**fCOMPLIANCE CHECKLIST**

**IP7\_Neonatal Intensive Care Unit**

The following checklist is intended to be used in the plan review applications for health care facilities submitted to the Massachusetts Department of Public Health. This checklist summarizes and references the applicable requirements from the Licensure Regulations and the 2018 Edition of the FGI Guidelines for Design and Construction of Hospitals. Applicants must verify compliance of the plans submitted to the Department with all referenced requirements from the Licensure Regulations and FGI Guidelines when completing this Checklist. A separate Checklist must be completed for each nursing unit, hospital or clinic department, or clinical suite.

Other jurisdictions, regulations and codes may have additional requirements which are not included in this checklist, such as:

1. NFPA 101 Life Safety Code (2012) and applicable related standards contained in the appendices of the Code
2. State Building Code (780 CMR)
3. Accreditation requirements of The Joint Commission
4. CDC Guidelines for Preventing the Transmission of Mycobacterium Tuberculosis in Health Care Facilities
5. USP 797 & Regulations of the Massachusetts Board of Registration in Pharmacy
6. Occupational Safety & Health Standards (OSHA)
7. Accessibility Guidelines of the Americans with Disabilities Act (ADA)
8. Architectural Access Board Regulations (521 CMR)
9. Local Authorities having jurisdiction.

Instructions:

1. All requirement lines must be completed according to the following instructions and included in the plan submissions for Self-Certification Process or Abbreviated Review Process.
2. This checklist must be completed by the project architect or engineer based on the design actually reflected in the plans at the time of completion of the checklist.
3. Each requirement line (\_\_\_) of this Checklist must be completed exclusively with one of the following marks, unless otherwise directed in the checklist. If a functional space is not affected by a renovation project, the mark “E” may be indicated on the requirement line (\_\_\_) before the name of the functional space (associated requirements on indented lines below that name, or associated MEP requirements do not have to be completed in this case). If more than one functional space serves a given required function (e.g. patient room or exam room), that clarification should be provided in the Project Narrative, and the requirement lines are understood to only address the functional spaces that are involved in the project.

|  |  |
| --- | --- |
| **X** = Requirement is met, for new space, for renovated space, or for existing direct support space for an expanded service. | ⌧ = Check box under section titles or individual requirements lines for optional services or functions that are not included in the project area. |
| **E** = Requirement relative to an existing suite or area that has been *licensed* for its designated function, is *not affected* by the construction project and *does not pertain to a required direct support space* for the specific service affected by the project. “E” must not be used for an existing required support space associated with a new patient care room or area. | **W** = Waiver requested for specific section of the Regulations or FGI Guidelines, where hardship in meeting requirement can be demonstrated (a Physical Plant Waiver Form must be completed for each waiver request). An explicit floor plan or plan detail must be attached to each waiver request. |

1. All room functions marked with "X" must be shown on the plans with the same name labels as in this checklist.
2. Mechanical, electrical & plumbing requirements are only partially mentioned in this checklist. The relevant section of the FGI Guidelines must be used for project compliance with all MEP requirements and for waiver references.
3. Oxygen, vacuum, medical air, waste anesthesia gas disposal and instrument air outlets (if required) are identified respectively by the abbreviations "OX", "VAC", "MA", “WAGD” & “IA”.
4. Requirements referenced with “FI” result from formal interpretations from the FGI Interpretations Task Group.
5. The location requirements including asterisks (\*) refer to the definitions of the Glossary in the beginning section of the FGI Guidelines and reproduced in this checklist.

|  |  |  |
| --- | --- | --- |
| Facility Name: |  | DoN Project Number: (if applicable) |
| Facility Address: |  | Patient Care Unit Bed Complements:  Current =  Proposed = |
| Satellite Name: (if applicable) |  | Building/Floor Location: |
| Satellite Address: (if applicable) |  | Submission Dates: |
| Project Description: |  | Initial Date:  Revision Date: |

