nurse stations, medication rooms, including biological refrigerator, if a generator is required or provided;
 - (F) nurse calling systems;
 - (G) resident room night lights where required;

- (H) elevator cab lighting, control, and communication systems;
 - (I) all facility telephone equipment; and
 - (J) those paging or speaker systems that are necessary for the communication plan for an emergency. Radio transceivers that are necessary for emergency use must be capable of operating for at least one hour upon total failure of both normal and emergency power.
- (2) Where critical systems are provided, there must be a delayed automatic connection.
 - (3) The emergency lighting must be automatically in operation within ten seconds after the interruption of normal electric power supply. Emergency service to receptacles and equipment may be a delayed automatic connection. Receptacles connected to emergency power must be of a uniform and distinctive color. Stored fuel capacity must be sufficient for not less than four-hour operation of required generator.
 - (4) Emergency motor generator, if required or provided, must meet the following standards:
 - (A) any emergency generator must be installed in accordance with NFPA 37 and NFPA 99;
 - (B) generators located on the exterior of the building must be provided with a noncombustible protective cover or be protected as per manufacturer's recommendations; and
 - (C) motor generators fueled by public utility natural gas must have the capacity to be manually or automatically switched to an alternate fuel source, as specified in NFPA 70.
 - (5) Wiring for the emergency system must be in accordance with NFPA 70.
- (b) When life support systems are used, the facility must provide emergency electrical power with an emergency generator (as defined in NFPA 99, Health Care Facilities) located on the premises.

§19.304 Space and Equipment

- (a) The facility must:
 - (1) provide sufficient space and equipment in dining, health services, recreation, and program areas to enable staff to provide residents with needed services as required by these standards and as identified in each resident's plan of care; and
 - (2) maintain all essential mechanical, electrical, and patient care equipment in safe operating condition.
- (b) A wing or area which is separated from the rest of the facility by locked doors for the purpose of securing residents must meet the requirements of §19.2208(a)(6) and (c)(1)-(10) of this title (relating to Standards for Certified Alzheimer's Facilities).
- (c) If children are residents of the facility, the facility must provide:
 - (1) indoor and outdoor recreation areas designed to encourage exploration within the children's capabilities; and

- (2) pediatric equipment and supplies in appropriate size for the age and development level of the children. Pediatric emergency supplies and equipment must be readily available for use.

§19.305 Resident Rooms

Resident rooms must be designed and equipped for adequate nursing care, comfort, and privacy of residents.

- (1) Bedrooms must:
 - (A) accommodate no more than four residents. The total number of beds in ward rooms with three or more beds must not exceed 50% of the total facility capacity in existing facilities unless approved by the Texas Department of Human Services (DHS).
 - (B) measure at least 80 square feet per resident in multiple resident bedrooms and at least 100 square feet in single resident rooms.
 - (C) have direct access to an exit corridor.
 - (D) be designed or equipped to assure full visual privacy for each resident. Appropriate measures must be taken through the use of cubicle curtains, screens, or procedures to protect the privacy and dignity of the residents. Curtains and screens must be rendered and maintained flame-retardant.
 - (E) in facilities initially certified after March 31, 1992, except in private rooms, have ceiling-suspended curtains for each bed, which extend around the bed to provide total visual privacy, in combination with adjacent walls and curtain (see paragraph (4) of this section).
 - (F) have at least one operable window to the outside which can readily be opened from the inside without the use of tools. The height of the window sill (opening) must not exceed 36 inches above the floor. The minimum area of windows in each bedroom must equal at least 8.0% of the room area. Operable window sections may be restricted to not more than six nor less than four inches for security or safety reasons if approved in writing by DHS. Each window must be provided with a flame-retardant shade, curtain, or blind.
 - (G) have a floor at or above grade level.
- (2) The facility must provide each resident with:
 - (A) a separate bed of proper size and height for the convenience of the resident. The bed will be a minimum of 36 inches wide with a headboard of sturdy construction. Each bed must be provided with suitable bedspreads and blankets to assure the comfort and warmth of each resident, and must not be passed from resident to resident without first being laundered. The bed of each resident with physician's orders for bedrails must have bedrails affixed to both sides of the bed;
 - (B) a clean, comfortable mattress with a moisture-proof cover, and a comfortable pillow;
 - (C) bedding appropriate to the weather and climate; and
 - (D) functional furniture appropriate to the resident's needs including a comfortable chair, bedside cabinet, and individual closet space in the resident bedroom with at least 16 inches of hanging space, shelves for personal belongings accessible to the resident, and closeable door(s). Each bedroom must be provided with at least one noncombustible wastebasket.
- (3) DHS may permit variations in requirements specified in paragraph (1)(A) and (B) of this section relating to rooms in individual cases when the facility demonstrates in writing that the variations:
 - (A) are required by the special needs of the residents; and
 - (B) will not adversely affect residents' health and safety.

- (4) The width and length of bedrooms and the arrangement of furniture must assure appropriate resident circulation, especially in relation to emergency evacuation and to usual wheelchair movement. Bedrooms should not be less than ten feet in the smallest dimension. There must be at least 36 inches between beds and should be at least 18 inches between any bed and the adjacent parallel wall that restricts access by the resident (that is, bed sides should not have to be placed against a wall to meet other spacing requirements). Beds must not extend into the bedroom door opening, nor must any other piece of furnishing or equipment be located where it might preclude or inhibit the removal of any bed or closing and latching of the bedroom door in an emergency.
- (5) Each bed must have access to a nurse-call device that is part of an electrical nurse-call system.
- (6) Each bed must be provided with an appropriate, safe, durable, nonglare, permanently bed-mounted or wall-mounted reading-light fixture. The fixture must be wired in accordance with National Fire Protection Association (NFPA) 70. These fixtures should be mounted at least five feet, six inches above the floor. The switch must be within reach of a resident in the bed.
- (7) At least one duplex receptacle must be provided for each bed. Other duplex receptacles must be provided as needed and/or as required by NFPA 70.
- (8) Each bedroom must be assured of having general lighting, either by means of appropriate combination reading light or by means of separate fixture.
- (9) For emergency separation from fire and smoke, bedroom doors must be maintained to close completely without dragging or binding, to latch securely, and to fit reasonably tight in the frame. The gap between the floor and the bottom of the closed door must not exceed 3/4 inch.
- (10) Vacant bedrooms may not be used for hazardous activities or hazardous storage, unless specifically approved by DHS in writing.
- (11) Bedrooms must be identified with a raised or recessed unique number placed on or near the door. Refer to §19.319(c) of this title (relating to Provisions for Persons with Disabilities) and §19.301(c)(5) of this title (relating to Applicable Codes and Standards).
- (12) Residents must be permitted and encouraged to have personal possessions in their rooms that do not interfere with their care, treatment, or well-being, or that of other residents. Pediatric resident's rooms should be decorated and furnished in accordance with the age and developmental level of the children and as an expression of their individual preferences.
- (13) Locks on bedroom doors are permitted when they meet definite patient needs, including the following situations:
 - (A) married couples whose rights of privacy could be infringed upon unless bedroom door locks are permitted;
 - (B) residents for whom the attending physician wants bedroom door locks to enhance their sense of security; and
 - (C) residents for whom restraint through confinement to their own rooms is necessary for their own and/or other persons' safety.

- (14) In situations such as those listed in paragraph (13) of this section, the following guidelines must be met:
- (A) bedroom door locks for other than restraining purposes must be of the type which the occupant can unlock at will from inside the room;
 - (B) all bedroom door locks must be of the type which can be unlocked from the corridor side;
 - (C) attendants must carry keys which will permit ready accessibility to the locked bedrooms when entrance becomes necessary;
 - (D) bedroom doors which are locked for resident restraining purposes must be dutch-doors, with only the lower section locked. The upper part of the doorway must be open to permit visual supervision of the residents from the corridor. The dutch door should be easily unlocked by nurses and attendants. Resident restraints of any nature cannot be applied without orders from the attending physician. See §19.601 of this title (relating to Resident Behavior and Facility Practice).
 - (E) locking of bedroom doors by residents for privacy or security or by nursing facility staff for restraint (dutch door) will not be permitted except when specifically included in the attending physician's written orders or authorized by the nursing facility administrator.

§19.306 Toilet Facilities

Each resident room must be equipped with or located near toilet and bathing facilities.

- (1) Bedrooms not provided with their own (or shared) direct-access toilets and baths must have general-use baths and toilets conveniently located for each sex.
- (2) Bathtubs or showers must be provided at minimum rate of one for each 20 beds which are not otherwise served by bathing facilities directly accessible from resident bedrooms.
- (3) In toilet facilities designed for multi-resident use, water closets must be separated in such a manner that they can be used independently and afford privacy. Toilet paper in a suitable dispenser must be provided within reach of each toilet.
- (4) Water closets and lavatories must be provided at a minimum rate of one for each eight beds which are not otherwise served by fixtures directly accessible from resident bedrooms. A lavatory must be provided in or adjacent to each area having a water closet.
- (5) Lavatories must be equipped with a mixer faucet and hot and cold water. Resident-use hot water must be provided within the temperature guidelines specified in §19.322(g) of this title (relating to Plumbing).
- (6) There must be a sufficient number of toilet rooms and bathing areas designed to accommodate residents in wheelchairs, including sufficient space in or around fixtures. Proper heights, locations, and installations must be made for grab bars, and any mirrors and accessories provided.
- (7) Grab bars and lavatories must be substantially anchored to withstand sustained and repeated downward and outward pressure. Grab bars must be provided at all resident water closets and bathing fixtures. New grab bar installations must meet the requirements of the Texas Department of Licensing and Regulation, Elimination of Architectural Barriers Section.
- (8) Floors, walls, and ceilings must have a nonabsorbent, cleanable surface. Floors and tub or shower standing surfaces must be slip resistant.

- (9) Doors to bathing and toilet facilities must be wide enough for safe and easy passage of residents in wheelchairs. Folding or sliding doors must not be used unless it can be established that no safety hazard exists.
- (10) Keys to resident baths or toilets with privacy locks must be kept readily available to staff.
- (11) Provision must be made for sanitary hand washing and drying by staff, visitors, or residents at each lavatory.
- (12) Bathrooms and toilets rooms must have a negative air pressure in relation to adjacent areas with air exhausted through ducts to the exterior.
- (13) Bathing areas must be provided with safe heating.
- (14) Bathtubs, showers, and lavatories must be kept clean and in proper working order. They must not be used for laundering or for storage of soiled materials or for the cleaning of mops or brooms.
- (15) Nurse-call devices must be provided at resident-use baths and toilets and be within easy reach of residents.
- (16) Electrical outlets in wet areas must be provided with ground fault interrupters, excluding toilet rooms where there are no bathing units.

§19.307 Resident Call System

- (a) The nurse's station must be equipped to receive resident calls through a communication system from:
 - (1) resident rooms; and
 - (2) toilet and bathing facilities.
- (b) The call cord does not have to be accessible in all parts of the room, but must be accessible to the resident. The system must be connected to on and off switches operable at each bed, toilet unit, and bathing unit.
- (c) Each call entered into the system must activate a corridor dome light above the bedroom, bathroom, or toilet corridor door that opens onto a corridor.
- (d) A visual signal at the nurses station must indicate the room from which the call was placed with an audible signal of sufficient amplitude to be clearly heard by nursing staff. The amplitude or pitch of the audible signal must not be irritating to residents or visitors.
- (e) The system must be designed so calls entered into the system may be canceled only at the calling station. Intercom-type systems which meet this requirement are acceptable.

§19.308 Dining and Resident Activities

- (a) Requirements. The facility must provide one or more rooms designated for resident dining and activities. These rooms must be:
 - (1) well-lighted;
 - (2) well ventilated, with nonsmoking areas identified;
 - (3) adequately furnished; and
 - (4) sufficiently spacious to accommodate all activities.

- (b) Resident living areas.
 - (1) Resident living areas such as living rooms, dayrooms, lounges, recreation rooms, and sunrooms must be provided to meet the needs of the residents' comfort. Combined living and dining areas should be not less than 19 square feet per bed, but must not be less than ten square feet per bed.
 - (2) No single room less than 100 square feet will be included as part of the acceptable total area required.
 - (3) At least one living area must have an outside window.
 - (4) Living areas must be provided with comfortable furniture of substantial construction and be appropriately decorated to provide a pleasant and comfortable environment for residents and visitors. Furnishings and decorations must not obstruct exits or ways of egress.
 - (5) Nonsmoking areas must be provided and identified.

- (c) Dining areas. Dining space must be provided to adequately serve needs of the residents and provide an efficient, sanitary, and pleasant environment for dining.

§19.309 Other Environmental Conditions

The facility must provide a safe, functional, sanitary, and comfortable environment for residents, staff, and the public.

- (1) The facility must:
 - (A) establish procedures to ensure that water is available to essential areas when there is a loss of normal water supply;
 - (B) have adequate outside ventilation by means of windows, mechanical ventilation, or a combination of the two;
 - (C) maintain an effective pest control program so that the facility is free of pests and rodents; and
 - (D) equip corridors with firmly secured handrails on each side on all walls 18 inches or greater. These rails must be substantially anchored to withstand downward force and must be mounted 33 to 36 inches from the floor.

- (2) No occupancies or activities undesirable to the health, safety, or well-being of residents will be located in the facility.
- (3) For pediatric residents, the environment must be the least restrictive allowable while remaining within the parameters of safety. All areas of the facility accessible to children must be "child proof" for safety hazards. This type of safety proofing is above the normal level of hazard control maintained for adult residents and includes the addition of safety covers on electrical outlets not in use which are accessible to children.
- (4) In operations where there is a chance of cross-contamination, clean and soiled operations must be separated to lessen the chance of cross-contamination by facility employees, residents, and others. This separation must be in relation to traffic flow, air currents, air exhaust, water flow, vapors, and other conditions.
- (5) An electric water cooler or water fountain must be accessible to residents. When new drinking fountains are provided, at least one must be installed to be accessible to persons in wheelchairs.
- (6) Public toilet(s) with sanitary handwashing and drying provisions must be provided or designated.
- (7) If deodorant is used for air-freshening purposes, the following procedures must apply:
 - (A) deodorants or air fresheners are permitted provided the dispensing device is located where it is inaccessible to residents and patients;
 - (B) these products are not used to cover odors resulting from poor housekeeping practices or unsanitary conditions;
 - (C) these products are not used in excess;
 - (D) there is no contra-indication on the label of the product indicating that the product should not be used in the presence of aged or ill persons; and
 - (E) devices, such as ozone generators, ultra-violet generators, and smoke eliminators, must be approved by the Texas Department of Human Services.

§19.310 Site and Grounds

- (a) Site grades must provide for positive surface water drainage so that there will be no ponding or standing water at or near the building that would present a hazard to health or provide a breeding site or harborage for carriers of disease.
- (b) Outdoor activity, recreational, and sitting spaces must be provided for residents as space permits.
- (c) Each facility must have parking spaces to satisfy the needs of residents, employees, staff, and visitors. Provisions must be made for handicapped parking and access into the building.
- (d) Protection must be provided for resident safety from traffic or other site hazards by the use of appropriate methods, such as fences, hedges, retaining walls, railings, or other landscaping. This protection must not inhibit the free emergency egress to a safe distance away from the building.
- (e) Auxiliary buildings located on the site within 20 feet of the main licensed structure and which contain hazardous operations or contents, such as laundries or storage buildings, must meet the same code requirements for safety as the main licensed structure.
- (f) Other buildings on the site must meet the appropriate occupancy section or separation requirements of the Life Safety Code.

- (g) All outside areas, grounds, and adjacent buildings on the site must be maintained in good condition and kept free of rubbish, garbage, and untended growth that may constitute a fire or health hazard.
- (h) Enclosed exterior spaces, such as fenced areas, that are in a means of egress to a public way must meet the requirements of §19.2208(a)(6) of this title (relating to Standards for Certified Alzheimer's Facilities).

§19.311 Fire Service and Access

- (a) The facility must be served by a paid or volunteer fire department.
 - (1) The fire department must provide written assurance to the licensing agency that the fire department can respond to an emergency at the facility within an appropriately prompt time for the travel conditions involved.
 - (2) The facility must have an annual inspection by the local fire marshal and maintain documentation of such an inspection at the facility.
- (b) The facility must be served by an adequate water supply that is satisfactory and accessible for fire department use as determined by the fire department serving the facility and by the Texas Department of Human Services (DHS).
- (c) There must be at least one approved, readily accessible fire hydrant located within 300 feet of the building. The hydrant must be on a minimum six-inch service line, or else there must be an approved equivalent, such as a storage tank. The hydrant, its location, and service line, or equivalent must be approved by the local fire department and DHS.
- (d) The building must have suitable fire lanes for access as required by local fire authorities and DHS.

