

# Health Facilities Design

## A Look at the 2010 Edition of the FGI Guidelines



**SCOTT KIRCHNER, AIA, NCARB**  
**MICHAEL HAMILTON, AIA**



# Goals for Today



**Highlight some of the Key Differences  
between the 2001 AIA Guidelines and  
the 2010 FGI Guidelines**

No New Standards



**“New Standards...  
and New Interpretations!”**

# Introduction



## The Guidelines for Design and Construction of Hospital and Health Care Facilities

- The Facilities Guidelines Institute (FGI)
  - Established as a Federal Standard in 1947
  - Published through the American Institute of Architects from 1984 to 2008
  - **No longer affiliated with the “AIA”**
  - **Now partnered with ASHE**
  - This is the 3rd edition to be published under the FGI



# State of Nebraska – Current Building Code and Guidelines



- **State of Nebraska Adoptions**
  - 2009 International Building Code (IBC)
  - 2009 International Existing Building Code (IBC)
  - 2009 International Energy Conservation Code (IECC)
- **State Fire Marshal**
  - 2000 NFPA Life Safety Code
- **DHHS**
  - Nebraska Title 1.75, Chapter 7
  - 2001 Edition; AIA Guidelines for Design and Construction of Hospital and Healthcare Facilities
- **ADAAG**
- **Check with Local AHJ!**

# Nebraska; DHHS Public Health – Licensure Unit



- **New Construction Projects:**

- Pre- Construction Plan Submittal Procedures

- ✦ 1. Submit the completed **Pre-Construction Project Information Form**.
- ✦ 2. Submit the completed **Architect/Engineer Plan Certification Form** to certify compliance with 175 NAC 7.
- ✦ 3. **Submit Construction Plans** which have been completed in accordance with the Engineers and Architects Regulations Act, neb Rev. Stat. §§ 81-3401 to 81-3455.

# Nebraska; DHHS Public Health –Licensure Unit



- **New Construction Projects:**
  - **Project Completion: Required Forms Prior to use and Occupancy.**
    - ✦ **Completion Certificate** - signed by a Nebraska licensed architect/engineer. This signed certification is accepted by the Department to verify that the construction meets and is ready for occupancy in accordance with the approved plans.
    - ✦ **Order Form/Certificate of Occupancy** - or other document from the **State Fire Marshal** or Delegated Authority stating that the construction meets the **Life Safety/Fire Code Requirements**.

# Who Your Facility Should Know



- **Nebraska State Fire Marshal**

- **Doug Hohbein**

Chief Plans Examiner

[doug.hohbein@nebraska.gov](mailto:doug.hohbein@nebraska.gov)

Ph: 402-471-2027

Fax: 402-471-9663

- **Plan Submittal**

246 S. 14<sup>th</sup> St

Lincoln, NE 68508-1804



# Who Your Facility Should Know



- **State of Nebraska DHHS – Public Health:**

- **Diana Meyer**

Program Manager, Acute Care Facilities

[diana.meyer@nebraska.gov](mailto:diana.meyer@nebraska.gov)

Ph: 402-471-3484

Fax: 402-471-0555

- **Plan Submittal**

ATTN: Construction

301 Centennial Mall South

PO Box 94986

Lincoln, NE 68509

# 2010 FGI Guidelines



- A **Patient Handling and Movement Assessment (PHAMA)** section is included, and Patient Handling and Movement language has been incorporated throughout the document.
- A section on **Bariatric Units** included and Bariatric design language has been included throughout the document.
- A section on **Acoustics** is included.
- A section on **Provisions for Disasters** is included
- Updated and expanded language has been added to the section on **Commissioning**.
- Chapter 2.1 - Common Requirements has been expanded.

# 2010 FGI Guidelines



- A section on **Oncology Nursing** has been included.
- A section **Cancer Treatment/Infusion Therapy Service** section has been included.
- A section on **Technology Equipment Centers** has been included.
- A section on **Outpatient Cancer Treatment Centers** has been included.
- A section on **Outpatient Rehabilitation Centers** has been included.

# 2010 FGI Guidelines



- A section on **Freestanding Birth Centers** has been included.
- The section on **Gastrointestinal Endoscopy Facilities** has been included.
- A section on **Mobile, Transportable and Relocatable Units** has been included.
- A **handbook**, with diagrams and explanatory material is in the works.
- **“White Papers”** on PHAMA, acoustics and other topics will now be available through the FGI.

Sections



# Chapter 1- Planning Design & Construction

# Chapter 1 – Planning, Design & Construction



## 1.2-5.1 Patient-Handling and Movement Assessment

- A PHAMA is conducted to direct/assist the design team in incorporating appropriate patient-handling and movement equipment into the health care environment in order to provide a safe environment for staff and patients during high-risk patient-handling tasks.
- The health care facility shall be responsible for providing the PHAMA to the design team.
  - Shall include consideration of both bariatric and non- bariatric patient care requirements.
  - Shall be completed as part of the pre-design phase development of the functional program.
  - Shall address the specific needs of all areas affected by the project.
  - Shall be specific to each clinical unit, residential living space, procedure area or diagnostic area.



# Chapter 1 – Planning, Design & Construction



## 1.2-5.2 Patient-Handling and Movement Assessment

- Phase 1: Needs Assessment
- Identifying appropriate patient-handling and patient movement equipment for each service area in which patient handling and movement occurs.
- Shall include, but not be limited to the following considerations:
  - Characteristics of projected patient populations.
  - Types of high-risk patient handling and movement tasks to be performed and accommodated.
  - Knowledge of each specific technology appropriate to reduce risk for each high risk task.
  - Types and quantity of patient handling equipment to be used.
  - Required weight carrying capacities.
  - Locations/rooms/areas for use with installation requirements and storage requirements.



# Chapter 1 – Planning, Design & Construction



## 1.2-5.2 Patient-Handling and Movement Assessment

- Phase 2: Design Considerations
- Defining the space, structural and other design considerations to accommodate the incorporation of required patient-handling and movement equipment.
- Shall include, but not be limited to the following considerations:
  - Structural considerations for current and future installations.
  - Electrical/mechanical considerations for current and future installations.
  - Adequate space maneuvering within and around areas where patient handling equipment is used.
  - Sizes and types of door openings through which patient handling equipment and staff must pass.
  - Floor finishes, surfaces, and transitions needed to facilitate safe use.
  - Coordination of mechanical, electrical, and life safety systems with patient-handling and movement equipment installations.
  - Storage space requirements and locations available or to be provided.