|  | **Architectural Requirements** | **Building Systems Requirements** |  |
| --- | --- | --- | --- |
| 2.2-2.8 | **NEONATAL INTENSIVE CARE UNIT** |  |  |
|  |  |  |  |
| 2.1‑1.2.3 | Shared Services: |  |  |
|  | No combined functions unless specifically allowed in this checklist |  |  |
|  |  |  |  |
| 2.2-2.8.1.2 | Location: |  |  |
| (1) | all entries to NICU secured with controlled access by door locking or by direct or indirect visual observation |  |  |
| (2) | family entrance & reception area is clearly identified |  |  |
| (3) | reception area permits visual observation & contact with all traffic entering unit |  |  |
| (4) | NICU designed to protect physical security of infants parents & staff & to minimize risk of infant abduction |  |  |
|  |  |  |  |
| 2.2-2.8.2 | **NICU ROOMS & AREAS** |  |  |
| 2.2-2.8.2.2(1)(a) | Multiple-infant rooms  (including those with bays, cubicles or movable cubicle partitions)  check if not included in project |  |  |
|  | Space Requirements: | Ventilation: |  |
|  |  | Min. 4 air changes per hour | Table 7.1 |
|  | each infant care station contains min. clear floor area 120 sf per infant care bed | Lighting:        General lighting | 2.1‑8.3.4.3(1)  (c) |
| (2)(a) | aisle adjacent\* to each infant care station with min. width 4’-0” | Lighting for NICU bed permits staff observation of patient |  |
| (2)(b) | fixed cubicle partitions | minimizes glare |  |
|  | check if not included in project        adjacent\* aisle with min. clear width 8’-0” to permit passage of equipment & personnel | Power:        Min. 16 receptacles in total        convenient to head of bed | Table 2.1-1  + Errata |
| (3)(a) | min. clearance 8’-0” provided between infant care beds | Nurse Call System:        Staff assistance station for each bed | Table 2.1-2 |
| (3)(b) | min. clearance 1 foot at head of infant care bed | Emergency call station for each bed |  |
|  | min. clearance 4’-0” between sides of infant care beds & any wall or other fixed obstruction | Medical Gases:        3 OX, 3 VAC, 3 MA per bed | Table 2.1-3 |
|  |  |  |  |
| 2.2-2.8.2.5(1) | Handwashing Stations: |  |  |
|  | every bed position located within 20’-0” of handwashing station |  |  |
|  |  |  |  |
| (1)(b) | Single-infant rooms  check if not included in project |  |  |
|  | Space Requirements: | Ventilation: |  |
|  | min. clear floor area 165 sf | Min. 4 air changes per hour | Table 7.1 |
| (3)(b) | min. clearance 1 foot at head of infant care bed | Lighting:        General lighting | 2.1‑8.3.4.3(1)  (c) |
|  | min. clearance 4’-0” between sides of infant care beds & any wall or other fixed obstruction | Lighting for NICU bed permits staff observation of patient |  |
|  | Handwashing Stations: | minimizes glare |  |
| 2.2-2.8.2.5(2) | handwashing station provided in each room | Power:        Min. 16 receptacles in total        convenient to head of bed | Table 2.1-1 |
|  |  | Nurse Call System:        Patient station        Staff assistance station        Emergency call for each bed | Table 2.1-2 |
|  |  | Medical Gases:        3 OX, 3 VAC, 3 MA per bed | Table 2.1-3 |
| 2.2-2.8.2.3 | Windows        at least one source of daylight is visible from infant care areas |  |  |
| (1) | exterior windows glazed with insulating glass to minimize heat gain or loss |  |  |
| (2) | exterior windows are situated at least 2’-0” from any part of infant bed        exterior windows are sized to minimize radiant heat loss from infant |  |  |
| (3) | all daylight sources are equipped with shading devices |  |  |
|  |  |  |  |
| 2.2-2.8.2.4 | Each infant care station is designed to allow visual privacy for infant & family |  |  |
|  |  |  |  |
| 2.2-2.8.4 | **SPECIAL PATIENT CARE ROOMS** |  |  |
| 2.2-2.8.4.2 | Airborne infection isolation (AII) room |  |  |
| (1) | provisions for observation of infant in AII room from adjacent\* areas of NICU |  |  |
| 2.1‑2.4.2.2 | complies with requirements applicable to NICU patient rooms |  |  |
| (1) | capacity one bed |  |  |
| (2) | personal protective equipment (PPE) storage at entrance to room |  |  |
| (3) | handwashing station |  |  |
|  |  |  |  |
| 2.1‑2.4.2.3 | Anteroom  check if not included in project |  |  |
| (1) | provides space for persons to don personal protective equipment (PPE) before entering patient room | Ventilation:        Min. 10 air changes per hour        Exhaust        No recirculating room units | Table 7.1 |
| (2) | all doors to anteroom have self‑closing devices  **or**        audible alarm activated when AII room is in use as isolation room |  |  |
|  |  |  |  |
| (3)(a) | handwashing station |  |  |
| (3)(b) | storage for unused PPE |  |  |
| (3)(c) | disposal/holding container for used PPE |  |  |
|  |  |  |  |
| 2.1‑2.4.2.4 | Architectural Details & Furnishings: |  |  |
| (1)(a) | perimeter walls ceiling & floor including penetrations constructed to prevent air exfiltration |  |  |