§19.312 Means of Egress

- (a) Corridors and other means of egress must be kept clear of obstructions and must not be used for any purpose which would interfere with its use as an exit, such as for storage, vending machines, seating, or similar purposes. The corridor width must be maintained at all times.
- (b) Ways of egress and exit signs must be illuminated at all times.
- (c) In addition to the required normal and emergency illumination, the facility must keep on hand and readily available to night staff no less than one working flashlight per nurses station.
- (d) Doors within the means of egress must not be equipped with a latch or lock which requires the use of a key or tool to open from the inside of the building. A latch or other fastening device on a door must be provided with a knob, handle, panic bar, or other simple type of releasing device with an obvious method of operation, even in darkness.
- (e) A hold-open device must be installed on each exit door.

§19.313 Interior Finishes - Walls, Ceilings, and Floors

- (a) Interior finishes of walls and ceilings must have limited flame-spread rating as required by the Life Safety Code. Where new interior finishes of walls, ceilings, or floors are applied to existing facilities, the new finishes must meet the requirements for flame-spread ratings for new construction. Fire retardant paints or solutions must not be applied to new materials in an effort to meet flame-spread requirements for new construction. This description of interior finishes does not apply to furniture or accessories.
- (b) Floors of the facility must be level, smooth, and free of any irregularities which might affect safety.
- (c) Walls and ceilings not specifically described elsewhere in this chapter must be cleanable, maintained attractively, and in good repair.
- (d) Walls and floors must be kept free of cracks. The joint between the walls and floors is to be maintained so as to be free of spaces which might harbor insects, rodents, or vermin.

§19.314 Fire Alarms, Detection Systems, and Sprinkler Systems

Fire alarms, detection systems, and sprinkler systems must be as required by the Life Safety Code, the National Fire Protection Association (NFPA) 72, and NFPA 13.

- (1) Components must be compatible and laboratory listed for the use intended.
- (2) Wiring and circuitry for alarm systems must meet the applicable requirements for NFPA standards, including NFPA 70, for these systems.
- (3) Fire alarm systems must be installed, maintained, and repaired by an agent having a current certificate of registration with the State Fire Marshal's Office of the Texas Commission on Fire Protection, in accordance with state law. A fire alarm installation certificate must be provided as required by the Office of the State Fire Marshal.
- (4) Smoke detector sensitivity must be checked within one year after installation and every alternate year thereafter in accordance with NFPA 72. Documentation, including as-built installation drawings, operation and maintenance manuals, and a written sequence of operation must be available for examination by the Texas Department of Human Services (DHS).
- (5) The fire alarm system must be designed so that whenever the general alarm is sounded by activation of any device (such as manual pull, smoke sensor, sprinkler, or kitchen range hood extinguisher) the following will occur automatically:
 - (A) smoke and fire doors which are held open by an approved device must be released to close;
 - (B) air handlers (air conditioning/heating distribution fans) serving three or more rooms or any means of egress must shut down immediately;
 - (C) smoke dampers must close; and
 - (D) the alarm-initiating location must be clearly indicated on the fire alarm control panel(s) and all auxiliary panels.

- (6) Consistent fire alarm bells or horns must be located throughout the building for audible coverage. Flashing alarm lights (visual alarms) must be installed to be visible in corridors and public areas including dining rooms and living rooms.
- (7) A master control panel which indicates location of alarm and trouble conditions (by zone or device) must be visible at the main nurse station. All control panels must be listed in accordance with the provisions of the Underwriters Laboratories, Inc. (UL) for intended use, such as manual, automatic, and water-flow activation. Alarm and trouble zoning must be by smoke compartments and by floors in multi-story facilities.
- (8) Remote annunciator panels, indicating location of alarm initiation by zone or device and common trouble signals, must be located at auxiliary or secondary nurses stations on each floor or major subdivision of single story facilities and indicate the alarm condition of adjacent zones and the alarm conditions at all other nurse stations.
- (9) Manual pull stations must be provided at all exits, living rooms, dining rooms, and at or near the nurse stations.
- (10) The NFPA 13 sprinkler system must be monitored for flow and tamper conditions by the fire alarm system.
- (11) The kitchen range hood extinguisher must be interconnected with the fire alarm system. This interconnection may be a separate zone on the panel or combined with other initiating devices located in the same zone as the range hood is located.
- (12) Partial sprinkler systems provided only for hazardous areas must be interconnected to the fire alarm system and comply with the Life Safety Code. Each partial system must have a valve with a supervisory switch to sound a supervisory signal, water-flow switch to activate the fire alarm, and an end-of-line test drain.

§19.315 Portable Fire Extinguishers

Portable fire extinguishers must be provided and maintained to comply with the provisions of the National Fire Protection Association (NFPA) 10. This includes type of extinguishers (A, B, or C), location and spacing, mounting heights, monthly inspections by staff, yearly inspections by a licensed agent, any necessary servicing, and hydrostatic testing as recommended by the manufacturer.

- (1) Extinguishers in resident corridors must be spaced so that travel distance is not more than 75 feet. The minimum size of extinguishers must be either 2 1/2 gallon for water type or five pound for ABC type.
- (2) Extinguishers must be installed on supplied hangers or brackets or be mounted in cabinets approved by the Texas Department of Human Services (DHS).
- (3) Extinguishers must be surface wall-mounted or recessed in cabinets where they are not subject to physical damage or dislodgement.
- (4) Extinguishers having a gross weight not exceeding 40 pounds must be installed so that the top of the extinguisher is not more than five feet above the floor. Extinguishers with a gross weight greater than 40 pounds must be installed so the top of the extinguisher is not more than 3-1/2 feet above the floor. The clearance between the bottom of the extinguisher and the floor must not be less than four inches.
- (5) Portable extinguishers provided in hazardous rooms must be located as close as possible to the exit door opening and on the latch (knob) side.
- (6) Staff must be appropriately trained in the use of each type of extinguisher in the facility.

§19.316 Subdivision of Building Spaces — Smoke Barriers

- (a) Subdivision of building spaces must be as required by the Life Safety Code.
- (b) The facility must maintain the integrity of smoke barrier walls, including those parts of walls in attics and other concealed spaces.
- (c) The facility must maintain the integrity of smoke dampers in air ducts.
- (d) Ducts with smoke dampers must have maintenance panels for inspection. The maintenance panels must be removable without tools. Means of access must also be provided in the ceiling or side wall to facilitate smoke damper inspection readily and without obstruction. Location of dampers must be identified on the wall or ceiling of the occupied area below.

§19.317 Elevators and Escalators

Elevators must comply with the provisions of the Life Safety Code and American National Standard Institute Safety Code for Elevators and Escalators (ANSI/ASME A17.1). Elevators are required for buildings having residents' facilities, such as bedrooms, dining, or recreation areas; or services, such as diagnostic or therapy, located on other than the main entrance floor. Passenger elevators and escalators must be inspected by a qualified agent at least every six months. Freight elevators must be inspected every 12 months.

§19.318 Other Rooms and Areas

- (a) Nurses station. A nurses station is an area designated as the focal point on all shifts for the administration and supervision of resident-care activities for a designated number of resident bedrooms.
 - (1) All resident bedroom corridors must be observable by direct line of sight or by mechanical means from a designated nurses station or auxiliary station. There must be at least one nurses station per floor in multi-storied buildings.
 - (2) If all resident bedroom corridors are observable by direct line of sight from inside the nurses station or from within 24 inches of the counter or hall of the nurses station, no auxiliary stations are required, even if resident bedrooms are more than 150 feet from the nurses station.
 - (3) When resident bedrooms are more than 150 feet from the nurses station and the adjacent corridors are not observable from the station by direct line of sight, an auxiliary station must be established and used.
 - (4) All corridors adjacent to resident bedrooms that are more than 150 feet from a designated nurses station or auxiliary station must be observable by direct line of sight from the designated nurses station or auxiliary station. Corridors located in the service area of an auxiliary station must be observable, as described in paragraphs (2) and (3) of this subsection, at the auxiliary station.
 - (5) The 150-foot limitation described in paragraphs (2)-(4) of this subsection may be increased to 165 feet in facilities or additions in facilities completed before August 10, 1983.

- (b) Auxiliary station. Each auxiliary station must include a work area in which nursing personnel can document and maintain resident data, even if the facility's initial decision is to maintain clinical records at the nurses station.
- (1) Auxiliary stations must be staffed by nursing personnel during all shifts.
 - (2) More than one auxiliary station may be assigned to a designated nurses station, regardless of the distance between stations. More than one corridor may be observed by mechanical means from a designated nurses station or auxiliary station.
 - (3) A nurse call system, located in the service area or a designated auxiliary station, must register calls at the nurses station to which it is assigned.
 - (4) Each auxiliary station must have an emergency electrical source adequate to power lights at the station.
 - (5) Medications and clinical records may be maintained at an auxiliary station.
 - (6) If a required auxiliary station does not already exist and the facility must establish a new auxiliary station, all applicable standards, particularly those pertaining to the physical plan and the Life Safety Code, must be observed. All renovations and structural changes require prior approval from the Texas Department of Human Services (DHS).
 - (7) All new construction completed after August 10, 1983, must allow direct line-of-sight observation of all resident bedroom corridors from the nurses station or auxiliary station.
- (c) Mechanical means for resident observation.
- (1) The nursing facility may use mechanical means, such as closed-circuit television and mirrors, to observe residents in the facility.
 - (2) Closed-circuit television monitoring systems must meet the following criteria:
 - (A) The camera(s) must be placed to view the entire corridor length, without any "blind spots."
 - (B) The camera(s) must be capable of providing recognizable images, in minimum and maximum light levels, for the complete viewing area.
 - (C) The monitor(s) must be installed and be clearly visible to persons in the nurses station or auxiliary station who are assigned to the area monitored by the camera.
 - (D) The system must be supplied with emergency power that enables the system to function during electrical service failures.
 - (E) Each camera must have its own separate monitor.
 - (F) If they perform the minimum basic functions specified in subparagraphs (A)-(D) of this paragraph, television monitoring systems installed before March 1984 may remain in service until the equipment is replaced or the system is expanded. Replacement systems or new component equipment must satisfy subparagraphs (A)-(E) of this paragraph.

- (3) Mirrors must meet the following criteria:
 - (A) The mounting height of the mirror must be no less than six feet and eight inches from the floor to the bottom of the mirror.
 - (B) The mirror(s) must not extend more than 3-1/2 inches from the face of the corridor wall, unless the bottom of the mirror is more than seven feet and six inches above the floor.
 - (C) The mirror image must be clear enough that individuals can be recognized, in minimum and maximum light levels, throughout the viewing area.
- (4) The monitoring systems described in this section must not be used to deny privacy to staff or residents.
- (d) Resident call system. Each nurses station must be equipped to register residents' calls through a communication system from resident areas. See §19.307 of this title (relating to Resident Call System) for specific requirements.
- (e) Medication storage area. There must be sufficient, lockable, enclosed medicine storage spaces, medicine room, or medication cart. The medication storage area must be furnished with a refrigerator. There must be sufficient space available for a medication preparation area equipped with a sink having hot and cold water. When not in use, the medication cart must be secured in a designated area. Only authorized personnel must have access to the medication storage area and the medication cart. Medication storage and preparation areas must be adequately ventilated and temperature controlled. See §19.1501 of this title (relating to Pharmacy Services).
- (f) Clean utility room. A clean utility room must be provided and must contain a sink with hot and cold water. It must be part of a system for storage and distribution of clean and sterile supply materials and equipment.
- (g) Soiled utility room. A soiled utility room must be provided and contain a flushing fixture and a sink with hot and cold water. It must be part of a system for collection and cleaning or disposal of soiled utensils or materials.
- (h) Soiled linen room. Soiled linen rooms must be provided as needed commensurate with the type of laundry system used. In relation to adjacent areas, a negative air pressure must be provided with air exhausted through ducts to the exterior. Air must be exhausted continually whenever there are soiled linens in the room. A soiled linen room may be combined with a soiled utility room.
- (i) Clean linen storage. Clean linen storage must be provided, conveniently located to resident bedroom areas.

(j) Kitchens.

- (1) Nursing facility kitchens will be evaluated on the basis of their performance in the sanitary and efficient preparation and serving of meals. Consideration will be given to planning for the type of meals served, the overall building design, the food service equipment, arrangement, and the work flow involved in the preparation and delivery of food. Evaluation will be based on the number of meals served.
- (2) Kitchen temperature, at peak load, must not exceed a temperature of 85 degrees Fahrenheit measured over the room at the five foot level. Sufficient heating must be provided to maintain an average temperature of not less than 70 degrees Fahrenheit in winter (with exhausts operating) at the five-foot level.
- (3) The kitchen must have operational equipment for preparing and serving meals and for refrigerating and freezing of perishable foods, as well as equipment in, and/or adjacent to, the kitchen or dining area for producing ice.
- (4) The kitchen must have facilities for washing and sanitizing dishes and cooking utensils. These facilities must be adequate for the number of meals served and the method of serving (such as use of permanent or disposable dishes). The kitchen must contain a multi-compartment sink large enough to immerse pots and pans. In all facilities, a mechanical dishwasher is required for sanitizing dishes. Separation of soiled and clean dish areas must be maintained, including air flow and traffic flow.
- (5) The kitchen must have an adequate supply of hot and cold water. Hot water for sanitizing purposes must be 180 degrees Fahrenheit or the manufacturer's suggested temperature for chemical sanitizers, as specified for the system in use. For mechanical dishwashers, the temperature measurement is at the manifold. Hot water for general kitchen use must be 140 degrees Fahrenheit.
- (6) A kitchen must have at least one handwashing lavatory in the food-preparation area. The dish washing area must have ready access to a handwashing lavatory or hand sanitizing device. Handwashing lavatories must be provided with hot and cold running water, a sanitary soap dispenser, and paper towel dispenser (or hot air dryer).
- (7) Nonabsorbent smooth finishes or surfaces must be used on kitchen floors, walls, and ceilings. These surfaces must be capable of being routinely sanitized to maintain a healthful environment.
- (8) A janitor's closet with service sink must be easily and readily accessible to the kitchen.
- (9) Kitchen exhaust hood at cooking equipment and its attached automatic chemical extinguisher must comply with National Fire Prevention Association (NFPA) 96. DHS may waive certain details of NFPA 96 for existing kitchen exhausts at cooking equipment provided that basic function and safety are not compromised.

- (k) Food storage areas.
 - (1) Food storage areas must provide for storage of a seven-day minimum supply of nonperishable staple foods and a two-day supply of perishable foods at all times.
 - (2) Shelves and pallets must be moveable wire, metal, or sealed lumber, and walls must be finished with a nonabsorbent finish to provide a cleanable surface.
 - (3) Dry food storage must have a venting system to provide for reliable positive air circulation.
 - (4) The maximum room temperature for food storage must not exceed 85 degrees Fahrenheit at all times. The measurement must be taken at the five-foot level.
 - (5) Foods must not be stored on the floor. Dunnage carts or pallets may be used to elevate foods not stored on shelving.
 - (6) Sealed containers must be provided for storing dry foods after the package seal has been broken.
 - (7) Food storage areas may be located apart from the food preparation area as long as there is space adjacent to the kitchen for necessary daily usage.
- (l) Auxiliary serving kitchens (those not contiguous to food preparation and serving areas).
 - (1) Where service areas other than the kitchen are used to dispense foods, these must be designated as food service areas and must have equipment for maintaining required food temperatures while serving.
 - (2) Separate food service areas must have handwashing facilities as a part of the food service area.
 - (3) Finishes of all surfaces except ceilings must be the same as those required for dietary kitchens.
- (m) Administrative and public areas. Facilities must have administrative area(s) for normal business transactions and maintenance of records.
- (n) Laundry.
 - (1) Laundry facilities must be located in areas separate from resident rooms. The laundry must be designed, constructed, and equipped and appropriate procedures must be utilized to assure that laundry is handled, cleaned, and stored in a sanitary manner.
 - (2) Laundry for general linen and clothing must be arranged so as to separate soiled and clean operations as they relate to traffic, handling, and air currents. Suitable exhaust and ventilation must be provided to prevent air flow from soiled to clean areas.
 - (3) Floors, walls, and ceilings must be nonabsorbing and easily cleanable.
 - (4) Soiled linen must be stored and/or transported in closed or covered containers. Soiled linen storage or holding rooms must have a negative air pressure in relation to adjacent areas with air exhausted through ducts to the exterior.
 - (5) Laundry areas must have air supply and ventilation to minimize mildew and odors. Doors must not remain open, for sanitation and safety reasons.

