# Architectural and Engineering Guidelines for Submission, Approval and Inspection of Occupancies Licensed by the Department of Health


## TDOH

Tennessee Department of Health

## Division of Health Licensure and Regulation

1/2019

## Tennessee Department of Health
## Office of Health Care Facilities

## *A. General Requirements:*

The following notes are intended to help expedite review of your project drawings as submitted to this department. Review is performed only for facilities which are required to be licensed by this department. These include:
**REGULATIONS (at: https://publications.tnsosfiles.com/rules/1200/1200-08/1200-08.htm):**

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| **1.** | **Minimum Standards for Hospitals** | **1200-08-01** |
| **2.** | **Minimum Standards for Prescribed Child Care Centers** | **1200-08-02** |
| **3.** | **Minimum Standards for Nursing Homes** | **1200-08-06** |
| **4.** | **Minimum Standards for Ambulatory Surgical Treatment Centers** | **1200-08-10** |
| **5.** | **Minimum Standards for Homes for the Aged** | **1200-08-11** |
| **6.** | **Minimum Standards for Residential Hospices** | **1200-08-15** |
| **7.** | **Minimum Standards for Birthing Centers** | **1200-08-24** |
| **8.** | **Minimum Standards for Assisted-Care Living Facilities** | **1200-08-25** |
| **9.** | **Minimum Standards for HIV Supportive Living Facilities** | **1200-08-28** |
| **10.** | **Minimum Standards for End Stage Renal Dialysis Clinic** | **1200-08-32** |
| **11.** | **Minimum Standards for Outpatient Diagnostic Centers** | **1200-08-35** |
| **12.** | **Minimum Standards for Adult Care Homes – Level 2** | **1200-08-36** |
| **13.** | **Minimum Standards for Traumatic Brain Injury Residential Homes** | **1200-08-37** |

Plans and specifications shall be submitted to the department for review and approval when new construction, addition to an existing building, or substantial alterations to an existing building is planned by any facility required to be licensed by the department. However, instead of plans and specifications for the conversion only of an existing single family dwelling into a licensed residential health care facility with six (6) or fewer beds, schematics shall be submitted to the department for approval. Facilities licensed for the first time or changing their licensure category to provide a different service are considered new and must comply with all current and applicable regulations.

Before construction is started, approval of the plans and specifications must be obtained from the department with respect to compliance with the minimum standards and/or regulations. Plans and specifications must be prepared by an architect and/or engineer registered in the state of Tennessee and shall bear their *signed and dated seal(s)* on every drawing.

A plans review will not be scheduled until the Plans Review Submittal Form and fee, the Certificate of Need (if required) and license fee (if required) are submitted. Meetings will be at the discretion of the department and made on a case by case basis. Reviews will be conducted on a first-in first-out basis.

Two (2) sets of plans, specifications, addenda, etc., must be submitted to the department in order to allow one set to maintain on the job site for the life safety surveyor's reference. Transportation of the plans to the jobsite is the responsibility of the architect or engineer and may be picked up from our office or by providing us with an appropriate self-addressed mailing container pre-supplied with adequate postage. The other set will be maintained in the plans review section until a legible CD is received. Once the CD is received, the hard copy set of plans held by plans review can be picked up by the architect, engineer or a facility representative.

Sprinkler shop drawings and calculations must be submitted for review and approved prior to installation. All sprinkler installations in Tennessee must be performed by a contractor currently licensed by the Tennessee Department of Commerce and Insurance to perform such installations, including all underground piping used solely for fire protection. Final approval of the project plans will not be granted until the sprinkler shop drawings are approved.

All construction documents submitted to the plans review section must be properly signed, sealed and dated by the design professional responsible for the content, must be in accordance with the requirements of the State Board of Architect and Engineering Examiners, contain the assigned project number and are considered to be public record.

Plans approval is also required for any change to the physical plant of a licensed facility which has an effect on any of the following: the function or use of an area; the facility's structural integrity; active or passive fire safety systems; exit corridors; or door assemblies. Renovations which do not meet the substantial renovation requirements as defined by the Board for Licensing Health Care Facilities (see Interpretive Guidelines below) may not have to submit plans; however, sufficient information must be submitted to the department for review, approval and inspection.