# Chapter 1 – Planning, Design & Construction



## 1.2-6.1 Acoustic Design Considerations

- **Site Exterior Noise**
  - Sites shall be screened to help determine which exterior wall/window assemblies are suitable to address site noise.
- **Existing Exterior Noise Sources**
  - Planning and design shall consider of all existing exterior noise sources transmitted from outside a building to its interior through the exterior shell.
- **Facility Noise Source Emissions**
  - Planning and design shall consider sound emissions from health care facility noise sources that reach sensitive receptors.
- **Exterior Noise Classifications**
  - Exterior building sound isolation performance shall depend on the site classification and shall provide acceptable interior sound levels.
- **Design Criteria for Acoustical Finishes**
  - All occupied facility spaces shall have acoustical finishes to achieve design sound absorption coefficients as per new Table 1.2-1

# Chapter 1 – Planning, Design & Construction



## 1.2-6.1 Acoustic Design Considerations

- **Design for Room Noise Levels**

- Room noise levels shall fall within the sound level ranges shown for the chosen rating system in new Table 1.2-2, Minimum–Maximum Design Criteria for Noise in Interior Spaces
- Room noise levels shall be determined for the unoccupied room (i.e., without operating medical equipment).
- Interior Wall and Floor/Ceiling Constructions.
  - Sound isolation shall be considered for all demising construction separating occupied spaces.
  - The composite sound transmission class (STC) rating of demising wall assemblies shall not be less than the ratings indicated in new Table 1.2-3.
- Design for Speech Privacy
  - Spaces shall be designed to meet speech privacy goals using one of the four speech privacy rating methods as shown in new Table 1.2-4.

# Chapter 1 – Planning, Design & Construction



## 1.2-6.1 Acoustic Design Considerations

Adjacency combination		STC: <sup>1</sup>
Patient room	Patient room (wall-same floor)	45 <sup>2</sup>
Patient room	Patient room (floor-to-floor)	50
Patient room	Corridor (with entrance)	35 <sup>3</sup>
Patient room	Public space	50
Patient room	Service area	60 <sup>4</sup>
NICU room	Patient room	50
NICU	Corridor	50
Exam room	Corridor (with entrance)	35 <sup>3</sup>
Exam room	Public space	50
Treatment room	Room	50
Treatment room	Corridor	35
Toilet room	Public space	45
Consultation room	Public space	50
Consultation room	Patient rooms	50
Consultation room	Corridor (with entrance)	35 <sup>3</sup>
Patient room	MRI room	60 <sup>4</sup>
Exam room	MRI room	60 <sup>4</sup>
Exam room	Exam room (no electronic masking)	50
Exam room	Exam room (with electronic masking)	40 <sup>5</sup>
Public space	MRI room	50

# Chapter 1 – Planning, Design & Construction



## 1.2-6.1 Acoustic Design Considerations

- **Structural vibration**

- Footfall vibration shall be evaluated using AISC Design Guide 11:
  - Floor Vibrations Due to Human Activity.
  - The structural floor shall be designed to avoid footfall vibration levels not to exceed the peak vibration velocities in Table 1.2-5.
  - More stringent vibration criteria to be considered for medical and laboratory instrumentation.
- Structure-borne sound
  - Structure-borne transmitted sound shall not exceed the limits for airborne sound presented in Section 1.5-5.3.4, Room Noise Levels.
  - Vibration isolators shall be used to control potential sources of structure-borne sound.
- Mechanical, Electrical & Plumbing equipment vibration
  - Fixed equipment that rotates or vibrates shall be considered for vibration isolation.
  - Bases and supports shall be provided for attachment of vibration isolators to equipment.

# Chapter 1 – Planning, Design & Construction



## 1.2-6.4 Bariatric-Specific Design Considerations

- When the facility accommodates bariatric patients, those areas of the facility designated for this accommodation, and **the associated path of travel to arrive at these areas, shall be designed with appropriate support and clearances.**



# Chapter 1 – Planning, Design & Construction



## 1.2-6.5 Provisions for Disasters

- In areas where there is recognized potential for...tornadoes, planning and design shall consider the need to protect the life and safety of...all occupants and the need for continuing services following such a disasters
- **NFPA 1600 Disaster Management**



# Chapter 1 – Planning, Design & Construction



## 1.2-8 Commissioning

- **At a minimum activities shall include:**
  - **Basis of design narrative**
    - ✦ **Shall include: Safety factors used in sizing, Classes of systems and components, Level of redundancy, Occupant density, Limitations and restrictions of systems, Indoor and outside conditions assumed.**
  - **Pre-functional checklists**
    - ✦ **Shall include inspections and tests to verify proper functioning of equipment that has been installed or modified.**
    - ✦ **Shall be prepared by the commissioning agent, design engineer or owner. Inspections and testing shall be performed and documented by the contractor, commissioning agent, or other agent.**
  - **Functional performance tests**
    - ✦ **Dynamic, full operation, systems tests shall be performed in various modes and run through all of the control system sequences of operation.**
    - ✦ **Tests shall be performed and documented by the contractor, commissioning agent, or other agent and witnessed by the commissioning agent, design engineer, and owner.**

# Chapter 1 – Planning, Design & Construction



## 1.4 Space Requirements for Equipment

- **Movable Equipment**

- New Clearance and Path of Travel Requirements are found throughout the Guidelines
- ie: Hospital Bed Size
  - **Hospital Bed Size: Now defined as 40 inches x 96 inches- Important for required design clearances within tight Patient Rooms.**



Sections



# Chapter 2.1- Common Elements for Hospitals

# Chapter 2.1 – Common Elements for Hospitals



## 2.1-2.4.2 Combination AII/PE Room (Isolation Room)

- For profoundly immunosuppressed patients who require a protective environment and have an airborne infectious disease.
  - Number
    - ✦ Hospitals with PE rooms shall include at least one combination AII/PE room.
  - Requirements
    - ✦ Must comply with the requirements in Section 2.1-3.3.2, Protective Environment Room(s), as well as this section.
  - Anteroom
    - ✦ With space for persons to don personal protective equipment before entering the patient room.
    - ✦ All doors to the anteroom shall have self-closing devices.

# Chapter 2.1 – Common Elements for Hospitals



- **2.1-7.2.2.3 Door opening dimensions**

- Throughout this edition of the Guidelines, the door openings given are the minimum clear dimension of each door opening unless otherwise noted. Door clear opening dimensions have taken into consideration the clear width needed to accommodate access by patients, patient equipment and staff.