- (6) Room size, and number and type of appliances must provide efficient, sanitary, and timely laundry processing to meet the needs of the facility.
- (7) The laundry, if located in the facility, must meet Life Safety Code requirements for separation and construction for hazardous areas.
- (o) Resident-use laundry. This service, if provided, must be limited to not more than one residential type washer and dryer per laundry room. This room must be classified as a hazardous area according to the Life Safety Code.
- (p) Personal grooming area. Space and equipment must be provided for the hair care and grooming needs of the residents. Hair care and grooming service will be provided in resident bedrooms or in designated areas which are not in a way of egress.
- (q) Storage rooms. General and/or specific storage areas must be provided as needed and required for safe and efficient operation of the facility. Items must not be stored in inappropriate places such as corridors or rooms which are not equipped for special hazard protection.
- (r) Janitor closets. In addition to the janitors' closet called for in certain departments, other janitors' closets must be provided throughout the facility to maintain a clean and sanitary environment. All janitor closets must have a negative air pressure in relation to adjacent areas with air exhausted through ducts to the exterior.
- (s) Disposal facilities. A policy and procedure for the safe and sanitary disposal of special waste must be provided. The facility must comply with Texas Department of Health requirements as described in 25 TAC §§1.131-1.137 (relating to Definitions and Treatment of Special Waste from Health Care Related Facilities). The facility must also comply with Texas Natural Resource Conservation Commission requirements for medical waste management, as specified in 30 TAC Chapter 330, Subchapter Y. Space and facilities must be provided for the sanitary storage and disposal of waste, not classified as special, by incineration, mechanical destruction, compaction, containerization, removal, or contract with outside resources, or by a combination of these techniques.
- (t) Maintenance, engineering service, and equipment areas.
 - (1) The facility must provide storage for building equipment, supplies, tools, parts, and yard maintenance equipment.
 - (2) Volatile liquids and supplies must not be kept within the main building housing residents.
 - (3) All equipment requiring periodic maintenance, testing, and servicing must be reasonably accessible. Necessary equipment to conduct these services (such as ladders, specific tools, keys) must be readily available on site.
- (u) Oxygen.
 - (1) The facility must implement procedures that assure the safe and sanitary use and storage of oxygen.
 - (2) Liquid oxygen containers must be certified by Underwriters Laboratory (UL) or other approved testing laboratory for compliance with NFPA 50 requirements. The storage, handling, assembly, and testing must be in compliance with all applicable NFPA standards, including NFPA 99 and NFPA 50 requirements. The facility is responsible for defining all potential hazards both graphically and verbally to all persons involved in the use of liquid oxygen and ensuring that the liquid-oxygen provider does also.

§19.319 Provisions for Persons with Disabilities

New facilities and additions must meet the requirements of the Texas Department of Licensing and Regulation, Elimination of Architectural Barriers Section. Existing facilities must meet the requirements of the Americans with Disabilities Act and must, at a minimum, comply with the following:

- (1) The facility must provide and mark at least one parking space for persons with disabilities.
- (2) The facility must provide wheelchair access into the building by use of ramps and curb breaks. Ramps must not slope more than 1:12 (one unit of rise to 12 units of run).
- (3) Room identification signs or letters must be installed four feet six inches to five feet above finished floor and located on the corridor walls adjacent to the latch side of the door jamb. Letters or numbers on signs must be raised or recessed at least 1/32 inch minimum. Characters must be at least 5/8 inch in height and no higher than two inches.
- (4) Grab bars at toilet and bathing units must be 1-1/4 inch to 1-1/2 inch in diameter.
- (5) Toilet facilities must be available and of sufficient size to accommodate wheelchairs. There must be at least one public wheelchair-accessible restroom.
- (6) Water closet seat height in toilet facilities for persons with disabilities must be 17 to 19 inches from floor.
- (7) Mirrors and dispensers for persons with disabilities must be no higher than 40 inches above the floor.
- (8) Drinking fountains or coolers must meet American National Standards Institute (ANSI) A117.1 (that is, up front spout and controls no more than 36 inches from floor maximum). Fountains existing at the time of this publication do not have to be altered.
- (9) Public telephones, if provided, must meet ANSI A117.1. Mounting height must not exceed 48 inches to coin slot.

§19.320 Lighting and Illumination

Current recommendations of the Illumination Engineering Society of North America must be followed to achieve proper illumination characteristics and lighting levels throughout the facility. Minimum illumination must be ten foot candles in resident rooms and 20 foot candles in corridors, nurses stations, dining rooms, lobbies, toilets, bathing facilities, laundries, stairways, and elevators. Illumination requirements for these areas apply to lighting throughout the space and should be measured at approximately 30 inches above the floor anywhere in the room. Minimum illumination for overbed reading lamps, medication preparation or storage areas, kitchens, and nurse's station desks must be 50 foot candles. Illumination requirements for these areas apply to the task performed and should be measured on the task.

§19.321 Heating, Ventilating, and Air-conditioning Systems (HVAC)

- (a) The heating system must be capable of maintaining a temperature of not less than 71 degrees Fahrenheit at the resident level in all resident-use areas.
 - (1) Auxiliary heating devices permanently installed, such as heat strips in ducts, electric ceiling-mounted heating units, and electric baseboards, may be used to augment a central heating system as approved by the Texas Department of Human Services (DHS). See §19.705 of this title (relating to Environment).
 - (2) All gas heating systems must be checked prior to the heating season for proper operation and safety by persons who are licensed or approved by the State of Texas to inspect such equipment. A record of this service must be maintained by the facility. Any unsatisfactory conditions must be corrected promptly.
- (b) The cooling system must be capable of maintaining a temperature suitable for the comfort of the residents in resident-use areas.
- (c) Air flow must be directed or adjusted so that a resident is not in direct drafts that could be harmful to the health and comfort of the resident.
- (d) Unvented heating units and portable heaters are prohibited.
- (e) The facility must be well ventilated through the use of windows, mechanical ventilation, or a combination of both. Rooms and areas which do not have outside windows and which are used by residents or personnel must be provided with functioning mechanical ventilation to change the air on a basis commensurate with the room usage. Air systems must provide for the induction and mixing of at least 10% outside fresh air into the facility unless otherwise approved by DHS; that is, 100% continuous recirculation of interior air in most areas is not acceptable. When certain rooms or areas are dependent on a central air system for proper ventilation, including exhaust, that central air system fan must run continuously.
- (f) Operable outside windows must be provided with insect screens. Outside doors must be self-closing to control entry of insects. All exterior doors must be effectively weather stripped.
- (g) Heating and air conditioning systems must be provided with clean and effective air filters.
- (h) Ducts and piping subject to surface condensation must be insulated to prevent condensation at least in areas which may affect sanitation or cause building deterioration.
- (i) A comfortable temperature for residents when bathing must be provided.
- (j) Heating, ventilating, and air conditioning systems must comply with the provisions of applicable National Fire Prevention Association (NFPA) standards. Ducts are to be of a Class A material (noncombustible). Combustion air for gas-fired equipment must be ducted from the exterior.
- (k) Air flow must be designed to prevent cross contamination within any area where applicable, such as laundries and kitchens, as well as the system or facility as a whole.
- (l) In relation to adjacent areas, a positive air pressure must be provided for clean utility rooms, clean linen rooms, and medication rooms. Conditioned supply air must be introduced into these rooms.
- (m) In relation to adjacent areas, a negative air pressure must be provided for soiled utility rooms, soiled laundry rooms, bathrooms, toilets, and other odor-producing rooms. Air from these rooms must not be recirculated, but instead must be exhausted through ducts to the exterior by effective means.
- (n) Facility temperature must be maintained for the comfort of residents.

§19.322 Plumbing

- (a) If the municipality has a plumbing code, that code must be used as a basis for determining the correctness of plumbing installation. In the absence of a municipal code, a nationally recognized plumbing code must be used.
- (b) The water supply must be of safe, sanitary quality, suitable for use, and adequate in quantity and pressure. The water must be obtained from a water supply system, the location, construction, and operation of which are approved by the Texas Natural Resource Conservation Commission.
- (c) Sewage must be discharged into a state-approved sewerage system or the sewage must be collected, treated, and disposed of in accordance with applicable Texas Natural Resource Conservation Commission rules and regulations.
- (d) The wastewater drainage and sewage system must assure that sanitation is maintained for residents. Wastewater or sewage must not be discharged on the surface of the ground. Traps must not be allowed to lose their seal. Appliances must have air gaps as required for connections to the sewerage system. Venting must assure a rapid flow of wastewater in the sewage system.
- (e) The interior cold water supply system and piping must be so placed or so insulated as to prevent condensation drip in habitable areas and in storage areas.
- (f) Backflow preventers or vacuum breakers must be installed with any water supply fixture where the outlet or attachments may be submerged.
- (g) Resident-use hot water must be reliably controlled, such as by thermostatic or mixing valves, to not exceed 110 degrees Fahrenheit and not less than 100 degrees Fahrenheit at each fixture.
- (h) Hot water for other usages must be provided at the temperatures required for the appliance or fixture or for the operation involved, such as dishwashing and laundry.
- (i) The supply quantity of hot water must be adequate for normal peak load usage. Facilities which continue to experience a shortage of hot water must remedy the situation by such means as adding storage tanks, adding or increasing the size of water heaters, or other approved means.
- (j) Water heaters must be equipped with pressure temperature relief valves.

§19.323 Housekeeping Services

- (a) The facility must provide sufficient housekeeping and maintenance personnel, equipment, and supplies to maintain the interior, exterior, and grounds of the facility in a safe, clean, orderly, and attractive manner. In a nursing facility, an employee must be designated as responsible for housekeeping services.
- (b) Occupied resident rooms must be cleaned and put in order at least daily.
- (c) Storage areas must be kept safe and free from accumulations of extraneous materials such as refuse, discarded furniture, and newspapers. Combustibles, such as cleaning rags and compounds, must be kept in closed metal containers and labeled.
- (d) Attics, mechanical rooms, boiler rooms, and other similar areas must not be used for storage purposes.
- (e) All bleaches, detergents, disinfectants, insecticides, and other poisonous substances must be kept in a safe place accessible only to employees. They must not be kept in containers previously containing food or medicine. Containers must be labeled.

§19.324 Pest Control

- (a) An effective, safe, and continuing pest control system against insects, rodents, and vermin must be in operation in the facility. Pest control services must be provided by nursing facility personnel or by contract with a licensed pest control company. Care must be taken to use the least toxic and least flammable effective insecticides and rodenticides. These compounds must be stored in nonfood preparation and storage areas. Poisons must be under lock.
- (b) The facility must protect against harborages and entrances for insects, rodents, and vermin. Outside doors must be self-closing to control entry of pests.
- (c) Garbage and trash must be stored in enclosed containers, protected against leakage, contact with disease carriers, and access to animals. It must be stored in areas separate from those used for the preparation and storage of food and must be removed from the premises in conformity with state and local practices. Garbage and trash containers must be maintained free of accumulations and coatings of garbage. Garbage storage areas must be kept clean and in a state of good repair.

§19.325 Linen

- (a) The nursing facility must have available at all times a quantity of linen essential for the proper care and comfort of residents. Linens must be handled, stored, and processed so as to control the spread of infection.
- (b) Linen will be maintained in good repair.
- (c) Linen must be washed, dried, stored, and transported in a manner which will produce hygienically clean linen. The washing process must have a mechanism for soil removal and bacteria kill.
- (d) Clean linen must be stored in a clean linen area easily accessible to the personnel.
- (e) Clean towels and washcloths must be provided to each resident as needed or desired. Towels and washcloths must be stored in a sanitary manner between uses by the resident and must not be used by more than one resident between launderings.
- (f) Soiled linen and clothing must be stored separately from clean linen and clothing. Soiled linen and clothing must be stored in well ventilated areas, and must not be permitted to accumulate in the facility. Soiled linen and clothing must be transported in accordance with procedures consistent with universal precautions. Bags or containers must not be reused to transport or store clean items.
- (g) Soiled linen must not be sorted, laundered, rinsed, or stored in bathrooms, resident rooms, corridors, kitchens, or food storage areas, except soiled linen and clothing which is not contaminated with blood may be rinsed in a resident's bathroom water closet.
- (h) Resident's personal clothing that is not soiled with body wastes may be stored in a closed container in the resident's closet. The clothing must be collected and cleaned at least weekly.
- (i) Facility staff must wash their hands both after handling soiled linen and before handling clean linen.

§19.326 Safety Operations

- (a) The facility must have a written emergency preparedness and response plan. Procedures to be followed in an internal or external disaster should be attached to the plan. The plan must address, at a minimum, the eight core functions of emergency management, which are: direction and control; warning (how the facility will be notified of emergencies and who they will notify); communication (with whom and by what mechanism); sheltering arrangements; evacuation (destinations, routes); transportation; health and medical needs; and resource management (supplies, staffing, emergency equipment, records). Plans should address those natural, technological, and man-made emergencies that could affect the facility and must be coordinated with the local emergency management coordinator. Information about the local emergency management coordinator may be obtained from the office of the local mayor or county judge.
 - (1) The facility must maintain the plan and procedures at the nurses station and with department managers within the facility. The facility must ensure that the plan and procedures are reviewed at least annually. Changes in administrator, construction, or emergency phone numbers will require the facility to review and possibly modify the disaster plan. All reviews of disaster plans must be documented.
 - (2) The facility must include in the disaster plan, evacuation routes and procedures to be followed in the event of fire, explosion, or other disaster. The plan must also include procedures for the prompt transfer of casualties, clinical records, medications, and notification of appropriate persons.
 - (3) All employees must be familiar with the disaster plan and must be instructed in the location and use of the facility's alarm systems, fire-fighting equipment, and procedures. The facility must post fire and explosion evacuation routes prominently throughout the facility. The facility must have a fire safety plan within the disaster plan. The fire safety plan must be rehearsed quarterly on each shift with at least one rehearsal conducted each month. A comprehensive fire drill report form must be completed for each rehearsal of the fire safety plan.
 - (4) In smaller, simple, one story buildings where all exits are obvious, the Texas Department of Human Services (DHS) may not require the posting of evacuation routes.
 - (5) The facility must have an emergency contingency plan to ensure the residents' comfort and safety, including the provision of potable water.
 - (6) Emergency telephone numbers must be clearly posted on or near each phone. Emergency telephone numbers must include the local fire department, ambulance, and police.
- (b) The facility must report all fires to DHS on the Fire Report for Long Term Care Facilities Form within 15 days after the fire. The facility must immediately notify DHS by phone of disasters or any fires which caused death or serious injury. Telephone reports must be followed by written reports. Failure of the fire alarm, emergency power, or sprinkler system will require that all facility staff be informed of conditions, and the facility must take special precautions such as establishing a fire watch, appropriate to the situation. These situations must be reported to the local fire authority.

- (c) Severe weather drills and other emergency drills must be held as needed and as called for by the facility's policy and procedure manual.
- (d) The fire alarm and sprinkler systems must be inspected and tested at least once every three months by a licensed agent. Each quarterly inspection and test must be of the complete system, including smoke dampers and individual sprinkler heads. A standard report form of the inspection must be completed by the agent and kept on file by the facility. The report must include the signature of the person making the inspection and the date of the inspection. The facility must maintain a current contract on file for the services of the inspecting company.
- (e) The facility may, at its own discretion, make simple periodic tests of the basic fire alarm system, such as by activating a manual-pull station, particularly when conducting required fire drills. At any time the facility staff verifies or suspects some malfunction of the system, the condition must be immediately investigated and corrected.
- (f) Emergency generators, if required or provided, must be maintained in operating condition at all times.
 - (1) Generators must be inspected and run, under load, for at least 30 minutes each week. A signed or initialed record or log must be kept on file by the facility. The log should document maintenance performed, time taken to transfer load, and length of run times.
 - (2) The condition and proper operation of the emergency egress lighting also should be checked at this time.
 - (3) If duplex receptacles are not available at resident bed locations where patient-care-related electrical appliances are in use, a facility must demonstrate that it can provide the diagnostic, therapeutic, or monitoring benefits of the patient-care-related electrical appliances through alternative means in the event of a power outage.
- (g) A functional test must be conducted on every required battery emergency lighting system at 30-day intervals for a minimum of 1/2 hour. An annual test must be conducted for a one and 1/2 hour duration. Equipment must be fully operational for the duration of the test. Written records of testing must be kept in the facility for inspection by the authority having jurisdiction.
- (h) Automatic, fixed, dry-chemical extinguishers mounted in kitchen range hoods must be inspected and serviced by a licensed agent (type A license with the State Fire Marshal's office) at least once every six months. A written, signed report must be left on file with the facility. The hood, exhaust ducts, and filters must be kept clean and free of accumulated grease.
- (i) Portable fire extinguishers must be visually inspected monthly by facility staff and must have maintenance provided annually by a licensed agent in accordance with National Fire Prevention Association (NFPA) 10. A record of the annual maintenance must be kept in the facility. Portable extinguishers must be protected from damage and must be kept on their mounting brackets or in cabinets at all times.
- (j) Facilities using gas must have the gas piping lines from the meter and appliances tested for leaks annually by a qualified person. A written, signed report must be made of these tests and kept on file. Any unsatisfactory conditions must be noted and corrected promptly.