For all projects requiring a Certificate of Need (CON), the plans must be submitted with the CON number and dates (approval date and expiration date). Plans review on a project will be terminated on the CON expiration date if the project has not been approved and occupied by that date. Projects requiring a CON will not be scheduled for a meeting or review until the CON is obtained.

After approval of plans, prior to construction, the regional life safety inspector shall be notified for scheduling of the progress inspections.

In order to request a final inspection, the following must be submitted and received by the appropriate office at least four (4) weeks prior to the requested/scheduled final inspection date:

1. The final approved plans on CD-Rom, clearly labeled with the project name , county and assigned project number must be received in the plans review section ; and

2. A letter to the appropriate regional office requesting the final inspection must be received in the regional office.

The Office's central and regional offices mailing addresses are as follows:

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|---|---|
| Central Office: | Office of Health Care Facilities<br>665 Mainstream Drive, 2nd Floor<br>Nashville, TN 37243 |
| Plans Review Section: | Office of Health Care Facilities<br>Plans Review Section<br>665 Mainstream Drive, 2nd Floor<br>Nashville, TN 37243 |
| East Tennessee Regional Office: | Office of Health Care Facilities<br>East Tennessee Regional Office<br>7175 Strawberry Plains Pike, Suite 103<br>Knoxville, TN 37914 |
| Middle Tennessee Satellite Regional Office: | Office of Health Care Facilities<br>Middle Tennessee Regional Office<br>665 Mainstream Drive, 1st Floor<br>Nashville, TN 37243 |
| West Tennessee Regional Office: | Office of Health Care Facilities<br>West Tennessee Regional Office<br>295 Summar Drive<br>Jackson, TN 38301 |

## *B. Plans Submission and Review Steps:*

Prior to any actions by the plans review section (meeting, review, approval, etc.), the Plans Review Submittal form and review fee, CON (if required), application (if required) and license fee (if required) must be received.

1. Plans must be delivered or mailed to the Department of Health, Office of Health Care Facilities, 665 Mainstream Drive, 2nd Floor, Nashville, TN 37243.

2. Upon initial submission, the plans will be assigned a project number. This project number must be referenced on all correspondence. Failure to reference the assigned project number on all subsequent correspondence and/or submittals may cause delays in the plans review process.

3. Phased construction plans must contain sufficient information to determine that the architect has the proper interpretations (life safety layout, egress routes and distances, construction type, fire walls, etc.) and to answer code interpretation questions prior to finalizing the design of the facility.

4. The plans review section will issue an approval for the project, deficiencies, or a combination of deficiencies and partial approval (i.e., foundation and /or shell approval). If deficiencies are cited, such deficiencies require correction by submittal of revised plans, addenda, field orders, or change orders before the plans can be approved for construction.

5. All plans for a project must agree on the layout, wall ratings, room dimensions, smoke compartments, etc. Any change order, addendum or other deviation from the approved plans must be submitted and approved prior to construction or change being made.

6. After all deficiencies have been satisfactorily resolved, an approval letter will be issued by the section, and construction may begin. Conveyance of the hard set of plans to the job site for reference by the inspector is the responsibility of the architect/engineer.

7. Final inspection requests shall be directed to the appropriate Regional Office a minimum of four (4) weeks prior to the date of the requested inspection. Prior to the final inspection a CD disk of the final approved plans including specifications, addenda, field orders, change orders, sprinkler and hood and duct shop drawings, etc., must be submitted to the plans review section. The storage box containing the disk must be labeled with the project name, assigned project number and county. **The Department of Health Final Inspection for Occupancy/Licensure will not be conducted until the plans on CD disk page are received and approved.**

8. Projects intended to have phased occupancy inspections shall submit a letter signed and dated to the plans review section describing each area, scope of work for each phase, an estimated start/completion date for each phase, and all numbering of phases shall be consecutive numbers (e.g. 1, 2, 3, etc.). **Final Occupancy cannot be granted until all phases have been completed.**

9. Final inspections will be conducted by the regional fire safety personnel as scheduled. If deficiencies are discovered, re-inspection may not be rescheduled for at least thirty (30) days. ***The building cannot be occupied until the department issues a written occupancy approval.***

## *C. Plans Requirements:*

1. **Civil Engineering Plans** must delineate existing grade structure and improvements, all site utilities, parking spaces (including handicapped spaces), handicapped access to the facility, all area fire hydrants, access roads for emergency vehicles, property lines, other buildings or structures, tanks, etc. Details must be provided for all pits, curbs, depth of bury for piping, etc. Projects which require sprinklers are to show the location, elevation, all related piping and grades, and flow data of the test hydrant. The hydrant test must have been performed within the past twelve (12) months and the time, date and who performed the test must be included with the sprinkler plans.