# Chapter 2.1 – Common Elements for Hospitals



## 2.1-7.2.2.8 Common Requirements

- **Hand-washing stations**

- Sinks in hand-washing stations shall be designed with deep basins to prevent splashing.
- The area of the basin shall not be less than 144 sq in, with a minimum 9-in width or length.
- Hand-washing basins/countertops shall be made of porcelain, stainless steel, or solid surface materials. Basins shall be permitted to be set into plastic laminate countertops if, at a minimum, the substrate is marine-grade plywood (or equivalent) with an impervious seal.
- The discharge point of the faucet shall be at least 10 inches above the bottom of the basin.
- The water pressure at the fixture shall be regulated.
- **Design of sinks shall not permit storage beneath the sink basin.**

# Chapter 2.1 – Common Elements for Hospitals



- **2.1-7.2.2.9 Grab bars**
  - Grab bars installed in areas intended for use by bariatric patients shall be designed to sustain a concentrated load of 1,000 pounds.
- **2.1-7.2.3.4 Ceilings**
  - Ceilings in restricted areas (e.g., operating rooms) shall be of monolithic construction, scubbable and capable of withstanding cleaning and/or disinfecting chemicals. **All access openings in these ceilings shall be gasketed.**
  - In **Dietary and laundry areas a sealed monolithic and scubbable** gypsum board ceiling or a lay-in ceiling shall be provided.
  - Where a lay-in ceiling is provided, it shall include a rust-free grid and tiles that weigh at least one pound per square foot and are smooth, scubbable, nonabsorptive, nonperforated, and capable of withstanding cleaning with chemicals.

# Chapter 2.1 – Common Elements for Hospitals



## 2.1-7.2.4 Furnishings

- **Casework, millwork, and built-ins**
  - Cabinetry door hardware shall comply with ADA Guidelines.
  - Hand-washing basins/countertops shall be made of porcelain, stainless steel, or solid-surface materials.
  - For hand-washing basins set into plastic laminate countertops, substrate shall be marine-grade plywood, or an equivalent material, with an impervious seal.
- **Furniture and equipment**
  - Furniture shall be upholstered with impervious materials as per the functional program and an ICRA.
  - Furniture and equipment in clinical areas that is not easily movable and where sufficient access is not provided to permit cleaning under and behind the unit, shall be sealed against floors and adjoining walls.
  - Equipment such as refrigerators, medicine and clean supply dispensing units, kitchen equipment and similar types of furnishings shall be installed so they can be routinely moved for cleaning.

# Chapter 2.1 – Common Elements for Hospitals



## 2.1-8.5 Communications Systems

- Each hospital shall have at least one telecommunications service entrance room (TSER) that is dedicated to the telecommunications function and related support facilities.
- Each hospital shall have at least one Technology Equipment Center (TEC) space that is not used for any purposes other than data storage, processing, and networking.
- **There shall be a minimum of one Technology Distribution Room (TDR) on each floor of the facility, minimum inside dimension of 12' x 14'.**
- Access to the TSER, TEC & TDR's shall be restricted and controlled by an access control system.

# Chapter 2.1 – Common Elements for Hospitals



- **Location**

- The TSER shall be located in a dry area not subject to flooding, as close as practicable to the building entrance point, and next to the electrical service room to reduce the length of bonding conductor to the electrical grounding system.
- The TEC shall be located a minimum of 12 feet from any transformer, motors, x-ray, induction heaters, arc welders, radio and radar systems, or other sources of electromagnetic interference.
- TDRs shall be provided throughout the facility as necessary to meet the 90 meter (292 feet) maximum cable distance required for Ethernet cables from the termination point in the TDR to each wall outlet.
- The TDR shall be located in an accessible, non-sterile area on each floor.
- Access to the TDR shall be directly off a corridor and not through another space, such as an electrical room or mechanical room.



# Chapter 2.1 – Common Elements for Hospitals



- **Table 2.1-2**

## Ventilation Requirements

- Added Combo AII/PE rooms, Dialysis areas and Nuclear Med areas to

Ventilation Requirements for Areas Affecting Patient Care in Hospitals and Outpatient Facilities

Area designation	Air movement relationship to adjacent area	Minimum air changes of outdoor air per hour	Minimum total air changes per hour	All air exhausted directly to outdoors	Recirculated by means of room units <sup>a</sup>	Relative humidity (%)	Design temperature (degrees F/C)
<b>KEY:- no requirement , N - negative, P - positive</b>							
<b>NURSING UNITS</b>							
Combination AI/PE room <sup>2</sup>	P	2	12	Yes	No	NR	75 (24)
Anteroom	N/P	NR	10	NR	No	NR	NR
<b>DIAGNOSTIC AND TREATMENT AREAS</b>							
Dialysis treatment area	NR	2	6	NR	NR	30-60	72-78 (22-26)
Dialyzer reprocessing room	NR	NR	10	Yes	No	NR	NR
<b>Imaging</b>							
Nuclear medicine hot lab	NR	NR	6	Yes	No	NR	75 (24)
Nuclear medicine treatment room	NR	NR	6	Yes	NR	NR	70-75 (21-24)

# Chapter 2.1 – Common Elements for Hospitals



## • Table 2.1-3 Receptacle Requirements

- Added a new table for “Electrical Convenience Receptacle Requirements for Clinical Areas”