- (k) Smoking policies must be adopted and enforced by the facility. The policies must comply with all applicable codes, regulations, and standards, including local ordinances. The facility is responsible for informing residents, staff, visitors, and other affected parties of smoking policies through distribution and/or posting. The facility is responsible for enforcement of smoking policies. Smoking must be prohibited in any room, ward, or compartment where flammable liquids, combustible gas, or oxygen are used or stored and in any other hazardous locations. These areas must be posted with "No Smoking" signs.
- (l) No storage is permitted in rooms with gas-fired equipment. Bulk storage of volatile or flammable liquids or materials is not allowed anywhere within the building.
- (m) Medical equipment, carts, wheelchairs, tables, furniture, dispensing machines, and similar physical objects, must not be stored in corridors or other ways of egress.
- (n) Smoke doors, fire doors, and doors to hazardous rooms must be kept closed and must not be propped or wedged open. Only approved devices such as alarm-activated electromagnetic hold-open devices may be used to hold these doors open, except doors to rooms classified as severe hazard.
- (o) Electrical extension cords must not be used on a permanent or semi-permanent basis as a substitute for approved wiring methods. Approved electrical receptacles must be provided in quantity and location for the normal use of appliances.
- (p) All abandoned utilities such as electrical wiring, ducts, and pipes, must be removed from the facility when no longer usable.

§19.330 Construction and Initial Survey of Completed Construction

- (a) Construction phase.
 - (1) The Texas Department of Human Services (DHS), Architectural Section in Austin, Texas, must be notified in writing of construction start.
 - (2) All construction must be done in accordance with minimum licensing requirements. It is the sponsor's responsibility to employ qualified personnel to prepare the contract documents for construction of a new facility or remodeling of an existing facility. Contract documents for additions and remodeling and for the construction of an entirely new facility must be prepared by an architect licensed by the Texas State Board of Architectural Examiners. Drawings must bear the seal of the architect. Certain parts of final plans, designs, and specifications must bear the seal of a registered professional engineer approved by the State Board of Registration for Professional Engineers to operate in Texas. These certain parts include sheets and sections covering structural, electrical, mechanical, and sanitary engineering.
 - (A) Remodeling is the construction, removal, or relocation of walls and partitions, the construction of foundations, floors, or ceiling-roof assemblies, the expanding or altering of safety systems (including, but not limited to, sprinkler, fire alarm, and emergency systems), or the conversion of space in a facility to a different use.
 - (B) General maintenance and repairs of existing material and equipment, repainting, applications of new floor, wall, or ceiling finishes, or similar projects are not included as remodeling, unless as a part of new construction. DHS must be provided flame spread documentation for new materials applied as finishes.

- (b) Contract documents.
- (1) Site plan documents must include grade contours; streets (with names); north arrow; fire hydrants; fire lanes; utilities, public or private; fences; unusual site conditions, such as ditches, low water levels, other buildings on-site; and indications of buildings five feet or less beyond site property lines. Site plan documents for nursing facilities may include the developed landscaping plan for resident use as called for in §19.332(f) of this title (relating to Location and Site).
 - (2) Foundation plan documents must include general foundation design and details.
 - (3) Floor plan documents must include room names, numbers, and usages; resident care areas; doors (numbered) including swing; windows; legend or clarification of wall types; dimensions; fixed equipment; plumbing fixtures; and kitchen basic layout; and identification of all smoke barrier walls (outside wall to outside wall) or fire walls.
 - (4) For both new construction and additions or remodeling to existing buildings, an overall plan of the entire building must be drawn or reduced to fit on an 8-1/2 inch by 11 inch sheet.
 - (5) Schedules must include door materials, widths, types; window materials, sizes, types; room finishes; and special hardware.
 - (6) Elevations and roof plan must include, but is not limited to, exterior elevations, including material note indications and any roof top equipment, roof slopes, drains, and gas piping, and interior elevations where needed for special conditions.
 - (7) Details must include wall sections as needed (especially for special conditions); cabinet and built-in work, basic design only; cross sections through buildings as needed; and miscellaneous details and enlargements as needed.
 - (8) Building structure documents must include structural framing layout and details (primarily for column, beam, joist, and structural frame building); roof framing layout (when this cannot be adequately shown on cross section); cross sections in quantity and detail to show sufficient structural design and structural details as necessary to assure adequate structural design, also calculated design loads.
 - (9) Electrical documents must include electrical layout, including lights, convenience outlets, equipment outlets, switches, and other electrical outlets and devices; service, circuiting, distribution, and panel diagrams; exit light system (exit signs and emergency egress lighting); emergency electrical provisions (such as generators and panels); fire alarm and similar systems (such as control panel, devices, and alarms); a nurse call system; and sizes and details sufficient to assure safe and properly operating systems.
 - (10) Plumbing documents must include plumbing layout with pipe sizes and details sufficient to assure safe and properly operating systems, water systems, sanitary systems, gas systems, other systems normally considered under the scope of plumbing, fixtures, and provisions for combustion air supply.
 - (11) Heating, ventilation, and air-conditioning (HVAC) documents must include sufficient details of HVAC systems and components to assure a safe and properly operating installation including, but not limited to, heating, ventilating, and air-conditioning layout, ducts, protection of duct inlets and outlets, combustion air, piping, exhausts, and duct smoke and/or fire dampers; and equipment types, sizes, and locations.

- (12) Sprinkler system documents must include plans and details of National Fire Protection Association (NFPA) designed systems; plans and details of partial systems provided only for hazardous areas; electrical devices interconnected to the alarm system.
 - (13) Other layouts, plans, or details as may be necessary for a clear understanding of the design and scope of the project; including plans covering private water or sewer systems must be reviewed by the local health or wastewater authority having jurisdiction.
 - (14) Specifications must include installation techniques, quality standards and/or manufacturers, references to specific codes and standards, design criteria, special equipment, hardware, painting, and any others as needed to amplify drawings and notes.
- (c) Initial survey of completed construction.
- (1) Upon completion of construction, including grounds and basic equipment and furnishings, a final construction inspection (initial survey) of the facility, including additions or remodeled areas, is required to be performed by DHS's architectural section prior to occupancy. A minimum of three weeks advance notice is needed. The completed construction must have the written approval of the local authorities having jurisdiction, including the fire marshal and building inspector.
 - (2) After the completed construction has been surveyed by a representative of DHS's architectural section and found acceptable, this information will be conveyed to the licensing officer as part of the information needed to issue a license to the facility. In the case of additions or remodeling of existing facilities, a revision or modification to an existing license may be necessary. Note that the building, grades, drives, parking, and grounds must be essentially 100% complete at the time of this initial survey visit for occupancy approval and licensing, including basic furnishings and operational needs.
 - (3) A copy of the following documents must be provided to DHS's architectural inspecting surveyor at the time of the survey of the completed building:
 - (A) written approval of local authorities as called for in paragraph (1) of this subsection;
 - (B) written certification of the fire alarm system by the installing agent (the Texas State Fire Marshal's Fire Alarm Installation Certificate);
 - (C) documentation of materials used in the building which are required to have a specific limited fire or flame spread rating including, but not limited to, special wall finishes or floor coverings, flame retardant curtains (including cubicle curtains), and rated ceilings. This must include a signed letter from the installer verifying that the material installed, such as carpeting, is the same material named in the laboratory test document;
 - (D) approval of the completed sprinkler system installation by the Texas Department of Insurance or the designing engineer. A copy of the material list and test certification must be available;
 - (E) service contracts for maintenance and testing of systems, including, but not limited to, alarm systems and sprinkler systems;

- (F) a copy of gas test results of the facility's gas lines from the meter;
 - (G) a written statement from an architect and/or engineer stating that he certifies that the building was constructed to meet NFPA 101, Life Safety Code, and all locally applicable codes, and that the facility is in substantial conformance with minimum licensing requirements; and
 - (H) the contract documents specified in subsection (b) of this section.
- (d) Nonapproval of new construction.
- (1) If, during the survey of completed construction, the surveyor finds certain basic requirements not met, DHS will not license the facility or approve it for occupancy. Such basic items may include the following:
 - (A) construction which does not meet minimum code or licensure standards for basic requirements such as corridor widths being less than eight feet clear width, ceilings installed at less than the minimum seven feet six inches height, resident bedroom dimensions less than required width, and other similar features which would disrupt or otherwise adversely affect the residents and staff if corrected after occupancy;
 - (B) no written approval by local authorities;
 - (C) fire protection systems not completely installed or not functioning properly including, but not limited to, fire alarm systems, emergency power and lighting, and sprinkler systems;
 - (D) required exits are not all usable according to Life Safety Code requirements;
 - (E) telephone not installed or not properly working;
 - (F) sufficient basic furnishings, essential appliances and equipment are not installed or not functioning; and
 - (G) any other basic operational or safety feature which the surveyor, as the authority having jurisdiction, encounters which in his judgment would preclude safe and normal occupancy by residents on that day.
 - (2) If the surveyor encounters deficiencies that do not affect the health and safety of the residents, licensure may be recommended based on an approved written plan of correction by the facility's administrator.
 - (3) Copies of reduced size floor plan on an 8-1/2 inch by 11 inch sheet must be submitted in duplicate to DHS for record and/or file use and for the facility to use in evacuation planning and fire alarm zone identification. The plan must contain basic legible information such as overall dimensions, room usage names, actual bedroom numbers, doors, windows, and any other pertinent information.

§19.331 Construction Standards for Additions, Remodeling, and New Nursing Facilities

- (a) This subchapter is written for, and applies to, new construction, including conversions, additions, and remodelings. The requirements of the Life Safety Code, Standard 101 of the National Fire Protection Association (NFPA), as required under Health and Safety Code, §242.039, and other applicable NFPA codes and standards referenced in NFPA 101 will apply unless otherwise noted or modified in this subchapter. The provisions of the chapter or subchapter and the provisions of the New Health Care Occupancies of the Life Safety Code are applicable.
 - (1) Life Safety Code, NFPA 101, is a registered trademark of the National Fire Protection Association, Inc., Quincy, Massachusetts 02269.
 - (2) The definitions listed in §19.101 of this title (relating to Definitions) also apply to this subchapter.
 - (3) In addition to the Life Safety Code and the standards referenced therein, this subchapter is subject to the codes, standards, and requirements established by the following: Underwriters Laboratories, Inc.; the American National Standards Institute, Inc. (ANSI); the National Electrical Code (NFPA 70); the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE); and the American Society for Testing Materials (ASTM). Various references to these entities will be made throughout these sections.
- (b) All applicable local, state, or national codes and ordinances must be met as determined by the authority having jurisdiction for those codes and ordinances and by the Texas Department of Human Services (DHS). Any conflicts must be made known to DHS for appropriate resolution.
- (c) The design of structural systems must be done by or under the direction of a professional engineer who is currently registered by the Texas State Board of Registration for Professional Engineers.
- (d) If an existing licensed facility plans building additions or remodeling which includes construction of additional resident beds, then the ratio of bathing units must be reevaluated to meet minimum standards and the square footage of dining and living areas must be reevaluated by DHS at a minimum of 19 square feet per bed. Conversion of existing living, dining, or activity areas to resident bedrooms must not reduce these functions to a total area of less than 19 square feet per bed. The dietary department must be evaluated by the facility's registered or licensed dietitian or architect having knowledge in the design of food service operations. This evaluation must be provided to DHS.
- (e) No building may be occupied by residents prior to inspection and approval to occupy by DHS.
- (f) The words "shall" or "must" are requirements. The word "should" is a recommendation which is expected to be followed unless there is valid reason not to do so .
- (g) Nothing in §§19.332-19.343 of this title ((relating to Location and Site, General Considerations, Architectural Space Planning and Utilization, Exit Provisions, Smoke Compartmentation (Subdivision of Building Spaces), Fire Protection Systems, Hazardous Areas, Structural Requirements, Mechanical Requirements, Electrical Requirements, Miscellaneous Details, and Elevators)) may be construed as prohibiting a better type of building or construction, more space, services, features, or greater degree of safety than the minimum requirements.

§19.332 Location and Site

- (a) Site approval is normally required of the local building department and fire marshal having jurisdiction. Any conditions considered to be a fire, safety, or health hazard will be grounds for disapproval of the site by the Texas Department of Human Services (DHS). New facilities may not be built in an area designated as a floodplain of 100 years or less.
- (b) Site grades must provide for positive surface water drainage so that there will be no ponding or standing water on the designated site. This does not apply to local government requirements for engineered controlled run-off holding ponds.
- (c) A new building (or addition) must be set back at least 10 feet from the property lines except as otherwise approved by DHS.
- (d) Exit doors from the building must not open directly onto a drive for vehicular traffic, but must be set back at least six feet from the edge of the drive (measured from the end of the building wall in the case of a recessed door) to prevent accidents due to lack of visual warning.
- (e) Walks must be provided as required from all exits and must be of non-slip surfaces free of hazards. Walks must be at least 48 inches wide except as otherwise approved. Ramps should be used in lieu of steps where possible for the handicapped and to facilitate bed or wheelchair removal in an emergency.
- (f) Outdoor activity, recreational, and sitting spaces must be provided and appropriately designed, landscaped, and equipped. Some shaded and/or covered outside areas are needed. These areas must be designed to accommodate residents in wheelchairs.
- (g) Each facility must have parking space to satisfy the needs of residents, employees, staff, and visitors. In the absence of a formal parking study, each facility must provide for a ratio of at least one parking space for every four beds in the facility. This ratio may be reduced slightly in areas convenient to public parking facilities. Space must be provided for emergency and delivery vehicles. No parking space may block or inhibit egress from the outside exit doors. Parking spaces and drives must be at least 10 feet away from windows in bedrooms, dining, and living areas.
- (h) Barriers must be provided for resident safety from traffic or other site hazards by the use of appropriate methods such as fences, hedges, retaining walls, railings, or other landscaping. These barriers must not inhibit the free emergency egress to a safe distance away from the building.
- (i) Open or enclosed courts with resident rooms or living areas opening upon them must not be less than 20 feet in the smallest dimension unless otherwise approved by DHS. Exceptions would be as follows:
 - (1) Nonparallel wings forming an acute angle may have a maximum of two windows each side less than 20 feet but not less than 10 feet.
 - (2) Windows may be separated by a distance equal to the depth of the court but not less than 10 feet.
 - (3) For unusual or unique site conditions, courts with resident rooms opening upon them on one side only must be not less than 10 feet in the smallest dimension, provided that the opposite wing does not contain a hazardous area, and the wall has no openings which could permit fire to reach the resident room side.
- (j) Auxiliary buildings located within 20 feet of the main building and which contain hazardous areas such as laundry and storage buildings must meet the applicable Life Safety Code requirements for separation and construction.

- (k) Other buildings on the site must meet the appropriate occupancy section or separation requirements of the Life Safety Code.
- (l) Fire service and access must be as follows:
 - (1) The facility must be served by a paid or volunteer fire department. The fire department must provide written assurance to DHS that the fire department can respond to an emergency at the facility within an appropriately prompt time for the travel conditions involved.
 - (2) The facility must be served by an adequate water supply that is satisfactory and accessible for fire department use as determined by the fire department serving the facility and by DHS.
 - (3) There must be at least one readily accessible fire hydrant located within 300 feet of the building. The hydrant must be on a minimum six inch service line, or else there must be an approved equivalent, such as a storage tank. The hydrant, its location, and service line, or equivalent must be as approved by the local fire department and DHS.
 - (4) The building must have suitable all-weather fire lanes for access as required by local fire authorities and DHS. As a minimum, there must be access to two sides of the building by an all-weather lane at least 10 feet wide. Fire lanes must have at least 14 feet in clearance width above grade (two feet each side of the ten-foot roadbed) and be kept free of obstructions at all times. All-weather access lanes must be no less than a properly constructed gravel lane.

§19.333 General Considerations

- (a) Services. Nursing facilities must either contain the elements described in this section or the provider must indicate the manner in which the needed services are to be made available. Each element provided in the facility must comply with the requirements of this subchapter. Appropriate modifications or deletions in space requirements may be made when services are shared or purchased.
- (b) Sizes. The sizes of the various departments will depend upon program requirements and organization of services within the facility. Some functions requiring separate spaces or rooms in these minimum requirements may be combined provided that the resulting plan will not compromise the best standards of safety and of medical and nursing practices.
- (c) Shared or combined services. Nursing facilities may be operated together with hospitals and may share administration, food service, recreation, janitor service, and physical therapy facilities, but must otherwise have clearly identifiable physical separations such as a separate wing or floor. Nursing facilities with different levels of care will require identifiable physical separations. Combined attendant or nurse stations and medication room areas will require some separating construction features.
- (d) Exterior finishes. Unless otherwise approved by the Texas Department of Human Services (DHS), the exterior finish material of buildings classified (per the National Fire Protection Association (NFPA 220)) as fire resistive or protected noncombustible must be Class A in the Life Safety Code. All others must be Class A or B in the Life Safety Code. Items of trim may be of combustible material subject to approval by DHS. Roofing must be Underwriter Laboratories listed as Class A or B.