2. **Architectural Plans** must include floor plans which are drawn to a minimum of 1/8" scale and large scale plans of typical rooms with net square footage and cubic footage. Architectural plans must show, include, identify and provide details for all walls and their ratings, all doors, windows, casework and millwork, fixed equipment and plumbing fixtures, the function of each space, how ratings are obtained, how penetrations are to be sealed, schedules on doors, hardware, finishes, etc., all handicapped accessible spaces and the provision of all required handicapped spaces in accordance with the Americans with Disabilities Act.

3. **Life Safety Plans** must provide a single sheet floor plan showing fire/smoke compartments (including size), fire ratings of all walls, travel distances, exit markings, and, calculation of required exit units, etc.

4. **Mechanical Plans** must show/provide color coding of supply, return and exhaust systems, pressure relationships between all areas, design criteria for all HVAC units, including the percent of outside air (OSA) to be supplied at a minimum and the required OSA changes required for each space, the systems connections to the fire alarm including all shutdowns, cubic footage of room areas and the calculations of the air flow changes for total air changes and for outside air changes.

5. **Electrical Plans** must provide/show: a one line diagram of normal and alternate power systems showing service entrance, switchboards, transfer switches, distribution and panel boards, and a description of loads, color coding of systems connected to emergency power; all fire alarm zones, red outlets for outlets on emergency power, a fire alarm system diagram and a description of operation of all devices. Outlets in critical care areas of hospitals must be marked as to the panel and circuit from which it is fed. Ground fault interrupter outlets are to be installed in all wet areas, i.e., physical therapy, laundry, kitchen, central baths, janitor's closets, etc.

6. **Plumbing Plans** must provide/show a layout of all medical gas lines with all control valves and alarms as defined in NFPA 99, where applicable. No piping shall run above food preparation or storage areas per the U.S. Food and Drug Administration, Food Code.

7. **Sprinkler Plans** must provide a general layout of the sprinkler system including head locations, riser location, flow test data, underground location, test hydrant location, and hydraulic calculations, etc.

8. **Outline Form** must be included as a cover sheet and provide/show an index of the construction data, type of construction (both NFPA and IBC types and occupancies), codes editions used, U.L. assemblies used to obtain the required ratings, areas of construction; delineation between new and existing areas noting "fire walls", allowable area per IBC, etc., allowable area calculations and appropriate drawings to show clearances and when a CON is required, the CON number and date of expiration.

9. **Legends** must be included for each discipline (mechanical, electrical, plumbing, architectural, etc.) clearly delineating all symbols and assemblies used.

10. **Building Height and Area** will be established by the adopted building code and occupancy classification determined by NFPA 101.

## *D. Safety Considerations in Demolition and Renovation Areas:*

Demolition and renovation of areas within an existing facility must be carried out in a manner which considers all factors affecting patients, staff and public safety and must not expose patients to hazardous conditions.

Patient safety during construction/renovation of a facility is of highest priority, and is the responsibility of the facility. It may be necessary that nursing wings, beds or even certain areas of the facility be temporarily closed to patients and staff until such time that the area can be rendered safe again for use. During renovation, a greater degree of awareness of potential fire and safety hazards must be maintained by the facility staff and construction personnel. Temporary adjustments must be made in the fire evacuation plans and housekeeping procedures until the facility is restored to a condition of normalcy (i.e., all life and safety systems and safeguards are operational or complete). Close coordination with the regional office and local fire officials is necessary prior to and during renovation to obtain professional safety input and to identify the need to implement patient safety requirements.

Fire and Life Safety Systems requiring a temporary shut-down must be returned to operation as quickly as possible. Alternate safety provisions must be planned for and implemented during any shut-down. Prior to temporary shut-down of the fire alarm, smoke detection and/or sprinkler systems, the facility must contact and coordinate the shut-down with local fire officials and the regional office.