Electrical Convenience Receptacle Requirements for Clinical Areas		
Area Designation	Number	Locations
<b>Patient bed locations</b>		
Medical, surgical, pediatric, postpartum, physical rehabilitation units	12	Convenient to head of bed with one on each wall
Critical care unit, neonatal ICU, pediatric ICU (and associated exam/treatment)	16	Convenient to head of bed with one on each wall
Psychiatric, substance abuse units	No minimum	
Newborn nursery	4	Convenient to each bassinet
Continuing care nursery	5	Convenient to head of bed, crib, or bassinet (At least 50 percent of these outlets shall be connected to emergency system power and be so labeled)
Special care nursery	8	Convenient to each bassinet
Post anesthesia care -- PACU	8	Convenient to head of stretcher or bed
Post anesthesia care -- Phase II	4	Convenient to stretcher or chair
Operating rooms, cesarean delivery rooms	24	16 convenient to table placement with two on each wall
LDR/LDRP rooms	16	8 convenient to head of mother's bed and 4 convenient to each bassinet with one on each wall
Trauma/resuscitation emergency room, minor (no general anesthesia) surgical room	16	Convenient to head of stretcher or bed
Triage rooms or areas in the emergency department	6	Convenient to head of stretcher or bed (At least 50 percent of these outlets shall be connected to emergency system power and be so labeled)
Emergency care --- general	12	Convenient to head of stretcher or bed
General examination/treatment rooms	8	4 convenient to head of stretcher or bed
Cardiac catheterization, interventional radiology, angiography rooms	12	8 convenient to table placement with one on each wall
Endoscopy, bronchoscopy, non-surgical cystoscopy, lithotripsy, urology procedure rooms	8	
<b>Notes</b>		
1. Single or duplex receptacles or a combination of both shall be permitted.		
2. Consideration shall be given to providing some outlets on emergency power and some on normal power at the head of patient beds and in operating rooms, cesarean delivery rooms, and trauma/resuscitation emergency rooms in case of transfer switch failure.		
3. Each patient bed location or procedure room shall be supplied by at least two branch circuits, one from the emergency system and one or more from the normal system. Critical care locations served from two separate transfer switches on the emergency system shall not be required to have separate circuits from the normal system.		
4. Branch circuits serving only special purpose receptacles or equipment in critical care areas shall be permitted to be served by other panel boards.		
5. An additional outlet shall be provided for a television if one is furnished in the room. A minimum of one dedicated circuit shall be provided to each critical care patient room.		
6. Open heart post-anesthesia recovery spaces require outlets beyond those specified in Table 2.1-3 based on the functional program.		

# Chapter 2.1 – Common Elements for Hospitals



- **Table 2.1-4**

## Nurse Call Devices

- Added a new table for “Location of Nurse Call Devices” showing required and optional locations for devices.

Location of Nurse Call Devices							
KEY: ● Required □ Optional							
Area Designation	Patient Station	Bath Station	Staff Emergency Station	Code Call Station	Nurse Master Station	Duty Station	Notes
<b>Nursing Units</b>							
Inpatient bed location	●		●	□			1, 2, 3, 4
Patient toilets, showers, and baths		●					2
Nurse/control station					●		
Clen workroom						●	
Clean supply room						□	
Soiled workroom						●	
Soiled holding room						□	
Medication preparation room						●	
Examination/treatment room			●			●	
Staff lounge						●	
Clean linen storage						□	
Nourishment area or room						□	
Equipment storage room						□	
Multipurpose room						□	
<b>Other Clinical Areas</b>							
Operating and cesarean delivery rooms			●	□			2
Procedure rooms			●	□			2
LDR/LDRP rooms	●		●	●			1, 2, 3, 4
Recovery -- PACU	□		●	●	□		2, 4
Recovery -- Phase II	●		●	□	□		1, 2
Emergency exam, treatment, triage rooms	●		●	●	□		1, 2, 4
patient preparation and holding areas	●		●	□	□		1, 2
Critical care bed locations, including NICU	●		●	●	□		1, 2, 4, 5
Newborn and special care nurseries			●		□		
Cardiac catheterization, interventional radiology, angiography	□		●	●	□		
MRI, CT, stress testing areas	□		●	●			2, 4
Outpatient examination areas	□			□			
Outpatient waiting and changing areas	□						2
Psychiatric seclusion ante/exam rooms			●				
Outpatient toilet rooms, showers, and baths		□					2
Psychiatric patient room	□						2
<b>Notes</b>							
1. One device shall be permitted to accommodate both patient station and emergency staff assistance station functionality.							
2. A visible signal shall be activated in the corridor at the patient's door, at the nurse/control station, and at all duty stations. In multi-corridor nursing units, additional visible signals shall be installed at corridor intersections.							
3. Two-way voice communications shall be provided with the nurse/control station.							
4. One device shall be permitted to accommodate both emergency staff assistance and code call station functionality.							
5. A patient station shall not be required in the NICU.							

# Chapter 2.1 – Common Elements for Hospitals



- **Table 2.1-6 Station Outlets**
  - Added a new column for “Waste anesthesia gas disposal”

**Station Outlets for Oxygen, Vacuum (Suction), and Medical Air Systems in Hospitals<sup>1</sup>**

Section	Location	Oxygen	Vacuum	Medical Air	WAGD <sup>2</sup>
2.1-3.2.1	Patient rooms (medical and surgical)	1/bed	1/bed	—	—
2.1-3.2.3	Examination/treatment (medical, surgical, and postpartum care)	1/room	1/room	—	—
2.1-3.3.1/3.3.2	Airborne infection isolation/protective environment rooms	1/bed	1/bed	—	—
2.1-3.3.5	Seclusion room (medical, surgical, and postpartum)	1/bed	1/bed	—	—
2.1-3.4	Intermediate care	2/bed	2/bed	1/bed	—
2.1-3.5.2	Critical care (general)	3/bed	3/bed	1/bed	—
2.1-3.5.2.2	Airborne infection isolation	3/bed	3/bed	1/bed	—
2.1-3.5.3	Coronary critical care	3/bed	3/bed	1/bed	—
2.1-3.5.5	Pediatric critical care	3/bed	3/bed	1/bed	—
2.1-3.5.6	Newborn intensive care	3/bassinet	3/bassinet	3/bassinet	—
2.1-3.6.6	Newborn nursery (full-term)	1/bassinet <sup>2</sup>	1/bassinet <sup>2</sup>	1/bassinet <sup>2</sup>	—
2.1-3.6.8	Confining care nursery	1/bassinet	1/bassinet	1/bassinet	—
2.1-3.7	Pediatric and adolescent	1/bed	1/bed	1/bed	—
2.1-3.8.2	Psychiatric patient rooms	—	—	—	—
2.1-3.8.3	Seclusion treatment room	—	—	—	—
2.1-5.3.2.1	General operating room	2/room	4/room	1/room	1/room
2.1-5.3.2.2	Cardiac, transplant, neurology operating room	2/room	5/room	1/room	1/room
2.1-5.3.2.3	Orthopedic surgery	2/room	4/room	1/room	1/room
2.1-5.3.2.4	Surgical cystoscopic and endourologic	2/room	3/room	1/room	1/room
2.1-5.3.3.3	Post-anesthesia care unit (PACU)	2/bed	3/bed	1/bed	—
2.1-5.3.3.4	Phase II recovery	1/bed	3/bed	—	—
2.1-5.3.5.11	Anesthesia workroom	1 per workstation	—	1 per workstation	—
2.1-4.2.1	Postpartum room	1/bed	1/bed	—	—
2.1-4.3.1	Cesarean delivery room	2/room	4/room	1/room	1/room
2.1-4.3.2	Infant resuscitation space	3/bassinet	3/bassinet	3/bassinet	—
2.1-4.3.3	OB recovery room	1/bed	3/bed	1/room	—
2.1-4.4	Labor/delivery/recovery (LDR)	1/bed	1/bed	—	—
2.1-4.4	Labor/delivery/recovery/postpartum (LDRP)	1/bed	1/bed	—	—
2.1-5.1.2.5	Initial emergency management	1/bed	1/bed	—	—
2.1-5.1.3.4	Triage area (definitive emergency care)	1/station	1/station	—	—
2.1-5.1.3.7(2)(3)	Definitive emergency care exam/treatment rooms	1/bed	1/bed	1/bed	—
2.1-5.1.3.7(6)	Trauma/resuscitation room(s)	2/bed	3/bed	3/bed	—
2.1-5.1.3.7(7)	Orthopedic and cast room	1/room	1/room	—	—
2.1-5.1.3.8(2)	Definitive emergency care observation unit	1/bed	1/bed	—	—
2.1-5.4.5	MRI	1/room	1/room	1/room	—
2.1-5.5.2	Cardiac catheterization lab	2/bed	2/bed	1/bed	—
2.1-5.14.2.2	Autopsy room	—	1 per workstation	—	—