- (e) Interior finishes.
 - (1) Interior finish of walls, ceilings, and floors must meet the Life Safety Code requirements for new construction.
 - (2) Documentation of finishes, including, but not limited to, copies of lab test reports and material labels is required.
- (f) Corridor travel distance. Corridor travel from the nurse station to the farthest resident room must assure prompt service to the resident. The normal travel for nursing efficiency is considered to be not over 85 feet and must not exceed 150 feet.
- (g) Accessibility for individuals with disabilities. The facility must meet the provisions and requirements concerning accessibility for individuals with disabilities in the following laws: the Americans with Disabilities Act of 1990 (Public Law 101-336; Title 42, United States Code, Chapter 126); Title 28, Code of Federal Regulations, Part 35; Texas Civil Statutes, Article 9102; and Title 16, Texas Administrative Code, Chapter 68. Plans for new construction, substantial renovations, modifications, and alterations must be submitted to the Texas Department of Licensing and Regulation (Attn: Elimination of Architectural Barriers Program) for accessibility approval under Article 9102.
- (h) Handrails. Handrails must be provided on each side of all resident-use corridors. Handrails for other areas should be provided as needed to facilitate resident movement or egress. Design of handrails must be in accordance with the American National Standards Institute (ANSI) A117.1. These handrails may extend into the minimum required corridor width without widening the corridor (that is, in an eight-foot-wide corridor, handrails may project up to 3 1/2 inches on each side). Reference §19.342(a)(8) and (9) of this title (relating to Miscellaneous Details) for handrail details.

§19.334 Architectural Space Planning and Utilization

- (a) Resident bedrooms. Each resident bedroom must meet the following requirements:
 - (1) The maximum room capacity must be four residents.
 - (2) No more than 25% of the total licensed beds may be in bedrooms with more than two beds each.
 - (3) Minimum bedroom area, excluding toilet rooms, closets, lockers, wardrobes, alcoves, or vestibules, must be 100 square feet in single occupancy rooms and 80 square feet per bed in multi-bed rooms.
 - (4) The minimum allowable room dimension is 10 feet. The room must be designed to provide at least 36 inches between beds and 24 inches between any bed and the adjacent (parallel) wall.
 - (5) Each room must have at least one operable outside window arranged and located so that it can be easily opened from the inside without the use of tools or keys. The maximum allowable sill height (to opening) must not exceed 36 inches above the floor. All operative windows must have insect screens. The minimum area of window(s) in each bedroom must equal at least 16 square feet or 8.0% of the room area, whichever is larger.

- (6) Each room must have general lighting, bed reading lights, and night lighting. The night light must be switched just inside the entrance to each resident room with a silent type switch unless otherwise approved by the Texas Department of Human Services (DHS). The light providing general illumination must be switchable at the door of the resident room for use of staff and residents. A durable nonglare (opaque front panel) reading light securely anchored to the wall, integrally wired, must be provided for each resident bed. The switch must be within reach of a resident in the bed.
 - (7) Two duplex or a fourplex grounding type receptacles must be provided beside the head of each bed. Other walls must have duplex receptacles as needed for TV, radio, razors, hairdryers, clocks, and/or as required by the National Electrical Code, National Fire Protection Association (NFPA 70), which is a registered trademark of the National Fire Protection Association, Inc., Quincy, Massachusetts 02269.
 - (8) Each resident must have access to a toilet room without entering the general corridor area. One toilet room must serve no more than two resident rooms. The toilet room must contain a water closet and a lavatory. The lavatory may be omitted from a toilet room which serves two bedrooms if each resident room contains a lavatory. See subsection (c)(1) of this section for baths and other toilet facility requirements.
 - (9) Each resident must have a bed with a comfortable mattress, a bedside stand with at least two enclosed storage spaces, a dresser, and closet or wardrobe space providing privacy for clothing and personal belongings. Clothes storage space must provide at least 22 inches of lineal hanging space per bed and have closable doors. Chairs and space must be provided for use by residents and/or visitors.
 - (10) Each room must open onto an exit corridor and must be arranged for convenient resident access to dining, living, and bathing areas.
 - (11) Visual privacy (such as cubicle curtains) must be available for each resident in multi-bed rooms. Design for privacy must not restrict resident access to entry, lavatory, or toilet, nor may it restrict bed evacuation or obstruct sprinkler flow coverage.
 - (12) At least one noncombustible wastebasket must be provided in each bedroom.
 - (13) See the requirements in §19.341(d)(4) of this title (relating to Electrical Requirements) for nurse call systems.
- (b) Nursing service areas. The service areas described in this subsection must be located in or readily available to each nursing unit. The size and disposition of each service area will depend upon the number and types of beds to be served. Each service area may be arranged and located to serve more than one nursing unit, but at least one service area must be provided on each nursing floor. The maximum allowable distance from a resident room door to a nurse station is 150 feet. The following requirements are applicable to services areas:
- (1) Nurse stations must be provided with space for nurses' charting, doctors' charting, and storage for administrative supplies. Nurses stations must be located to provide a direct view of resident corridors. A direct view of resident corridors is acceptable if a person can see down the corridors from a point within 24 inches of the outside of the nurse station counter or wall.

- (2) Lounge and toilet room(s) must be provided for nursing staff.
- (3) Lockers and/or security compartments must be provided for the safekeeping of personal effects of staff. These must be located convenient to the duty station of personnel or in a central location.
- (4) Clean utility room(s) must contain a work counter, sink with high-neck faucet with lever controls, and storage facilities and must be part of a system for storage and distribution of clean and sterile supply materials.
- (5) Soiled utility room(s) must contain a water closet or equivalent flushing rim fixture, a sink large enough to submerge a bedpan with spray hose and high-neck faucet with lever controls, work counter, waste receptacle, and linen receptacle. These utility rooms must be part of a system for collection and cleaning or disposal of soiled utensils or materials. A separate handwash sink must be provided if the bedpan disinfecting sink cannot normally be used for handwashing.
- (6) Provision must be made for convenient and prompt 24-hour distribution of medication to residents. The medication preparation room must be under the nursing staff's visual control and contain a work counter, refrigerator, sink with hot and cold water, and locked storage for biologicals and drugs and must have a minimum area of 50 square feet. The minimum dimension allowed is five feet six inches. An appropriate air supply must be provided to maintain adequate temperature and ventilation for safe storage of medications. For purposes of storage of unrefrigerated medications, the room temperature must be maintained between 59 degrees and 86 degrees F.
- (7) Provision must be made for separate closets or room for clean linens. Corridors must not be used for folding or cart storage. Storage rooms must be located and distributed in the building for efficient access to bedrooms.
- (8) Soiled linen rooms must be provided as required in subsection (I) of this section.
- (9) A nourishment station(s) is usually required in all but the smaller facilities and must contain a sink equipped for handwashing, equipment for serving nourishment between scheduled meals, refrigerator, and storage cabinets. Ice for residents' service and treatment must be provided only by icemaker units. This station may be furnished in a clean utility room.
- (10) An equipment storage room must be provided for equipment such as intravenous stands, inhalators, air mattresses, and walkers.
- (11) Parking spaces for stretchers and wheelchairs must be located out of the path of normal traffic.

- (c) Residents' bathing and toilet facilities. The following requirements are applicable to bathing and toilet facilities:
- (1) Bathtubs or showers must be provided at the rate of one for each 20 beds which are not otherwise served by bathing facilities within residents' rooms. At least one bathing unit must be provided in each nursing unit. Each tub or shower must be in an individual room or enclosure which provides space for the private use of the bathing fixture, for drying and dressing, and for a wheelchair and an attendant. Each general-use bathing room (those not directly serving adjoining bedrooms) must be provided with at least one water closet (in a stall, room, or area for privacy) and one lavatory. These bathing room(s) must be located conveniently to the bedroom area it serves and must not be more than 100 feet from the farthest bedroom. See requirements in subsection (a)(8) of this section for resident toilets at bedrooms. Each facility must provide at least one whirlpool tub unit as one of the required bathing units.
 - (2) At least 50% of bathrooms and toilet rooms, fixtures, and accessories must be designed and provided to meet criteria under the Americans with Disabilities Act of 1990 for individuals with disabilities unless otherwise approved by DHS.
 - (3) All rooms containing bathtubs, sitz baths, showers, and water closets, subject to occupancy by residents, must be equipped with swinging doors and hardware which will permit access from the outside in any emergency.
 - (4) Bathing areas must be provided with safe and effective auxiliary or supplementary heating. Bathing areas must be free of drafts and must have adequate exhaust ducted to the outside to minimize excess moisture retention and resulting mold and mildew problems.
 - (5) Tubs and showers must be provided with slip-proof bottoms.
 - (6) Lavatories and handwashing facilities must be securely anchored to withstand an applied downward load of not less than 250 pounds on the front of the fixtures.
 - (7) Provision must be made for sanitary hand drying and toothbrush storage at lavatories. There must be paper towel dispensers or separate towel racks and separate toothbrush holders.
 - (8) Mirrors must be arranged for convenient use by residents in wheelchairs as well as by residents in a standing position, and the minimum size must be 15 inches in width by 30 inches in height, or tilt type.
 - (9) Rooms with toilets must be provided with effective forced air exhaust ducted to the exterior to help remove odors. Ducted manifold systems are recommended for some multiple-type installations.
 - (10) Floors, walls, and ceilings must have nonabsorbent surfaces, be smooth, and easily cleanable.
- (d) Disposal facilities. Space and facilities must be provided for the sanitary storage of waste by incineration, mechanical destruction, compaction, containerization, removal, or by a combination of these techniques.

(e) Resident living areas. The following requirements are applicable to resident living areas:

(1) Social-diversional spaces such as living rooms, dayrooms, lounges, sunrooms, must be provided on a sliding scale as follows:

Number of Beds	Area Per Bed Minimum
4-15	18 square feet (Minimum 144 square feet)
16-20	17 square feet
21-25	16 square feet
26-30	15 square feet
31-35	14 square feet
36-40	13 square feet
41-50	12 square feet
51-60	11 square feet
61 and over	10 square feet (Example: 100 beds = 1,000 square feet)

- (2) Where a required way of exit (or a service way) is through a living (or dining) area, a pathway equal to the corridor width will normally be deducted for calculation purposes and discounted from that area. These exit pathways must be kept clear of obstructions.
- (3) Each resident living room and dining room must have at least one outside window. The window area must be equal to at least 8.0% of the total room floor area. Skylighting may be used to fulfill one-half of the 8.0% minimum area.
- (4) See §19.331(d) of this title (relating to Construction Standards for Additions, Remodeling, and New Nursing Facilities) for capacity increases to existing facilities.
- (5) Open or enclosed seating space must be provided within view of the main nurse station that will allow furniture or wheelchair parking that does not obstruct the corridor way of egress.

(f) Dining space. Dining space must be adequate for the number of residents served, but no less than 10 square feet per resident bed. See §19.331(d) of this title (relating to Construction Standards for Additions, Remodeling, and New Nursing Facilities) for bed capacity increases to existing facilities.

(g) Dietary facilities. The following requirements are applicable to dietary facilities:

(1) Kitchens (main/dietary) must be as follows:

- (A) Kitchens will be evaluated on the basis of their performance in the sanitary and efficient preparation and serving of meals to residents. Consideration will be given to planning for the type of meals served, the overall building design, the food service equipment, arrangement, and the work flow involved in the preparation and delivery of food. Plans must include a large-scale detailed kitchen layout designed by a registered or licensed dietitian or architect having knowledge in the design of food service operations.
- (B) Kitchens must be designed so that room temperature at peak load (summertime) will not exceed a temperature of 85 degrees Fahrenheit measured over the room at the five-foot level. The amount of supply air must take into account the large quantities of air that may be exhausted at the range hood and dishwashing area.

- (C) Operational equipment must be provided as planned and scheduled by the facility consultants for preparing and serving meals and for refrigerating and freezing of perishable foods, as well as equipment in, and/or adjacent to, the kitchen or dining area for producing ice.
- (D) Facilities for washing and sanitizing dishes and cooking utensils must be provided. These facilities must be designed based on the number of meals served and the method of serving, that is, use of permanent or disposable dishes. As a minimum, the kitchen must contain a multi-compartment sink large enough to immerse pots and pans. In all facilities, a mechanical dishwasher is required for washing and sanitizing dishes. Separation of soiled and clean dish areas must be maintained, including air flow.
- (E) A vegetable preparation sink must be provided, and it must be separate from the pot sinks.
- (F) A supply of hot and cold water must be provided. Hot water for sanitizing purposes must be 180 degrees Fahrenheit or the manufacturer's suggested temperature for chemical sanitizers. For mechanical dishwashers the temperature measurement is at the manifold.
- (G) A kitchen must be provided with a hand-washing lavatory in the food preparation area with hot and cold water, soap, paper towel dispenser, and waste receptacle. The dish room area must have ready access to a handwashing lavatory.
- (H) Staff rest room facilities with lavatory must be directly accessible to kitchen staff without traversing resident use areas. The rest room door must not open directly into the kitchen (that is, provide a vestibule).
- (I) Janitorial facilities must be provided exclusively for the kitchen and must be located in the kitchen area.
- (J) Nonabsorbent smooth finishes or surfaces must be used on kitchen floors, walls, and ceilings. These surfaces must be capable of being routinely cleaned and sanitized to maintain a healthful environment. Counter and cabinet surfaces, inside and outside, must also have smooth, cleanable, relatively nonporous finishes.
- (K) Operable windows must have insect screens provided.
- (L) Doors between kitchen and dining or serving areas must have a safety glass view panel.
- (M) A garbage can or cart washing area with drain and hot water must be provided.
- (N) Floor drains must be provided in the kitchen and dishwashing areas.
- (O) Vapor removal from cooking equipment must be designed and installed in accordance with NFPA 96.
- (P) Grease traps must be provided in compliance with local plumbing code or other nationally recognized plumbing code.
- (Q) See §19.331(d) of this title (relating to Construction Standards for Additions, Remodeling, and New Nursing Facilities) for bed capacity increases to existing facilities.

- (2) Food storage areas must be as follows:
 - (A) Food storage areas must provide for storage of a seven-day minimum supply of nonperishable foods at all times.
 - (B) Shelves must be adjustable wire type. Walls and floors must have a nonabsorbent finish to provide a cleanable surface. No foods may be stored on the floor; dollies, racks, or pallets may be used to elevate foods not stored on shelving.
 - (C) Dry foods storage must have an effective venting system to provide for positive air circulation.
 - (D) The maximum room temperature for food storage must not exceed 85 degrees F at any time. The measurement must be taken at the highest food storage level but not less than five feet from the floor.
 - (E) Food storage areas may be located apart from the food preparation area as long as there is space adjacent to the kitchen for necessary daily usage.
- (3) Auxiliary serving kitchens (not contiguous to food preparation/serving area) must be as follows:
 - (A) Where service areas other than the kitchen are used to dispense foods, these must be designated as food service areas and must have equipment for maintaining required food temperatures while serving.
 - (B) Separate food service areas must have hand-washing facilities as a part of the food service area.
 - (C) Finishes of all surfaces, except ceilings, must be the same as those required for dietary kitchens or comparable areas. See subsection (g)(1)(J) of this section.
- (h) Administrative and public areas.
 - (1) The following elements must be provided in the public area:
 - (A) The entrance must be at grade level, sheltered from the weather, and able to accommodate wheelchairs. A drive-under canopy must be provided for the protection of residents or visitors entering or leaving a vehicle. The latter may be a secondary entrance.
 - (B) The lobby must include:
 - (i) storage space for wheelchairs (if more than one is kept available);
 - (ii) a reception and/or information area (may be obviously adjacent to lobby);
 - (iii) waiting space(s);
 - (iv) public toilet facilities for individuals with disabilities (may be adjacent to lobby);
 - (v) at least one public access telephone(s), installed to meet standards under the Americans with Disabilities Act; and
 - (vi) drinking fountain(s). These may be provided in a common public area and at least one must be installed to meet standards under the Americans with Disabilities Act; and

- (C) A lobby may also be use-designed to satisfy a portion of the minimum area required for resident living room space.
- (2) The following must be provided in the administrative area:
 - (A) General or individual offices(s) for business transactions, medical and financial records, administrative and professional staff, and for private interviews relating to social service, credit, and admissions.
 - (B) A multipurpose room for conferences, meetings, and health education purposes including facilities for showing visual aids.
 - (C) Storage and work area for office equipment and supplies must be provided and accessible to the staff using such items.
- (3) Toilet facilities for the disabled must be available in the building.
- (i) Physical therapy facilities.
 - (1) Physical therapy facilities must be provided if required by the treatment program. The facilities stated in subparagraph (B) of this paragraph and paragraph (2)(C)-(E) of this subsection may be planned and arranged for shared use by occupational therapy residents and staff if the treatment program reflects this sharing concept. Physical therapy facilities must include the following:
 - (A) Provision for cubicle curtains around each individual treatment area; handwashing facility(ies) (one lavatory or sink may serve more than one cubicle); and facilities for the collection of soiled linen and other material that may be used in the therapy.
 - (B) Residents' dressing areas, showers, lockers, and toilet rooms if the therapy is such that these would be needed at the area.
 - (2) Physical therapy facilities may also include the following:
 - (A) treatment area(s) with space and equipment for thermotherapy, diathermy, ultrasonics, and hydrotherapy;
 - (B) an exercise area;
 - (C) storage for clean linen, supplies, and equipment used in therapy;
 - (D) service sink located near therapy area; and
 - (E) wheelchair and stretcher storage.
- (j) Occupational therapy. Occupational therapy facilities must be provided if required by the treatment program.
 - (1) An activities area with a sink or lavatory and facilities for collection of waste products prior to disposal must be provided.
 - (2) Storage for supplies and equipment used in the therapy must be provided.
- (k) Personal grooming area (barber/beauty shop). A separate room with appropriate equipment must be provided for hair care and grooming needs of residents in facilities with over 60 beds.