During any construction or renovation, occupied portions of the facility must be kept clean and safe. Appropriate barriers must be placed to separate the operational portion of the facility from area(s) under construction to prevent dust, debris, traffic, etc. from affecting the facility's operation. During construction or renovation, operation of the facility must be contained to rooms or areas properly separated from the construction and appropriate egress(es) must be maintained.

Exit/egress arrangements are also to be coordinated with our regional office and the local building official. The facility must have written policies and procedures regarding safety during construction or renovation.

## *E. Portable Fire Extinguishers:*

As various types of fire extinguishers are not equally effective on all types of fires, consideration must be given to the class of fire which may occur, the activity in the area of probable use, and contents of the building when selecting extinguishers. Extinguishers must be conspicuously located, installed, sized, and maintained according to NFPA 10. Extinguishers must be located in accordance with the maximum travel distance does not exceed the requirements specified by NFPA 10.

## *F. Automatic Sprinkler Systems:*

All automatic fire extinguisher systems must be installed by a sprinkler contractor currently licensed in Tennessee to perform such installations, including all underground piping used solely for fire protection. The sprinkler contractor must obtain an approval from the plans review section prior to installation. Maintenance of the system must also be accomplished by a licensed contractor. Systems are to be designed in accordance with the appropriate NFPA codes for the type of system provided. If the system is required by the IBC, the system must be designed as an NFPA 13 system unless the exceptions listed in the NFPA 101 chapters apply.

Kitchen systems must be designed in accordance with NFPA 96 and IMC Chapter 5. The air balance in the kitchen is to be positive in the food preparation area, and negative in the dishwashing area and areas leading to the corridor. Air is to flow from clean to soiled in order to prevent contaminating food and clean items.

## *G. Wall Construction and Penetrations:*

All walls or partitions required to have a fire rating and all corridor walls shall be appropriately constructed of noncombustible materials, however, protected construction is allowed where wood framing is in compliance. This includes: one (1) hour walls; one (1) hour fire/smoke walls; two (2) hour walls; two (2) hour fire/smoke walls and, four (4) hour walls.

All rated walls must be continuous from floor slab to roof or floor slab above and must be sealed “tight” with a tested assembly for the wall rating. Floor penetrations must also be protected by a tested assembly. The contractor is to keep copies of these tested assemblies on site in order for the inspector to ascertain that the penetration was properly sealed.

Non-rated, smoke-tight walls are to be sealed tight to prevent the passage of smoke from one side to the other. This must only be done on one side of the wall, as long at the integrity of the smoke barrier is preserved for the length of the wall. If the sealed side of the wall changes along the run of the wall, the smoke tight membrane must be run through the cross-section of the wall. Dry-wall compound may not be used to seal penetrations due to the fact that expansion and contraction or other movement of the items penetrating the wall will result in cracks over a period of time. Acoustical

caulking may be applied in smoke tight wall penetrations.

## *H. Kitchen Requirements:*

### *Materials/Finishes:*

Washable finishes/materials must be provided in all areas in the kitchen for walls, floors and ceilings. Floors are to be sealed, junctures covered and must be graded to drain. GFCI outlets are to be used in all wet locations.

### *Lighting:*

At least twenty (20) footcandles of light must be provided on all working surfaces. At least ten (10) footcandles of light must be provided on all other areas measured at thirty (30) inches above the finished floor.

### *Insect and Rodent Protection:*

Outer openings must be screened or other adequate controls must to be provided. Outer doors and service windows are to be equipped with self-closers or approved air curtains.

### *Toilet and Handwashing Facilities:*

Toilets must be conveniently located. Toilet rooms must be vented by exhaust fans which run continuously while occupied. Sinks must have wrist blades or other such devices to allow operation without hands and soap dispensers and towels must be provided. A handwashing sink is to be provided in the food preparation areas. Employee lockers and lounges must be supplied, but must not be located in the kitchen area.

### *Mop Sink Area:*

A mop sink closet shall be provided with hot and cold water connections.