Added  
Medical air &  
WAGD  
systems to  
OR/Cesarean  
rooms

Sections



# Chapter 2.2- Specific Requirements for Hospitals

# Chapter 2.2 – Specific Requirements for Hospitals



## 2.2-2.2.4.6 Bone Marrow/Stem Cell Transplant Units

- **Location**

- Bone marrow transplant rooms shall be located to have close access to out-of-unit diagnostic and treatment equipment, particularly diagnostic imaging and radiation therapy equipment.

- **Bone marrow/stem cell transplant room requirements**

- Patient rooms in bone marrow/stem cell transplant units shall meet the requirements of Section 2.1-3.3.2, Protective Environment Room(s), as well as the requirements in this section (2.1-3.3.4).
- At least one patient room in these units shall meet the requirements of Section 2.1-3.3.3, Combination AII/PE Room.

- **Details, surfaces, and furnishings**

- All windows in the room shall have fixed sash and be sealed to eliminate all infiltration.
- Viewing panels shall be provided for nursing staff observation.
- Curtains or other means shall be provided to cover windows and viewing panels for visual privacy.

# Chapter 2.2 – Specific Requirements for Hospitals



## 2.2-2.3 Oncology Nursing Unit

- **Patient Rooms**

- Patient rooms shall comply with the requirements of Section 2.1-3.2.1, Typical Patient Room, as well as the additional requirements in Section 2.1-3.3.2.4, Protective Environment Rooms.

- **Pediatric and adolescent unit**

- Pediatric patient rooms shall include provisions for family support (hygiene, sleeping, and personal belongings).
- Play areas shall be constructed of surfaces and materials that are easy to clean and durable.
- Pediatric patient rooms shall be separated from units serving adult populations.
- At least one AII room shall be provided for each pediatric unit.

# Chapter 2.2 – Specific Requirements for Hospitals



## 2.2-2.3 Oncology Nursing Unit (cont)

- **Support areas for visitors**
  - Space for visitor privacy shall include the following to promote interaction and resource availability:
    - ✦ Area for communications (e.g., cell phones, computers, wireless Internet access).
    - ✦ Patient-family information stations.
    - ✦ Access to beverages and nourishment.
- **Diagnostic and treatment areas**
  - Treatment/infusion therapy unit.
  - Imaging facilities.
  - Radiotherapy facilities.
  - Storage space for radiation body casts.
  - Provision of these services from central departments shall be permitted.



# Chapter 2.2 – Specific Requirements for Hospitals



## 2.2-2.3 Oncology Nursing Unit (cont)

- **Details, surfaces, and furnishings**
  - **No decorative water features or fish tanks.**
  - No decorative plant boxes or containers with live plants, dirt, or dried flowers.
  - Surfaces in the patient's environment of care shall be planned and designed to facilitate cleaning and disinfection.
  - Cabinetry, casework, and countertops shall have flush surfaces that are smooth, nonporous, cleanable, wipeable, and durable and that do not scratch easily.
  - Window treatments shall be selected for ease of cleaning. Smooth-surfaced, easy-to-clean, wipeable, non-pleated window treatments shall be used.
  - Use of fabric privacy curtains shall be permitted if they are washable. A wipeable fabric with a smooth surface is preferable.

# Chapter 2.2 – Specific Requirements for Hospitals



## 2.2-2.3 Oncology Nursing Unit (cont)

- **Building systems**

- **Light coves, non-flush surfaces, and areas that collect dust shall not be used.**
- Lighting shall be adjustable to meet standards for high visibility during procedures and still provide for the sleep and comfort of the patient.
- Natural lighting shall be provided for patient rooms through windows.

# Chapter 2.2 – Specific Requirements for Hospitals



## 2.2-2.10 Newborn Intensive Care Units

- **Patient care areas**

- **Space requirements**

- ✦ Rooms intended for the use of a single infant shall contain a minimum clear floor area of 150 square feet excluding sinks and aisles.

- **Noise control**

- ✦ Background sound and operational sound in infant bed rooms and adult sleep areas shall not exceed an hourly Leq of 45 dBA and an hourly L10 of 50 dBA. The Lmax (transient sounds) shall not exceed 65 dBA in these rooms/areas.
- ✦ Background sound and operational sound in staff work areas, family areas, and staff lounge areas shall not exceed an hourly Leq of 50 dBA and an hourly L10 of 55 dBA. Transient sounds as determined using the Lmax shall not exceed 70 dBA in these areas.

# Chapter 2.2 – Specific Requirements for Hospitals



## 2.2-2.10 Newborn Intensive Care Units

- **Lighting**

- Electric light sources shall have a color rendering index of no less than 80, a full-spectrum color index of no less than 55, and a gamut area of no less than 65 and no greater than 100.

- **Support areas**

- Infant formula facilities

The requirements for formula prep from the Nurseries Section have been incorporated into the NICU section.

- The formula preparation room shall be permitted to be located near the NICU or at other appropriate locations in the hospital.
- Refrigerated storage and warming facilities for infant formula shall be accessible for use by NICU personnel at all times.

# Chapter 2.2 – Specific Requirements for Hospitals



## 2.2-2.11.9 Cesarean Delivery Suite

- **Infant Resuscitation Space**

- A min. clear floor area of 80 square feet shall be provided for the infant resuscitation space in addition to the required area of each cesarean delivery room.