- (l) Laundry/linen services.
 - (1) On-site processing must be as follows:
 - (A) Because of the high incidence of fires in laundries, it is highly recommended that the laundry be in a separate building 20 feet or more from the main building. If the laundry is located within the main building it must be separated by minimum one - hour fire construction to structure above, and sprinklered, and must be located in a remote area away from resident sleeping areas. Access doors must be from the exterior or interior nonresident use area such as a service corridor (not required exit) which is separated from the resident area.
 - (B) If linen is to be processed on the site, the following must be provided:
 - (i) A soiled linen receiving, holding, and sorting room with a rinse sink. This area must have a floor drain and forced exhaust to the exterior which must operate at all times there is soiled linen being held in the area.
 - (ii) A laundry processing room with equipment which can process seven days needs within a regularly scheduled work week. Hand-washing facilities must be provided. The washer area must have
 - (I) a floor drain;
 - (II) storage for laundry supplies;
 - (III) a clean linen inspection and mending room or area and a folding area;
 - (IV) a clean linen storage, issuing, or holding room or area;
 - (V) a janitors' closet containing a floor receptor or service sink and storage space for housekeeping equipment and supplies; and
 - (VI) sanitizing (washing) facilities and a storage area for carts.
 - (C) Soiled and clean operations must be planned to maintain sanitary flow of functions as well as air flow. If carts containing soiled linens from resident rooms are not taken directly to the laundry area, intermediate holding rooms must be provided and located convenient to resident bedroom areas.
 - (D) Laundry areas must have adequate air supply and ventilation for staff comfort without having to rely on opening a door that is part of the fire wall separation.
 - (E) Provisions must be made to exhaust heat from dryers and to separate dryer make-up air from the habitable work areas of the laundry.
 - (2) For off-site linen processing, the following must be provided on the premises:
 - (A) a soiled linen holding room (provided with adequate forced exhaust ducted to the exterior);
 - (B) clean linen receiving, holding, inspection, sorting or folding, and storage room(s); and
 - (C) sanitizing facilities and storage area for carts.

- (3) Resident-use laundry, if provided, must be limited to not more than one residential type washer and dryer per laundry room. This room must be classified as a hazardous area as in accordance with the Life Safety Code.
- (m) General storage. The following requirements are applicable to general storage facilities:
 - (1) A general storage room(s) must be provided as needed to accommodate the facility's needs. It is recommended that a general storage area provide at least two square feet per resident bed. This area would be for items such as extra beds, mattresses, appliances, and other furnishing and supplies.
 - (2) Storage space with provisions for locking and security control should be provided for residents' personal effects which are not kept in their rooms.
- (n) Janitors' closet. In addition to the janitors' closet called for in certain departments, a sufficient number of janitors' closets must be provided throughout the facility to maintain a clean and sanitary environment. These must contain a floor receptor or service sink and storage space for housekeeping equipment and supplies.
- (o) Maintenance, engineering service, and equipment areas. Space and facilities for adequate preventive maintenance and repair service must be provided. The following spaces are needed and it is suggested that these be part of a separate laundry building or area:
 - (1) A storage area for building and equipment maintenance supplies, tools, and parts must be provided.
 - (2) A space for storage of yard maintenance equipment and supplies, including flammable liquids bulk storage, must be provided separate from the resident-occupied facility.
 - (3) A maintenance and/or repair workshop of at least 120 square feet and equipment to support usual functions is recommended.
 - (4) A suitable office or desk space for the maintenance person(s) is recommended (possibly located within the repair shop area) with space for catalogs, files, and records.
- (p) Oxygen. The storage and use of oxygen and equipment must meet applicable NFPA standards for oxygen, including NFPA 99.

§19.335 Exit Provisions

Exit provisions, including doors, corridors, stairways, and other exitways, locks, and other applicable items must conform to the requirements of the Life Safety Code concerning means of egress and of this section in order to assure that residents can be rapidly and easily evacuated from the building at all times, or from one part of the building to a safe area of refuge in another part of the building. Exit provisions are as follows:

- (1) Bedroom space arrangement and doors and corridors must be designed for evacuation of bedfast residents by means of rolling the bed to a safe place in the building or to the outside.
- (2) Public assembly, common living rooms, dining rooms, and other rooms with a capacity of 50 or more persons or greater than 1,000 square feet must have two means of exit remote from each other. Outswinging doors with panic hardware must be provided for these exits.
- (3) Exit doors and ways of egress must be maintained clear and free for use at all times. Furnishings, equipment, carts, and other obstacles must not be left to block egress at any time.
- (4) Steps in interior ways of egress are prohibited. If changes of elevation are necessary within ways of egress, approved ramps with maximum slope of 1:12 (one unit of rise to 12 units of run) must be used.
- (5) Any remodeling of, construction on, and/or additions to occupied buildings which involve exitways and exit doors must be accomplished without compromising the exits or creating a dead end situation at any time. Acceptable alternate temporary exits may be approved, or resident(s) in the area involved may have to be relocated until construction blocking the exit is completed. Other basic safety features such as fire alarms, sprinkler systems, and emergency power must also remain operational.
- (6) Doors in means of egress must be as follows:
 - (A) Locking hardware or devices which are capable of preventing or inhibiting immediate egress must not be used in any room or area that can be occupied.
 - (B) A latch or other fastening device on an exit door must be provided with a knob, handle, panic bar, or similar releasing device. The method of operation must be obvious in the dark, without use of a key, and operable by a well known one-action operation that will easily operate with normal pressure applied to the door or to the device toward the exterior. Locking hardware which prevents unauthorized entry from the out side (only) is permissible. Permanently mounted hold-open devices to expedite emergency egress and prevent accidental lock-out must be provided for exterior exit doors as well as self-closing devices.
 - (C) No screen or storm door may swing against the direction of exit travel where main doors are required to swing out.
 - (D) To aid in control of wandering residents, buzzers or other sounding devices may be used to announce the unauthorized use of an exit door. Other methods include approved emergency exit door locks or fencing with a gate outside of exit doors which enclose a space large enough to allow the space to be an exterior area of egress and refuge away from the building.
 - (E) Inactive leaves of double doors may have easily accessible and easily operable bolts if the active leaf is 44 inches wide. Center mullions are prohibited.

- (F) Resident baths or toilets having privacy locks will require that keys or devices for opening the doors are kept readily available to the staff.
 - (G) Folding or sliding doors must not be used in exit corridors or exitways. Sliding glass doors may be used as secondary doors from residents' bedrooms to grade or to a balcony, or as secondary doors in certain other areas where the primary designated exit door requirements are met. Doors to bathroom and other resident-use areas must be the side-hinged swinging type. Corridor doors to rooms must swing into the room or be recessed so as not to extend into the corridor when open; however, doors ordinarily kept closed may be excepted. Corridor door frames must be steel in accordance with the Life Safety Code.
- (7) Horizontal exits, if provided, must be according to the Life Safety Code.
- (8) Areas outside of exterior exit doors (exit discharge) must be as follows:
- (A) Provision must be made to accommodate and facilitate continuation of emergency egress away from a building for a reasonable distance beyond the outside exit door, especially for movement of nonambulatory residents in wheelchairs and beds. Any condition which may retard or halt free movement and progress outside the exit doors will not be allowed. Ramps must be used outside the exit doors in lieu of steps whenever possible.
 - (B) The landing outside of each exit door must be essentially the same elevation as the interior floor and level for a distance equal to the door width plus at least four feet. Generally, the difference in floor elevation at an exterior door must not be over 1/2 inch with the outside slope not to exceed 1/4 inch per foot sloping away from the door for drainage on the exterior. In locations north of the +20 Fahrenheit Isothermal Line as defined in the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Handbook of Fundamentals, the landing outside of all exit doors must be protected from ice build-up which would prohibit the door from opening and be a slip hazard.
 - (C) Emergency egress lighting immediately outside of exit doors is required as a part of the building emergency lighting system. Photocell devices may be used to turn lights off during daylight hours.
- (9) The requirements of an emergency lighting system must be in accordance with §19.341 of this title (relating to Electrical Requirements).
- (10) Requirements for interior finishes of ways of egress (flame spread of floor, walls, and ceiling finishes) must be in accordance with the Life Safety Code. The interior finishes of other areas must be in accordance with §19.333(e) of this title (relating to General Considerations).

§19.336 Smoke Compartmentation (Subdivision of Building Spaces)

- (a) Smoke compartmentation must be as described in the Life Safety Code and in this section.
- (b) An exit sign must be provided on each side of corridor smoke doors unless otherwise directed by the Texas Department of Human Services (DHS).
- (c) The metal frames for the wire glass view panels in smoke doors must be steel, unless otherwise approved by DHS. The bottom of the view panel must not be higher than 54 inches above the floor. Pairs of opposite (double egress) swinging smoke doors in corridors must have push/pull hardware. The door leaves must align in the closed position.
- (d) Smoke barrier walls in concealed spaces such as attics, must have prominent signs on each side that read: "Warning: Smoke/fire barrier. Properly seal all openings."
- (e) Provisions must be made for reasonable access to concealed smoke barrier walls for maintaining smoke dampers and so that walls and dampers can be visually checked periodically for conformance by facility staff, service persons, and inspectors. Access must provide for visual inspection of both sides of the wall, and of all parts (end-to-end and top-to-bottom). Ceiling access panels must be prefabricated metal panel, or its equivalent, and be at least 20 inches by 20 inches with no obstructions above (such as ducts) to hamper entrance, and it must be fire rated if required to maintain ceiling-roof or ceiling-floor fire rating. Access must be provided for both sides of the wall.
- (f) Air systems should be designed to avoid having ducts which penetrate smoke barrier walls, thus eliminating the need for smoke dampers which are often a problem to maintain in proper working condition.

§19.337 Fire Protection Systems

- (a) Fire protection systems include detection, alarm, and communication systems; fixed automatic extinguishment systems; and portable extinguishers. These systems must meet the requirements of the Life Safety Code, and of this section. Components must be compatible and laboratory listed for the use intended.
- (b) Fire protection systems must meet the requirements of all applicable National Fire Protection Association (NFPA) standards, such as NFPA 72 for alarm systems, as referenced in the Life Safety Code. Wiring and circuitry for alarm systems must meet the applicable requirements of NFPA standards including the NFPA 70 for these systems.
- (c) Requirements of emergency electrical systems must be in accordance with §19.341 of this title (relating to Electrical Requirements). Requirements for sprinkler systems must be in accordance with §19.340(4) of this title (relating to Mechanical Requirements).
- (d) Partial sprinkler systems (those provided only for hazardous areas) must be interconnected with the fire alarm and comply with the Life Safety Code. Each partial system must have a valve with a supervisory switch to sound a trouble signal, water flow switch to activate the fire alarm, and an end-of-line test drain.
- (e) Fire alarm systems must be installed, maintained, and repaired by an agent having a current certificate of registration with the State Fire Marshal's office of the Texas Commission on Fire Protection, in accordance with state law. A fire alarm installation certificate must be provided as required by the Office of the State Fire Marshal.

- (f) The fire alarm system must be designed so that whenever the general alarm is sounded by activation of any device (such as manual pull, smoke sensor, sprinkler, or kitchen range hood extinguisher), the following must occur automatically:
 - (1) smoke and fire doors which are held open by approved devices must be released to close;
 - (2) air handlers (air conditioning and/or heating distribution fans) serving three or more rooms or any means of egress must shut down immediately;
 - (3) smoke dampers must close; and
 - (4) the alarm-initiating-device location must be clearly indicated on the fire alarm control panel(s) and all auxiliary panels.
- (g) Fire alarm bells or horns must be located throughout the building for audible coverage. Flashing alarm lights (visual alarms) must be installed to be visible in corridors and public areas including dining rooms and living rooms in a manner that will identify exit routes.
- (h) A master control panel indicating the location of all alarm, trouble, and supervisory signals, by zone or device, must be visible at the main nurse station. Fire alarm system components must be laboratory-listed as compatible. Alarm and trouble zoning must be by smoke compartments and by floors in multi-story facilities.
- (i) Remote annunciator panels, indicating location of alarm initiation, by zone or device, and trouble indication, must be located at auxiliary or secondary nurse stations on each floor, and will indicate the alarm condition of adjacent zones and the alarm conditions at all other nurse stations.
- (j) Manual pull stations must be provided at all exits, living rooms, dining rooms, and at or near the nurse stations.
- (k) The sprinkler system must be monitored for flow and tamper conditions by the fire alarm system.
- (l) The kitchen range hood extinguisher must be interconnected with the fire alarm system. This interconnection may be a separate zone on the panel or combined with other initiating devices located in the same zone as the range hood is located.
- (m) Portable fire extinguishers must be provided throughout the facility as required by NFPA Standard 10 and as determined by the local fire department and the Texas Department of Human Services. The following requirements are applicable to fire extinguishers:
 - (1) Extinguishers in resident corridors must be spaced so that travel distance is not more than 75 feet. The minimum size of extinguishers must be either 2 1/2 gallon for water type or 5 pound for ABC type.
 - (2) Extinguishers must be installed on hangers or brackets supplied or mounted in approved cabinets. Recessed cabinets are required for extinguishers located in corridors.
 - (3) Extinguishers installed under conditions where they are subject to physical damage must be protected from impact or dislodgement.
 - (4) Extinguishers having a gross weight not exceeding 40 pounds must be installed so that the top of the extinguisher is not more than five feet above the floor. Extinguishers having a gross weight greater than 40 pounds must be installed so that the top of the extinguisher is not more than 3-1/2 feet above the floor. In no case may the clearance between the bottom of the extinguisher and the floor be less than four inches.
 - (5) Portable extinguishers provided in hazardous rooms should be located as close as possible to the exit door opening and nearest the latch (knob) side.

§19.338 Hazardous Areas

- (a) Protection from hazardous areas must be as required in the Life Safety Code, except as required or modified in this section. Gas fired equipment must not be located in attic spaces, except under the following conditions:
 - (1) the area around the units must be constructed to be one-hour fire rated;
 - (2) the enclosure must have sprinkler protection; and
 - (3) combustion and venting air must be ducted from the exterior in properly sized metal ducts.
- (b) Laboratories must be protected in accordance with the National Fire Protection Association (NFPA) 99.
- (c) Cooking equipment must have exhaust systems designed and installed in accordance with NFPA 96.
- (d) Doors to hazardous areas must have closers and be kept closed unless provided with an approved hold-open device such as an alarm activated magnetic hold-open device. Doors must be single-swing type with positive latching hardware. View panels at laundry entrances must be provided and be of materials adequate to maintain the integrity of the door as allowed by the Life Safety Code.

§19.339 Structural Requirements

- (a) Every building and every portion thereof must be designed and constructed to sustain all dead and live loads in accordance with accepted engineering practices and standards.
- (b) Special provisions must be made in the design of buildings in regions where local experience shows loss of life or extensive damage to buildings resulting from hurricanes, tornadoes, earthquakes, or floods.
- (c) The sponsor is responsible for employing qualified personnel in the preparation of plan designs and engineering and in the construction of the facility to assure that all structural components are adequate, safe, and meet the applicable construction requirements.
- (d) The design of the structural system must be done by or under the direction of a professional structural engineer who is currently registered by the Texas State Board of Registration for Professional Engineers in accordance with state law.
- (e) The parts of the plans, details, and specifications covering the structural design must bear the legible seal of the engineer on the original drawings from which the prints are made.
- (f) If the municipality has a building code, that code must govern the building requirements for the construction involved. The Life Safety Code must be used for fire safety requirements. Should discrepancies between the codes arise, they must be called to the attention of the Texas Department of Human Services for resolution.
- (g) In the absence of a local building code, a nationally recognized building code must be used with regard to the construction integrity of the building. The Life Safety Code must be used for fire safety requirements.
- (h) Each building must be classified as to building construction type for fire resistance rating purposes in accordance with the National Fire Protection Association (NFPA) 220 and the Life Safety Code.
- (i) Enclosures of vertical openings between floors must meet the Life Safety Code.