### *Plumbing:*

Back siphonage protection must be provided for the dishwasher, potato peeler, disposals, steam tables, scraping troughs, dipper wells, waste pulper, submerged inlets, etc. Indirect drains must be provided for the dishwasher, steam table, potato peeler, ice bins/machines, etc. The walk in cooler/freezer must have an interior drain equipped with a backwater valve. Condensate drains and other piping which may cause contamination of food preparation and storage must not be run overhead in the kitchen area. Kitchen condensate drains must be equipped with appropriate backflow protection. Water registering 140°F. shall be provided for general usage. The water source for the dishwashing area and three compartment sink must have means of supplying 171°F. water to the rinse area. While the use of chemicals for sanitizing dishes allows for use of lesser temperature, this does not eliminate the need to have 171°F water available at all times.

## *I. Interpretive Guidelines:*

The following guidelines have been developed to provide interpretations of the department's regulations, alleviate confusion, reduce the number of construction violations encountered, and prevent the need for costly corrections and/or construction delays:

1. "Substantial renovation" are projects that renovate more than ten percent (10%) of any smoke compartment. Areas renovated less than 10% must meet the following criteria to be exempt from submitting plans:

    a) all work is executed in accordance with currently adopted codes;

    b) only one (1) renovation project is being initiated during the year's period;

    c) no licensure deficiencies were cited on the facility's last survey;

    d) the project involves no combustible or medical gas and is not classified as Hazardous areas;

    e) there is no change or alteration to the existing life safety classification;

    f) there is no change or alteration to the construction type or life safety of the facility; and

    g) the project does not alter any of the following systems:

        I. Fire Alarm System;

        II. Fire Suppression System;

        III. Mechanical System; or the

        IV. Electrical System.

    All projects must be submitted to the Department of Health for consideration. Upon review of the data, the Director of Plans Review may require additional information or formal submittal from a licensed architect or engineer.

2. When a fire alarm system is required, all fire warning and detection devices must be connected to that fire alarm

system. This includes duct detectors, kitchen exhaust extinguishing systems, alternate fire suppression systems, etc. The initiation of any device must set off the fire alarm system and shut down the air handling units.

3. The sound of the fire alarm or smoke detectors must be heard throughout the facility, and appropriate audible/visual alarm devices must be employed in sufficient number and type to accomplish this. In residential facilities the alarm sounded by the smoke detector must be clearly heard throughout the entire "unit" or facility, not just the sleeping rooms.

4. "Fully sprinklered" includes all spaces including closets, electrical rooms, elevator shafts, elevator equipment rooms, MRI rooms, freezers, etc.

5. "Fan shutdown" must include all fans involved in recirculating air within the compartment of alarm origination and other fans as necessary to prevent the movement of smoke into other areas.

6. Smoke and fire dampers must be installed according to the manufacturer's instructions with particular attention to their sealing and the use of mounting screws around breakaway clips and angles. Fire dampers must be installed within the plane of the rated assembly.

7. On dry pipe systems, the water is to begin to flow within one (1) minute at the most remote inspector's test outlet. This means full water flow, not air and water mixed.

## *J. Applicable Codes:*


**DEPARTMENT OF HEALTH**

**OFFICE OF HEALTH CARE FACILITIES**

**APPLICABLE CODES**

**Project Name**_____ **Assigned Project #**_____

**County**_____ **Certificate of Need #**_____

**Regulations, Codes and Standards with which this project shall comply when reviewed by the Office of Health Care Facilities:**

1. **2012 International Building Code**
2. **2012 International Plumbing Code**
3. **2012 International Mechanical Code**
4. **2012 International Fuel & Gas Code**
5. **2012 NFPA 1, excluding NFPA 5000**
3. **2012 NFPA 101 Life Safety Code**
4. **2011 National Electrical Code**
5. **2010 Americans with Disabilities Act (ADA) with 2002 Amendments**
6. **2018 Edition of the Guidelines for Design and construction of Hospitals, Outpatient Facilities, Residential Health Care and Support Facilities (FGI).**

*Note: Please check with local building/fire officials to determine if any local building codes may be relevant to your project.*

**ADDITIONAL REGULATIONS that may be required:**

1. **Water Supply - Tennessee Dept. of Environment and Conservation (TDEC), (615) 532-0191**
2. **Wastewater - TDEC - (615) 532-0625**
3. **Radiological Protection – TDEC - (615) 532-0364**
4. **Air Pollution Control TDEC - (615) 532-0554**
5. **Hazardous Waste Disposal - TDEC - (615) 532-0780**