- **Recovery Space**

- A min. clear floor area of 80 square feet shall be provided for each recovery bed, with space for additional equipment as required by the functional program..
- Where labor-delivery-recovery (LDR) or labor-delivery-recovery-postpartum (LDRP) rooms are located within or directly accessible to the cesarean delivery suite, they shall be permitted to serve as the required recovery spaces.

## 2.1-4.4 LDR and LDRP Rooms

- An area within the room that is distinct from the mother's area shall be provided for infant stabilization and resuscitation. This area shall have a min. clear floor area of at least 40 square feet.

# Chapter 2.2 – Specific Requirements for Hospitals



## 2.2-2.12 Nurseries

- All nurseries shall be designed to protect the physical security of infants, parents, and staff and to minimize the risk of infant abduction. All entries to the nursery shall be controlled.

### 2.2-2.12.3.3 Continuing Care Nursery

- Where provided, a continuing care nursery shall have a minimum clear floor area of 120 square feet per infant station with 8 feet between and at all sides of each bassinet.

## 2.2-2.13 Pediatric and Adolescent Unit

- Maximum room capacity shall be 2 patients.

# Chapter 2.2 – Specific Requirements for Hospitals



## 2.2-2.16 Bariatric Care Units

- **General**

- **In hospitals that provide bariatric care, rooms shall be designated for this purpose.**
- These rooms shall be permitted to constitute a separate unit or be provided as a designated part of another unit.
- Can be units specifically designed to accommodate bariatric surgery patients or units designed to provide the full range of acute care services to an extremely obese patient population.

# Chapter 2.2 – Specific Requirements for Hospitals



## 2.2-2.16 Bariatric Care Units (cont)

- **Access to bariatric areas**
  - **Door openings in the general path of travel for bariatric patients from public areas to the bariatric unit shall have a min clear width of 3 feet 8 inches.**
- **Patient Rooms**
  - All bariatric patient rooms shall be single-patient rooms.
  - New patient rooms shall be have minimum clear floor area of 200 square feet with a minimum clear dimension of 5 feet between the sides and the foot of the bed and any wall or other fixed obstructions.
- **Door openings**
  - Door openings to bariatric patient rooms shall have a minimum clear width of 4 feet 9.5 inches In-Hospital Skilled Nursing.
- **Visitor waiting areas**
  - A minimum of 10 percent of the furniture in public areas of this unit shall be designed to accommodate the size and weight of a 600-pound person.



# Chapter 2.2 – Specific Requirements for Hospitals



## 2.2-2.16 Bariatric Care Units (cont)

- **Hand-washing stations**

- Shall be mounted with sufficient strength/stability to withstand a **downward static force of 1,000 pounds at the edge of the sink** without breaking any caulk seals or causing any physical damage.

- **Toilet rooms**

- Toilets in bariatric units or areas for bariatric patients shall be **designed to support 1,000 pounds and shall be mounted a minimum of 24 inches from the finished wall** to the centerline of the toilet.
- There shall be **44 inches of clear space** on the opposite side of the toilet for wheelchair access and to allow caregivers room to assist the patient.

- **Bathing facilities**

- Shower stalls designated for bariatric patients shall be a minimum of 4 feet by 6 feet.
- Showers shall be equipped with grab bars that are capable of supporting 1,000 pounds.
- Showers shall be provided with handheld spray nozzles mounted on a side wall.

# Chapter 2.2 – Specific Requirements for Hospitals



## 2.2-2.16 Bariatric Care Units (cont)

- Patient lift system
  - **At least one room** in each bariatric unit shall be provided with a built-in mechanical lift system (e.g., a ceiling rail system) capable of transporting a **600-pound** patient from the bed to the toilet room.
- Airborne Infection Isolation Room
  - At least one airborne infection isolation (AII) room shall be provided in the bariatric care unit unless provided elsewhere in the facility.
  - Each bariatric AII room shall comply with the requirements previously set forth for a bariatric patient room as well as the AII room requirements set forth in Sections 2.1-3.3.1.4 through 2.1-3.3.1.6.

# Chapter 2.2 – Specific Requirements for Hospitals



## 2.2-3.1 Emergency Services

### • Entrance

- A min. clear width of 72 inches shall be provided to accommodate bariatric stretchers, patient lift devices, and accompanying attendants.
- If required by the program, bariatric lifts shall be available in the covered ambulance bay and positioned to provide assistance with patient transfers.

### • Pediatric Examination/treatment room or area

- Facilities for the treatment of pediatric cases in dedicated pediatric rooms shall be provided.
- Each treatment room shall have a minimum clear floor area of 120 square feet.
- Treatment rooms designated for pediatric patients shall be located adjacent to a family waiting area and toilet.
- The quantity of dedicated rooms shall be based on the functional program.

# Chapter 2.2 – Specific Requirements for Hospitals



## 2.2-3.3 Surgical Suites

- **Pre- and Postoperative Patient Care Areas**
  - If required by the functional program, bariatric accommodations shall be provided in the surgical prep and recovery areas.
  - All facilities that perform diagnostic testing and treatment for bariatric patients shall provide adequate accommodations for these patients.
- **Preoperative patient care area(s)**
  - Each patient cubicle shall have a minimum clear dimension of 5 feet between the sides of patient beds and 4 feet between the sides of patient beds and adjacent walls or partitions.
  - Each cubicle shall have a minimum clear dimension of at least 3 feet between the foot of the bed and the cubicle curtain or wall.

# Chapter 2.2 – Specific Requirements for Hospitals



## 2.2-3.3 Surgical Suites

- **Phase II recovery**

- Where patient cubicles are used, the design shall provide a minimum of 50 square feet for each patient in a lounge chair or stretcher, with space for additional equipment described in the functional program.
- Where permanent partitions are used to define the patient care station, each station shall have a min clear floor area of 80 square feet.
- A min clear dimension of 4 feet shall be provided between the sides of lounge chairs/stretchers and 3 feet between walls or partitions and the sides and/or foot of lounge chairs/stretchers.

# Chapter 2.2 – Specific Requirements for Hospitals



## 2.2-3.3 Surgical Suites

- **Substerile room(s)**

- Shall be either directly accessible from the operating room(s) it serves or shall be located inside the clean core if the clean core is directly accessible from the operating room(s). This room shall be able to be accessed without traveling through any operating rooms.
- This room shall be equipped with the following:
  - ✦ A steam sterilizer as described in the functional program.
  - ✦ A countertop.
  - ✦ Built-in storage for supplies.