- (j) All interior walls, partitions, and roof structure in buildings of fire resistive and noncombustible construction must be of noncombustible or limited combustible materials.
- (k) Building insulation materials, unless sealed on all sides and edges in an approved manner, must have a flame spread rating of 25 or less when tested in accordance with NFPA 255 and NFPA 258.

§19.340 Mechanical Requirements

The design of the mechanical systems must be done by or under the direction of a registered professional (mechanical) engineer approved by the Texas State Board of Registration for Professional Engineers to operate in Texas, and the parts of the plans and specifications covering mechanical design must bear the legible seal of the engineer. Building services pertaining to utilities; heating, ventilating, and air-conditioning systems; vertical conveyors; and chutes must be in accordance with the Life Safety Code. Required plumbing fixtures must be in accordance with the Life Safety Code and §19.334 of this title (relating to Architectural Space Planning and Utilization) in specific use areas.

- (1) Plumbing.
 - (A) All plumbing systems must be designed and installed in accordance with the requirements of the plumbing code of the municipality. In the absence of a municipal code, a nationally recognized plumbing code must be used. Any discrepancy between an applicable code and these requirements must be called to the attention of the Texas Department of Human Services (DHS) for resolution.
 - (B) Supply systems must assure an adequacy of hot and cold water. An average rule-of-thumb design for hot water for resident usage (at 110 degrees Fahrenheit) is to provide 6-1/2 gallons per hour per resident in addition to kitchen and laundry use.
 - (C) Water supply must be from a system approved by the Water Utility Division, Texas Natural Resources Conservation Commission, or from a system regulated by an entity responsible for water quality in that jurisdiction as approved by the Water Utility Division, Texas Natural Resources Conservation Commission.
 - (D) The sewage system must connect to a system permitted by the Watershed Management Division, Texas Natural Resources Conservation Commission, or to a system regulated by an entity responsible for water quality in that jurisdiction as approved by the Water Utility Division, Texas Natural Resources Conservation Commission.
 - (E) The minimum ratio of fixtures to residents shall be as required in §19.334(c) of this title (relating to Architectural Space Planning and Utilization).
 - (F) For design calculation purposes, resident-use hot water must not exceed 110 degrees Fahrenheit at the fixture. For purposes of conforming to licensure requirements, an operating system providing water from 100 degrees Fahrenheit to 115 degrees Fahrenheit is acceptable. Hot water for laundry and kitchen use must be normally 140 degrees Fahrenheit except that dish sanitizing, if done by hot water, must be 180 degrees Fahrenheit.
 - (G) Water closets raised to provide a seat height 17 inches to 19 inches from the floor is required for persons with disabilities.
 - (H) Showers for wheelchair residents must not have curbs. Tub and shower bottoms must have a slip-resistant surface. Shower and tub enclosures, other than curtains, must be of tempered glass, plastic, and other safe materials.

- (I) Drinking fountains must not extend into exit corridors.
 - (J) Fixture controls easily operable by residents must be provided (such as lever type).
 - (K) Plumbing fixtures for residents must be vitreous china or porcelain finished cast iron or steel unless otherwise approved by DHS. Bathing units constructed of class B fire rated fiberglass are acceptable for use.
 - (L) Hand-washing sinks for staff use are required in many areas throughout the facility in accordance with §19.334 of this title (relating to Architectural Space Planning and Utilization). Lavatories are required to be provided adjacent to water closets in each area.
 - (M) The soiled utility room must be provided with a flushing device such as a water closet with bedpan lugs, a spray hose with a siphon breaker or similar device, such as a high neck faucet with lever controls and a deep sink that is large enough to submerge a bedpan. A sterilizer for sanitizing may be used in place of a deep sink.
 - (N) Siphon breakers or back-flow preventers must be installed with any water supply fixture where the outlet or attachments may be submerged.
 - (O) Clean-outs for waste piping lines must be provided and located so that there is the least physical and sanitary hazard to residents. Where possible, clean-outs must open to the exterior or areas which would not spread contamination during clean-out procedures.
 - (P) All boilers not exempted by the Texas Health and Safety Code §755.022 must be inspected and certified for operation by The Texas Department of Licensing and Regulation.
- (2) Heating, ventilating, and air-conditioning systems.
- (A) Heating, ventilating, and air-conditioning systems must be designed and installed in accordance with the Heating, Ventilating, and Air-Conditioning Guide of the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE), except as may be modified by this section.
 - (B) Heating, ventilating, and air-conditioning systems must meet the requirements of the Life Safety Code and the National Fire Protection Association (NFPA) 90A. The plans must have a statement verifying that the systems are designed to conform to NFPA 90A. Requirements for conditions related to smoke compartmentation must be in accordance with §19.336 of this title (relating to Smoke Compartmentation (Subdivision of Building Spaces)).
 - (C) Systems using liquefied petroleum gas fuel must meet the requirements of the Railroad Commission of Texas and NFPA 58 Liquefied Petroleum Gases.
 - (D) The heating system must be designed, installed, and functioning to be able to maintain a temperature of at least 75 degrees Fahrenheit for all areas occupied by residents. For all other occupied areas, the indoor design temperature must be at least 72 degrees Fahrenheit. The cooling system must be designed, installed, and functioning to be able to maintain a temperature of not more than 78 degrees Fahrenheit. A facility constructed or licensed after January 1, 2004, must have a central air conditioning system, or a substantially similar air conditioning system, that is capable of maintaining a temperature suitable for resident comfort within areas used by residents. Occupied areas generating high heat, such as kitchens, must be provided with a sufficient cool air supply to maintain a temperature not exceeding 85 degrees Fahrenheit at the five-foot level. Supply air volume must be approximately equal to the air volume exhausted to the exterior for these areas.

- (E) Air systems must provide for mixing at least 10% outside air for the supply distribution. Blowers for central heating and cooling systems must be designed so that they may run continuously.
- (F) Floor furnaces, unvented space heaters, and portable heating units must not be used. Heating devices or appliances must not be a burn hazard (to touch) to residents.
- (G) A combustion fresh air inlet must be provided to all gas or fossil fuel operated equipment in steel ducts or passages from outside the building in accordance with NFPA 54. Rooms must also be vented to the exterior to exhaust heated ambient air in the room. Combustion air will require one vent within 12 inches of the floor and one vent within 12 inches of the ceiling.
- (H) The location and design of air diffusers, registers, and return air grilles, must ensure that residents are not in harmful or excessive drafts in their normal usage of the room.
- (I) In areas requiring control of sanitation, the air flow must be from the clean area to the dirty area. Air supply to food preparation areas must not be from air which has circulated places such as resident bedrooms and baths.
- (J) Air from unsanitary areas such as janitors' closets, soiled linen areas, utility areas, and soiled area of laundry rooms, must not be returned and recirculated to other areas.
- (K) Intakes for fresh outside air must be located sufficiently distant from exhaust outlets or other areas or conditions which may contaminate or otherwise pollute the incoming fresh air. Fresh air inlets must be appropriately screened to prevent entry of debris, rodents, and animals. Provision must be made for access to such screens for periodic inspection and cleaning to eliminate clogging or air stoppage (see paragraph (3)(C)(i) of this subsection).
- (L) Systems must be designed as much as possible to avoid having ducts passing through fire walls or smoke barrier walls. All openings or duct penetrations in these walls must be provided with approved automatic dampers. Smoke dampers at smoke partitions must close automatically upon activation of the fire alarm system to prevent the flow of air or smoke in either direction.
- (M) Ducts with smoke dampers must have maintenance panels for inspections. The maintenance panels must be removable without tools. Means of access must also be provided in the ceiling or side wall to facilitate smoke damper inspection readily and without obstruction. Location of dampers must be identified on the wall or ceiling of the occupied area below.
- (N) Fusible links are not approved for smoke dampers.
- (O) Central air supply systems and/or systems serving means of egress must automatically and immediately shut down upon activation of the fire alarm system. (An exception must be approved, engineered smoke-removal systems.)
- (P) Ducts must be of metal or other approved noncombustible material. Cooling ducts must be insulated against condensation drip.

- (3) Ventilating and exhaust.
- (A) General ventilating systems must be in accordance with paragraph (2) of this subsection.
 - (B) Provisions for natural ventilation using windows or louvers must be incorporated into the building design where possible and practical. These windows or louvers must have insect screens.
 - (C) All air-supply and air-exhaust systems must be mechanically-operated. The ventilation rates shown in the table in clause (xi) of this subparagraph must be considered as minimum acceptable rates and must not be construed as precluding the use of higher ventilation rates.
 - (i) Outdoor air intakes must be located as far as practical (but normally not less than 10 feet) from exhaust outlets or ventilating systems, combustion equipment stacks, medical vacuum systems, plumbing vent stacks, or from areas which may collect vehicular exhaust and other noxious fumes.
 - (ii) The ventilation systems must be designed and balanced to provide the pressure relationship as shown in the table in clause (xi) of this subparagraph. A final engineered system air balance report will be required for the completed system to be furnished and certified by the installer.
 - (iii) The bottoms of ventilation openings must be not less than three inches above the floor of any room.
 - (iv) Doors protecting corridors or ways of egress must not have air transfer grilles or louvers. Corridors must not be used to supply air to or exhaust air from any room except that air from corridors may be used as make-up air to ventilate small toilet rooms, janitor's closets, and small electrical or telephone closets opening directly on corridors, provided that the ventilation can be accomplished by door undercuts not exceeding 3/4 inches.
 - (v) All exhausts must be continuously ducted to the exterior. Exhausting air into attics or other spaces is not permitted. Duct material must be metal.
 - (vi) All central ventilation or air-conditioning systems must be equipped with filters of sufficient efficiency to minimize dust and lint accumulations throughout the system and building including supply and return plenums and ductwork. Filters with efficiency rating of 80% or greater (based on ASHRAE) are recommended. Filters for individual room units must be as recommended by the equipment manufacturer. Filters must be easily accessible for routine changing or cleaning.
 - (vii) Static pressures of systems must be within limits recommended by ASHRAE and the equipment manufacturer (upstream and downstream).
 - (viii) In geographic locations or interior room areas where extreme humidity levels are likely to occur for extended periods of time, apparatus for controlling humidity levels (preferably between 40-60%) are recommended to be installed as a part of central systems and with automatic humidistat controls.
 - (ix) Exhaust hoods, ducts, and automatic extinguishers for kitchen cooking equipment must be in accordance with NFPA 96.
 - (x) Forced air exhaust must be provided in laundries, kitchens, and dishwashing areas to remove excess heat and moisture and to maintain air flow in the direction of clean to soiled areas.

- (xi) Ventilation requirements for nursing areas must be according to the following table:

Area Designation	Air Movement In Relation To Adjacent Area	Minimum Total Air Changes Per Hour	All Air Exhausted To Outside	Design Temperature
Resident Room	--	2	--	75/78
Examination and Treatment Room	--	4	No	75/78
Physical Therapy	In	4	No	75/78
Occupational Therapy	--	4	No	75/78
Soiled Work or Holding Room	In	6	Yes	--
Clean Work or Holding Room	Out	4	No	--
Toilet Rooms	In	10	Yes	--
Bath and Shower Rooms	--	10	No	75/78
Janitors' Closets	In	10	Yes	--

- (xii) With relationship to adjacent areas, a positive air pressure must be provided for clean utility rooms, clean linen rooms, and medication rooms. Conditioned supply air must be introduced into these rooms.

- (4) Sprinkler systems. The following requirements are applicable to sprinkler systems:

- (A) Sprinkler systems must be in accordance with NFPA 13 and this subchapter.
- (B) The design and installation of sprinkler systems must meet any applicable state laws pertaining to these systems and one of the following criteria:
 - (i) The sprinkler system must be designed by a qualified registered professional engineer approved by the Texas State Board of Registration for Professional Engineers to operate in Texas. The engineer must supervise the installation and provide written approval of the completed installation.
 - (ii) The sprinkler system must be planned and installed in accordance with NFPA 13 by firms with certificates of registration issued by the office of the state fire marshal that have at least one full-time licensed responsible managing employee (RME). The RME's license number and signature must be included on the prepared sprinkler drawings.

- (C) The approved sprinkler plans must be submitted to DHS, Architectural Section, Austin, Texas.
- (D) Particular attention should be paid to adequate, safe, and reasonable freeze protection for all piping. The design of freeze protection should minimize the need for dependence on staff action or intervention to provide protection.

§19.341 Electrical Requirements

- (a) The design of the electrical systems must be done by or under the direction of a registered professional electrical engineer approved by the Texas State Board of Registration for Professional Engineers to operate in Texas, and the parts of the plans and specifications covering electrical design must bear the legible seal of the engineer. Requirements pertaining to utilities, heating, ventilating, and air-conditioning systems, vertical conveyors, and chutes must be in accordance with the Life Safety Code, Chapter 9, Building Service and Fire Protection Equipment.
- (b) Requirements for fire protection systems must be in accordance with §19.337 of this title (relating to Fire Protection Systems).
- (c) Electrical systems must meet the requirements of the NFPA 70.
- (d) Specific requirements for lighting and outlets at resident bedrooms must be in accordance with §19.334 of this title (relating to Architectural Space Planning and Utilization).
 - (1) Emergency electrical service.
 - (A) To provide electricity during an interruption of the normal electric supply, an emergency source of electricity must be provided and connected to certain circuits for lighting and power.
 - (B) Emergency electrical connection service must be provided to the distribution systems as required by the Life Safety Code and NFPA 99.
 - (i) Emergency systems must include the following:
 - (I) illumination for means of egress, nurse stations, medication rooms, dining and living rooms, group bathing rooms (those not directly connected to resident bedrooms), and areas immediately outside of exit door (egress lighting must not be switched);
 - (II) exit signs and exit directional signs as required by the Life Safety Code;
 - (III) alarm systems including fire alarms activated by manual stations, water flow alarm devices of sprinkler systems, fire and smoke detecting systems, and alarms required for nonflammable medical gas systems if installed (where hospital-type functions are included in the nursing home facility, applicable standards will apply);
 - (IV) task illumination and selected receptacles at the generator set location;
 - (V) selected duplex receptacles including such areas as resident corridors, each bed location where patient care-related

- electrical appliances are utilized, nurse stations, and medication rooms including biologicals refrigerator;
 - (VI) nurse calling systems;
 - (VII) resident room night lights;
 - (VIII) a light and receptacle in the electrical and/or boiler room;
 - (IX) elevator cab lighting, control, and communication systems;
 - (X) all facility telephone equipment; and
 - (XI) paging or speaker systems if intended for communication during emergency. Radio transceivers where installed for emergency use must be capable of operating for at least one hour upon total failure of both normal and emergency power.
- (ii) Critical systems (delayed automatic or manual connections to critical systems) must include the following:
- (I) heating equipment must provide heating for general resident rooms. This will not be required if:
 - (-a-) the outside design temperature is higher than 20 degrees Fahrenheit (-6 degrees Celsius);
 - (-b-) the outside design temperature is lower than 20 degrees Fahrenheit (-6 degrees Celsius) and where selected rooms are provided for the needs of all confined residents, then only those rooms need to be heated; or
 - (-c-) the facility is served by a dual source of normal power; and
 - (II) in instances when interruptions of power would result in elevators stopping between floors, throw-over facilities must be provided to allow the temporary operation of any elevator for the release of passengers.
- (C) The emergency lighting must be automatically in operation within ten seconds after the interruption of normal electric power supply. Emergency service to receptacles and equipment may be delayed automatic or manually connected. Receptacles connected to emergency power must have red face plates. Stored fuel capacity must be sufficient for not less than four-hour operation of required generator.
- (D) The design and installation of emergency motor generators must be in accordance with NFPA 37, NFPA 99, and NFPA 110.
- (i) Generators must be a minimum of three feet from the combustible exterior building finish and a minimum of five feet from a building opening if located on the exterior of the building.

- (ii) Generators located on the exterior of the building must be provided with a noncombustible protective cover or be protected as per manufacturer's recommendations.
 - (iii) Motor generators fueled by public utility natural gas must have the capability to be switched to an alternate fuel source in accordance with NFPA 70.
- (E) The normal wiring circuit(s) for the emergency system must be kept entirely independent of all other wiring and must not enter the same race-ways, boxes, or cabinets in accordance with NFPA 70.
- (2) **General Lighting Requirements.** General lighting requirements are as follows:
- (A) All spaces occupied by people, machinery, equipment, approaches to buildings, and parking lots must have lighting.
 - (B) All quality, intensity, and type of lighting must be adequate and appropriate to the space and all functions within the space.
 - (C) Minimum lighting levels can be found in the Illuminating Engineering Society (IES) Lighting Handbook, latest edition. Minimum illumination must be 20-foot candles in resident rooms, corridors, nurses' stations, dining rooms, lobbies, toilets, bathing facilities, laundries, stairways, and elevators. Illumination requirements for these areas apply to lighting throughout the space and should be measured at approximately 30 inches above the floor anywhere in the room. Minimum illumination for overbed reading lamps, medication-preparation or storage area, kitchens, and nurse's station desks must be 50 foot candles. Illumination requirements for these areas apply to the task performed and should be measured on the task.
 - (D) Nursing unit corridors must have general illumination with provisions for reduction of light levels at night.
 - (E) Exposed incandescent light bulbs (or other high heat generating lamps) in closets or other similar spaces must be provided with basket wire guards or other suitable shield to prevent contact of combustible materials with the hot bulb and to help prevent breakage.
 - (F) Exposed incandescent or fluorescent bulbs will not be permitted in food service or other areas where glass fragments from breakage may get into food, medications, linens, or utensils. All fluorescent bulbs will be protected with a shield or catcher to prevent bulb drop-out.
- (3) **Receptacles (convenience outlets).**
- (A) Receptacles at bedrooms must be in accordance with §19.334(a)(7) of this title (relating to Architectural Space Planning and Utilization).
 - (B) Duplex receptacles for general use must be installed in corridors spaced not more than 50 feet apart and within 25 feet of ends of corridors.

- (C) Receptacles must be provided for essential needs such as medication refrigerators and life support systems or equipment. At least one outlet in each resident corridor must be provided with emergency electrical service. All receptacles on emergency circuits must be clearly, distinctly, and permanently identified, such as using a red face plate and/or a small label that says "Emergency."
 - (D) Receptacles in the remainder of the building must be sufficient to serve the present and future needs of the residents and equipment.
 - (E) Location of receptacles (horizontally and vertically) should be carefully planned and coordinated with the expected designed use of furnishings and equipment to maximize their accessibility and to minimize conditions such as beds or chests being jammed against plugs used in the outlets.
 - (F) Exterior receptacles must be approved waterproof type.
 - (G) Ground fault interruption protection must be provided at appropriate locations such as at whirlpools and other wet areas in accordance with the National Electrical Code.
- (4) Nurse call systems.
- (A) A nurse call system consists of power units, annunciator control units, corridor dome stations, emergency call stations, bedside call stations, and activating devices. The units must be compatible and laboratory listed for the system and use intended.
 - (B) Each resident bedroom must be served by at least one calling station and each bed must be provided with a call switch. Two call switches serving adjacent beds may be served by one calling station. Each call entered into the system must activate a corridor dome light above the bedroom, bathroom, or toilet corridor door, a visual signal at the nurses station which indicates the room from which the call was placed, and a continuous or intermittent continuous audible signal of sufficient amplitude to be clearly heard by nursing staff. The amplitude or pitch of the audible signal must not be such that it is irritating to residents or visitors. The system must be designed so that calls entered into the system may be canceled only at the calling station. Intercom-type systems which meet this requirement are acceptable.
 - (C) Nurse calling systems which provide two-way voice communication must be equipped with an indicating light at each calling station which lights and remains lighted as long as the voice circuit is operating.
 - (D) A nurse call emergency switch(es) must be provided for resident use at each resident's toilet, bath, and shower. These switches must be usable by residents using the fixtures and by a collapsed resident lying on the floor.

§19.342 Miscellaneous Details

- (a) Safety related details. A high degree of safety for the occupants is needed to minimize accidents more apt to occur with the elderly and/or infirm residents in a nursing facility. Consideration must be given to the fact that many have impaired vision, hearing, spatial perception, and ambulation.
 - (1) Hazards such as sharp corners and edges and unexpected steps must be avoided.
 - (2) Items such as drinking fountains, telephone booths, vending machines, and portable equipment must be located so as not to restrict corridor traffic or reduce corridor width.

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- (3) Windows must be designed to prevent residents from accidentally falling through the windows.
 - (4) Doors which normally stay open or are frequently used must not swing out into the corridor unless otherwise needed or required. Alcoves may be provided for doors which must swing outward toward a corridor or way of egress.
 - (5) The proper use of safety glass must be adhered to in applicable locations and conditions.
 - (6) Thresholds and expansion joint covers must be made essentially flush with the floor surface to facilitate use of wheelchairs and carts. See §19.340(a)(8) of this title (relating to Mechanical Requirements) for requirements for such items as shower curbs, surfaces, and doors.
 - (7) Grab bars must be provided at all residents' toilets, showers, tubs, and sitz baths. The bars must be 1-1/4 to 1-1/2 inches in diameter and must have 1-1/2 inch clearance to walls. Bars must have sufficient strength and anchorage to sustain a concentrated load of 250 pounds. Grab bar standards must comply with standards adopted under the Americans with Disabilities Act of 1990.
 - (8) Handrails must be provided on both sides of corridors used by residents. A clear distance of 1-1/2 inches must be provided between the handrail and the wall. Handrails must be securely mounted to withstand downward forces of 250 pounds. Handrails may be omitted on wall segments less than 18 inches. Handrails must be mounted 33 inches to 36 inches above the floor, and must comply with standards adopted under the Americans with Disabilities Act and the Texas Accessibility Standards.
 - (9) Ends of handrails and grab bars must be constructed to prevent snagging the clothes of residents (that is, return ends to wall).
 - (10) Ceiling fan blades must be at least seven feet above the floor and be located so as not to interfere with the operation of any ceiling-mounted smoke detectors.
- (b) General details.
- (1) Concrete floors, whether finished by sealant, or similar product, must not be used as the finished floor unless specifically approved in writing by the Texas Department of Human Services. An exception is mechanical equipment rooms and maintenance or similar areas.
 - (2) Sound separation must be provided in corridor walls and resident room party walls; Minimum Sound Transmission Coefficient 30 per American Society for Testing Material E-90.
 - (3) Illumination and a safe platform in the attic must be provided at all attic access panels.
 - (4) Attic access must be provided for building maintenance. Access panels must be prime coated steel flush panels where required to maintain fire rating of ceiling-roof/ceiling-floor assemblies.

§19.344 Plans, Approvals, and Construction Procedures

At the option of the applicant, the Texas Department of Human Services (DHS) will review plans for new buildings, additions, conversion of buildings not licensed by DHS, or remodeling of existing licensed facilities. DHS will, within 30 days, inform the applicant in writing of the results of the review. If the plans comply with DHS's architectural requirements, DHS may not subsequently change the architectural requirement applicable to the project unless the change is required by federal law or the applicant fails to complete the project within two years. DHS may grant a waiver of this two-year period for delays due to unusual circumstances. There is no time limit to complete a project, only a time limit for completing a project using requirements that have been revised after the project was reviewed.

- (1) Submittal of plans.
 - (A) For review of plans, submit one copy of working drawings and specifications (contract documents) before construction begins. Documents must be in sufficient detail to interpret compliance with these standards and assure proper construction. Documents must be prepared according to accepted architectural practice and must include general construction, special conditions, and schedules.
 - (B) Final copies of plans must have (in the reproduction process by which plans are reproduced) a title block that shows name of facility, person, or organization preparing the sheet, sheet numbers, facility address, and drawing date. Sheets and sections covering structural, electrical, mechanical, and sanitary engineering final plans, designs, and specifications must bear the seal of a registered professional engineer approved by the State Board of Registration for Professional Engineers to operate in Texas. Contract documents for additions, remodeling, and construction of an entirely new facility must be prepared by an architect licensed by the Texas State Board of Architectural Examiners. Drawings must bear the seal of the architect.
 - (C) A final plan for a major addition to a facility must include a basic layout to scale of the entire building onto which the addition will connect. North direction must be shown. The entire basic layout usually can be to scale such as 1/16 inch per foot or 1/32 inch per foot for very large buildings.
 - (D) Plans and specifications for conversions or remodeling must be complete for all parts and features involved.
 - (E) The sponsor is responsible for employing qualified personnel to prepare the contract documents for construction. If the contract documents have errors or omissions to the extent that conformance with standards cannot be reasonably assured or determined, a revised set of documents for review may be requested.
 - (F) The review of plans and specifications by DHS is based on general utility, the minimum licensing standards, and conformance of the Life Safety Code, and is not to be construed as all-inclusive approval of the structural, electrical, or mechanical components, nor does it include a review of building plans for compliance with the Texas Accessibility Standards as administered and enforced by the Texas Department of Licensing and Regulation.
 - (G) Fees for plan review will be required in accordance with §19.219 of this title (relating to Plan Review Fees).

- (2) Contract documents.
 - (A) Site plan documents must include:
 - (i) grade contours;
 - (ii) streets (with names);
 - (iii) north arrow;
 - (iv) fire hydrants;
 - (v) fire lanes;
 - (vi) utilities, public or private;
 - (vii) fences; and
 - (viii) unusual site conditions, such as
 - (I) ditches;
 - (II) low water levels;
 - (III) other buildings on-site; and
 - (IV) indications of buildings five feet or less beyond site property lines.
 - (B) Foundation plan documents must include general foundation design and details.
 - (C) Floor plan documents must include:
 - (i) room names, numbers, and usages;
 - (ii) doors (numbered), including swing;
 - (iii) windows;
 - (iv) legend or clarification of wall types;
 - (v) dimensions;
 - (vi) fixed equipment;
 - (vii) plumbing fixtures;
 - (viii) kitchen basic layout; and
 - (ix) identification of all smoke barrier walls (outside wall to outside wall) or fire walls.
 - (D) For both new construction and additions or remodeling to existing buildings, an overall plan of the entire building must be drawn or reduced to fit on an 8 1/2-inch by 11-inch sheet.
 - (E) Schedules must include:
 - (i) door materials, widths, and types;
 - (ii) window materials, sizes, and types;
 - (iii) room finishes; and
 - (iv) special hardware.

- (F) Elevations and roof plan must include:
 - (i) exterior elevations, including
 - (I) material note indications; and
 - (II) any rooftop equipment;
 - (ii) roof slopes;
 - (iii) drains;
 - (iv) gas piping, etc.; and
 - (v) interior elevations where needed for special conditions.
- (G) Details must include:
 - (i) wall sections as needed, especially for special conditions;
 - (ii) cabinet and built-in work, basic design only;
 - (iii) cross sections through buildings as needed; and
 - (iv) miscellaneous details and enlargements as needed.
- (H) Building structure documents must include:
 - (i) structural framing layout and details (primarily for column, beam, joist, and structural building);
 - (ii) roof framing layout (when it cannot be adequately shown on cross section); and
 - (iii) cross sections in quantity and detail to show sufficient structural design and structural details as necessary to assure adequate structural design and calculated design loads.
- (I) Electrical documents must include:
 - (i) electrical layout, including lights, convenience outlets, equipment outlets, switches, and other electrical outlets and devices;
 - (ii) service, circuiting, distribution, and panel diagrams;
 - (iii) exit light system (exit signs and emergency egress lighting);
 - (iv) emergency electrical provisions (such as generators and panels);
 - (v) staff communication system;
 - (vi) fire alarm and similar systems (such as control panel, devices, and alarms); and
 - (vii) sizes and details sufficient to assure safe and properly operating systems.

- (J) Plumbing documents must include:
 - (i) plumbing layout with pipe sizes and details sufficient to assure safe and properly operating systems;
 - (ii) water systems;
 - (iii) sanitary systems;
 - (iv) gas systems; and
 - (v) other systems normally considered under the scope of plumbing, fixtures, and provisions for combustion air supply.

 - (K) Heating, ventilating, and air-conditioning systems (HVAC) documents must include:
 - (i) sufficient details of HVAC systems and components to assure a safe and properly operating installation, including, but not limited to, heating, ventilating, and air-conditioning layout, ducts, protection of duct inlets and outlets, combustion air, piping, exhausts, and duct smoke and/or fire dampers; and
 - (ii) equipment types, sizes, and locations.

 - (L) Sprinkler system documents must include:
 - (i) plans and details of National Fire Protection Association (NFPA) designed systems;
 - (ii) plans and details of partial systems provided only for hazardous areas; and
 - (iii) electrical devices interconnected to the alarm system.

 - (M) Specifications must include:
 - (i) installation techniques;
 - (ii) quality standards and/or manufacturers;
 - (iii) references to specific codes and standards;
 - (iv) design criteria;
 - (v) special equipment;
 - (vi) hardware;
 - (vii) finishes; and
 - (viii) any others as needed to amplify drawings and notes.

 - (N) Other layouts, plans, or details as may be necessary for a clear understanding of the design and scope of the project, including plans covering private water or sewer systems, must be reviewed by local health or wastewater authority having jurisdiction.
- (3) Construction phase.
- (A) DHS must be notified in writing before construction starts.
 - (B) All construction not done in accordance with the completed plans and specifications as submitted for review and as modified in accordance with review requirements will require additional drawings if the change is significant.

- (4) Initial survey of completed construction.
- (A) Upon completion of construction, including grounds and basic equipment and furnishings, a final construction inspection (initial survey) of the facility must be performed by DHS before admitting residents. An initial architectural inspection will be scheduled after DHS receives a notarized licensure application, required fee, fire marshal approval, and a letter from an architect or engineer stating that to the best of their knowledge the facility meets the architectural requirements for licensure.
 - (B) After the completed construction has been surveyed by DHS and found acceptable, this information will be forwarded to the DHS Facility Enrollment Section as part of the information needed to issue a license to the facility. In the case of additions or remodeling of existing facilities, a revision or modification to an existing license may be necessary. The building, including basic furnishings and operational needs, grades, drives, and parking, must essentially be 100% complete at the time of this initial visit for occupancy approval and licensing. A facility may accept up to three residents between the time it receives initial approval from DHS and the time the license is issued.
 - (C) The following documents must be available to DHS's architectural inspecting surveyor at the time of the survey of the completed building:
 - (i) written approval of local authorities as required in subparagraph (A) of this paragraph;
 - (ii) written certification of the fire alarm system by the installing agency (the Texas State Fire Marshal's Fire Alarm Installation Certificate);
 - (iii) documentation of materials used in the building that are required to have a specific limited fire or flame spread rating, including special wall finishes or floor coverings, flame retardant curtains (including cubicle curtains), rated ceilings, etc., and, in the case of carpeting, a signed letter from the installer verifying that the carpeting installed is named in the laboratory test document;
 - (iv) approval of the completed sprinkler system installation by the Texas Department of Insurance or designing engineer. A copy of the material list and test certification must be available;
 - (v) service contracts for maintenance and testing of alarm systems, sprinkler systems, etc.;
 - (vi) a copy of gas test results of the facility's gas lines from the meter;
 - (vii) a written statement from an architect/engineer stating, to the best of his knowledge, the building was constructed in substantial compliance with the construction documents, the Life Safety Code, DHS licensure standards, and local codes; and
 - (viii) any other such documentation as needed.

- (5) Nonapproval of new construction.
- (A) If, during the initial on-site survey of completed construction, the surveyor finds certain basic requirements not met, DHS may recommend the facility not be licensed and approved for occupancy. Such items may include the following:
- (i) substantial changes made during construction that were not submitted to DHS for review and that may require revised "asbuilt" drawings to cover the changes. This may include architectural, structural, mechanical, and electrical items as specified in paragraph (3)(B) of this section;
 - (ii) construction that does not meet minimum code or licensure standards, such as corridors that are less than required width, ceilings installed at less than the minimum seven-foot, six-inch height, resident bedroom dimensions less than required, and other such features that would disrupt or otherwise adversely affect the residents and staff if corrected after occupancy;
 - (iii) no written approval by local authorities;
 - (iv) fire protection systems, including, but not limited to, fire alarm systems, emergency power and lighting, and sprinkler systems, not completely installed or not functioning properly;
 - (v) required exits not all usable according to National Fire Protection Association (NFPA) 101 requirements;
 - (vi) telephone not installed or not properly working;
 - (vii) sufficient basic furnishings, essential appliances, and equipment not installed or not functioning; and
 - (viii) any other basic operational or safety feature that would preclude safe and normal occupancy by residents on that day.
- (B) If the surveyor encounters only minor deficiencies, licensure may be recommended based on an approved written plan of correction from the facility's administrator.
- (C) Copies of reduced-size floor plans on an 8 1/2-inch by 11-inch sheet must be submitted in duplicate to DHS for record/file use and for the facility's use for evacuation plan, fire alarm zone identification, etc. The plan must contain basic legible information such as scale, room usage names, actual bedroom numbers, doors, windows, and any other pertinent information.