- **Equipment and supply storage**

- **Each surgical suite shall provide sufficient storage area to keep its required corridor width free of equipment and supplies, but not less than 300 square feet or 50 square feet per operating room, whichever is greater.**

# Chapter 2.2 – Specific Requirements for Hospitals



## 2.2-3.4 Diagnostic Imaging Services

- **Computerized Tomography (CT) Scanning**

- CT scan rooms shall be sized to allow a min clear dimension of 3 feet on three sides of the table for access to the patient and to facilitate transfer.
- **The door swing shall not encroach on the equipment, patient circulation, or transfer space.**

- **Ultrasound**

- Rooms used for ultrasound examination/treatment shall have a min clear floor area of 120 square feet.
- **A min clear dimension of 3 feet shall be provided on three sides of the table/stretchers.**
- A patient toilet, directly accessible from the procedure room, shall be provided.
- The patient toilet shall be permitted to serve more than one procedure room.

# Chapter 2.2 – Specific Requirements for Hospitals



## 2.2-3.4 Diagnostic Imaging Services

- **Magnetic Resonance Imaging (MRI)**

- MRI suites and spaces around, above, and below shall be designed to prevent unscreened individuals from entering the 5-gauss limits.
- Suites for MRI equipment shall conform to the four-zone screening and access control as per the American College of Radiology.
- Any area in which the magnetic field strength is equal to or greater than 5 gauss shall be physically restricted by locking systems.
- An anteroom shall be located outside the MRI scanner room so that patients & staff must pass through it before entering the scanning area and control room. This room shall be outside the restricted areas of the MRI's magnetic field.
- The MRI scanner room shall accommodate equipment and allow clearance in accordance with manufacturers' recommendations.
- MRI rooms shall be marked with a lighted sign with a red light to indicate when the magnet is on.
- An insulated cryogen quench exhaust pipe, room exhaust and pressure equalization shall be provided where superconducting MRI scanners are installed.



# Sections



**Chapter 2.3- Specific Requirements for Small Primary Care Hospital**

**Chapter 2.4- Critical Access Hospitals**

**Chapter 2.5- Specific Requirement for Psychiatric Hospitals**

**Chapter 2.6- Specific Requirements for Rehabilitation Hospitals and Other Facilities**

Sections



# Chapter 3.1- Ambulatory Care Facilities

# Chapter 3.1 – Ambulatory Care Facilities



## 3.1 Common Requirements for Outpatient Facilities

### ● 3.1-3.2.3.2 Special Purpose Examination Rooms

- Rooms for special clinics (eye, ear, nose, throat etc.) shall have a **minimum clear floor area of 100 net square feet.**
- Room arrangement shall permit a min clear dimension of 2 feet 8 inches on both sides and at one end of the examination table, bed, or chair.

### ● 3.1-4.1.2.1 Laboratory Testing/Work Area

- When lab tests are performed on site, a separate, dedicated room shall be provided.

# Chapter 3.1 – Ambulatory Care Facilities



- **3.1-5.3 Materials Management**

- An unpacking or box breakdown area shall be provided.
- This area shall be accessible from the designated delivery door.
- The route for supply delivery shall be identified.

- **3.1-5.3.3 Clean Clinical Storage**

- **This storage area shall not include space for storage of office supplies or environmental paper products.**
- Sterile items that are stored in manufacturers' packaging that is safe for handling shall be considered "clean" and appropriately stored with clean supplies.
- Items that are sterile shall be stored as established by criteria in Section 3.1-3.5, Sterilizing Facilities.

# Chapter 3.1 – Ambulatory Care Facilities



- **3.1-5.4 Waste Collection and Storage**

- Red Bag, Bio-hazardous and environmentally hazardous materials, including mercury, nuclear reagent waste, and other regulated waste types, shall be segregated and secured.
- **Regulated medical waste or infectious waste storage spaces shall have a floor drain, cleanable floor and wall surfaces, lighting, and exhaust ventilation.**
- Such spaces shall be safe from weather, animals, and unauthorized entry.
- Refrigeration requirements for such storage facilities shall comply with state and/or local regulations.

# Chapter 3.1 – Ambulatory Care Facilities



- **3.1-7.2.2.1 Corridor width**
  - **Minimum width of 5'-0".**
  - In-corridor storage or parking space for portable equipment shall not overlap required corridor widths.
- **3.1-7.2.2.8 Hand-washing stations**
  - Hand sanitation dispensers shall be provided in addition to hand-washing stations.
  - The number and location of both hand-washing stations and hand sanitation dispensers shall be determined by the ICRA.
  - **Sinks – To match the requirements noted in 3.1-8.4.3.2**

# Sections



**Chapter 3.2- Specific Requirements for Primary Care (Hospital) Outpatient Centers**

**Chapter 3.3 Specific Requirements for Small Primary Care (Neighborhood) Outpatient Facilities**

**Chapter 3.4 Specific Requirements for Freestanding Outpatient Diagnostic and Treatment Facilities**

**Chapter 3.5 Specific Requirements for Freestanding Urgent Care Facilities**

**Chapter 3.6 Specific Requirements for Freestanding Cancer Treatment Facilities**

# Sections



## **Chapter 3.7- Specific Requirements for Outpatient Surgical Facilities**



## 3.7 Specific Requirements for Outpatient Surgical Facilities



- **3.7-3.4.1- Preoperative Patient Holding Areas**
  - In facilities with Class B and C operating rooms, an area shall be provided to accommodate stretcher patients and/or seating space.
  - Class A operating room
    - ✦ **At least one patient station per operating room shall be required if the operating room is accessed from the semi-restricted area.**
    - ✦ If the operating room is accessed from an unrestricted area and the functional program allows for preoperative care to be carried out within the operating room, no patient station shall be required.
  - At least one patient station per Class B operating room shall be provided.
  - At least one patient station per Class C operating room shall be provided.

## 3.7 Specific Requirements for Outpatient Surgical Facilities



### 3.7-3.4.1- Preoperative Patient Holding Areas

- **Location**

- Preoperative holding areas shall be under direct visual control of the nursing staff.

- **Space requirements**

- Each pre-op holding area shall provide a min clear floor area of 80 square feet for each patient station.
- **Each pre-op holding area shall have a min clear dimension of 5 feet between patient stretchers and 4 feet between patient stretchers and adjacent walls (at the stretcher's sides and foot).**
- Provisions such as cubicle curtains shall be made for patient privacy.

- **Hand-washing stations**

- Hand-washing stations with hands-free or wrist blade-operable controls shall be available, with at least **one station for every four positions or fewer and for each major fraction thereof.**

## 3.7 Specific Requirements for Outpatient Surgical Facilities



### 3.7-3.4.2.3 Phase II recovery

- **General**
  - When permanent partitions (full or partial-height or -width) are used to define the patient care station, a minimum clear dimension of 3 feet shall be provided on the sides of the lounge chair.
  - **Recovery Area Toilet Room(s)**
    - In facilities with three or more operating rooms, a dedicated patient toilet room shall be provided in the Phase II recovery area.
    - In facilities with two or fewer operating rooms, a patient toilet room shall be provided in or adjacent to the Phase II recovery area.

## 3.7 Specific Requirements for Outpatient Surgical Facilities



### 3.7-3.7 Support Areas for Patients

- **3.7-3.8.2 Toilet room(s)**
  - A toilet room(s) shall be provided for patient use.
  - The patient toilet room(s) shall be separate from public use toilet(s) and located to permit access from pre- and postoperative holding areas. For specific requirements for the patient toilet room in Phase II recovery areas, see 3.7-2.4.2.3 (7).

## 3.7 Outpatient Surgical Facilities



- **3.7-5.1.2.3 Storage for sterile supplies**
  - The sterile supply room shall have a minimum floor area of 70 square feet or 50 square feet per operating room, whichever is greater.
- **3.7-7.2.1.1 Corridor width**
  - Public corridors shall have a minimum width of 5 feet, except that corridors connecting the operating room section and the PACU and at least one (ambulance transfer) exit, where patients are transported on stretchers or beds, shall have a minimum width of 6 feet.
  - The semi-restricted corridor shall have a minimum width of 8 feet in areas used to transport patients on gurneys between preoperative, procedure, and post-anesthesia recovery areas.
  - Passages and corridors used exclusively for staff access shall be a minimum of 3 feet 8 inches in clear width.

## 3.9 Specific Requirements for Gastrointestinal Facilities



### 3.9-3.3.1 Pre- and Post-Operative Holding Area(s)

- There shall be at least one pre-procedure holding area per procedure room.
- These holding areas shall be under the direct visual control of the nursing staff.

### 3.9-3.3.1.5 Hand Washing Stations

- Hand-washing stations with hands-free or wrist blade-operable controls shall be available, with at least **one station for every four positions or fewer** and each major fraction thereof.

## 3.9 Specific Requirements for Gastrointestinal Facilities



### 3.9-3.3.2 Step-down recovery

- A step-down recovery area shall be provided if required by the functional program.
- The design shall provide a min of 50 square feet for each patient in a lounge chair with space for additional equipment as needed.
- The design shall provide a minimum clear dimension of 4 feet between the sides of adjacent lounge chairs and between the foot of the lounge chairs and the nearest obstruction.
- When permanent partitions (full or partial-height or -width) are used to define the patient care station, a minimum clear dimension of 3 feet shall be provided on the sides of the lounge chair.
- Provisions for patient privacy such as cubicle curtains shall be made.
- In step-down recovery areas, a nurse utility/control station with a view of patients is not required.
- The step-down recovery area shall contain at least one hand-washing station.

## 3.9 Specific Requirements for Gastrointestinal Facilities



### 3.9-3.6.11 Equipment and Supply Storage

- At a minimum, storage room(s) for equipment and clean clinical supplies shall have a combined floor area of **25 square feet** per procedure room.

### 3.9-8.4.1.1 Medical Gas and Vacuum Requirements

- **Oxygen and Suction per Table 3.1-2** shall be provided for each post-procedure recovery position.
- Station outlets for oxygen and vacuum (suction) shall be available in the procedure room.
- Provision for vacuum and/or non-medical compressed air shall be provided for the instrument processing room decontamination area as appropriate to the cleaning methods used.



# Sections



**Chapter 3.10- Specific Requirements for Renal Dialysis Centers**

**Chapter 3.11 Specific Requirements for Psychiatric Outpatient Centers**

**Chapter 3.12 Specific Requirements for Outpatient Rehabilitation Facilities**

**Chapter 4 Residential Health Care Facilities**

# Sections



## **Chapter 5.1- Mobile, Transportable and Relocatable Units**

# 5.1 Mobile, Transportable, and Relocatable Units



## 5.1-1.3 Site

- 30 feet min shall be provided between any building outside air intake and any HVAC or generator exhaust from the unit.
- 20 feet min shall be provided between a mobile unit and any unsprinklered building.
- The location of the unit and routing of utilities shall avoid interference with appropriate access to and exiting from all occupied areas, including exterior means of egress to a public way.
- Use of an exit from the building as an access point to the mobile unit shall not be permitted unless the exit is specifically designed to serve both functions.
- The unit shall be located to avoid interference with fire lanes and direct access to the facility by emergency personnel and vehicles during an emergency.

# 5.1 Mobile, Transportable, and Relocatable Units



## 5.1-3.6 Support Areas

- The areas noted below will match the requirements for similar spaces found throughout Chapters 2 & 3
- Recovery Areas
- Patient Gowning and Holding
- Clean Utility
- Soiled utility
- Environmental Services
- Equipment Supply and Storage

# 5.1 Mobile, Transportable, and Relocatable Units



## 5.1-7.1 Design and Construction Requirements

- Tractors and/or cabs that have fuel tanks with a capacity of less than or equal to 100 gallons and that do not support the mobile unit while it is in use shall be detached and located more than 10 feet from the hospital.
- Tractors and/or cabs with fuel capacities greater than 100 gallons shall meet the requirements of NFPA 30, Flammable and Combustible Liquids Code.
- Exits from the mobile unit must meet the Chapter 7, Means of Egress, in NFPA 101.
  - A hoist or lift as the sole means of egress to grade from the mobile unit shall not be permitted.
  - Use of a coil-up door as the sole means of egress shall not be permitted.

## 5.1 Mobile, Transportable, and Relocatable Units



### 5.1-7.2.2.2 Exterior finish materials

- If the connecting link to the host facility is a fabric-type canopy, the material shall be treated with fire retardant and documentation of such shall be available for inspection at all times.
- Fabric (membrane) structures and supporting elements shall be designed in accordance with the local building code.
  - Permanent membrane structures shall also comply with applicable sections of NFPA 101-11.9.
  - Temporary membrane structures (limited to 45 days) shall comply with NFPA 101-11.10.
  - **Construction of permanent passageways shall be consistent with the construction type of the connected building or separated per NFPA 101.**

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## Q & A