| (1)(b) | self‑closing devices on all room exit doors  **or**        activation of audible alarm when AII room is in use as isolation room |  |  |
|  |  |  |  |
|  | edge seals provided along sides & top of doorframe for any door into AII room |  |  |
| (2) (a) | window treatments do not include fabric drapes & curtains |  |  |
| 2.1‑7.2.3.1(7)(a) | floors are monolithic & integral coved wall bases are at least 6” high & tightly sealed to wall |  |  |
| 2.1‑2.4.2.5 | room pressure visual or audible alarm |  |  |
|  |  |  |  |
| 2.2-2.8.8 | **SUPPORT AREAS FOR NICU** |  |  |
| 2.2-2.8.8.2 | Administrative center or nurse station |  |  |
| 2.1‑2.8.2.1(1) | space for counters |  |  |
| 2.1‑2.8.2.1(2) | handwashing station next to or directly accessible\*  **or**        hand sanitation dispenser next to or directly accessible\* |  |  |
|  |  |  |  |
| 2.2-2.8.8.3 | Documentation area |  |  |
| 2.1‑2.8.3.1 | work surface to support documentation process | Nurse Call System:        Duty station (light/sound signal) | 2.1‑8.5.1.2(3)(b) |
| 2.2-2.8.8.4 | Nurse/supervisor office or station |  |  |
|  |  |  |  |
| 2.2-2.8.8.5 | Multipurpose room |  |  |
| (1) | at least one multipurpose room for each facility for patient conferences, reports, education, training sessions & consultation (may serve several patient care units & departments) |  |  |
| (2) | readily accessible\* to patient care unit |  |  |
| 2.2-2.8.8.8 | Medication safety zones |  |  |
| 2.1‑2.8.8.1(2) | Design Promoting Safe Medication Use: |  |  |
| (a) | medication safety zones located out of circulation paths |  |  |
| (b) | work space designed so that staff can access information & perform required tasks | Lighting:        Task‑specific lighting level min. 100 foot‑candles | 2.1‑2.8.8.1(2)(d) |
| (c) | work counters provide space to perform required tasks |  |  |
| (e) | sharps containers placed at height that allows users to see top of container |  |  |
| (f) | max. 45 dBA noise level caused by building systems |  |  |
|  |  |  |  |
| 2.1‑2.8.8.2(1) | medication preparation room |  |  |
| (a) | under visual control of nursing staff | Ventilation: |  |
| (b) | work counter | Min. 4 air changes per hour | Table 7.1 |
|  | handwashing station | Lighting: |  |
|  | lockable refrigerator | Task lighting | 2.1‑2.8.8.1(2)(d) |
|  | locked storage for controlled drugs |  |  |
|  | sharps containers  check if not included in project | Nurse Call System:        Duty station (light/sound signal) | Table 2.1-2 |
| (c) | self‑contained medication‑dispensing unit  check if not included in project |  |  |
|  | room designed with space to prepare medications  **or** |  |  |
| 2.1‑2.8.8.2(2) | automated medication‑dispensing unit |  |  |
| (a) | located at nurse station, in clean workroom or in alcove | Lighting:        Task lighting | 2.1‑2.8.8.1(2)(d) |
| (c) | handwashing station located next to stationary medication‑dispensing units or stations | Nurse Call System:        Duty station (light/sound signal) | Table 2.1-2 |
|  |  |  |  |
| 2.1‑2.8.10 | Ice‑making equipment |  |  |
|  |  |  |  |
| 2.2-2.8.8.11 | Clean workroom or clean supply room |  |  |
| 2.1‑2.8.11.2 | clean workroom        used for preparing patient care items | Ventilation:        Min. 4 air changes per hour | Table 7.1 |
| (1) | work counter | Positive pressure |  |
| (2) | handwashing station |  |  |
| (3) | storage facilities for clean & sterile supplies  **or** |  |  |
| 2.1‑2.8.11.3 | clean supply room | Ventilation: |  |
|  | used only for storage & holding as part of system for distribution of clean & sterile supplies | Min. 4 air changes per hour        Positive pressure | Table 7.1 |
| 2.2-2.8.8.12 | Soiled workroom or soiled holding room |  |  |
| 2.1‑2.8.12.2 | soiled workroom | Ventilation:        Min. 10 air changes per hour | Table 7.1 |
| (1)(a) | handwashing station | Exhaust |  |
| (1)(b) | flushing‑rim clinical service sink with bedpan‑rinsing device or equivalent flushing‑rim fixture | Negative pressure        No recirculating room units |  |
| (1)(c) | work counter |  |  |
| (1)(d) | space for separate covered containers for waste & soiled linen | Nurse Call System:        Duty station (light/sound signal) | Table 2.1-2 |
| (2) | fluid management system is used  check if not included in project |  |  |
| (a) | electrical & plumbing connections that meet manufacturer requirements |  |  |
| (b) | space for docking station  **or** |  |  |
| 2.1‑2.8.12.3 | soiled holding room | Ventilation:        Min. 10 air changes per hour | Table 7.1 |
| (1) | handwashing station or hand sanitation station | Exhaust        Negative pressure |  |
| (2) | space for separate covered containers for waste & soiled linen | No recirculating room units |  |
|  |  |  |  |
| 2.1‑2.8.13.1 | Clean linen storage |  |  |
| (1) | stored in clean workroom  **or**        separate closet  **or**        covered cart distribution system on each floor |  |  |
|  |  |  |  |
| (2) | storage of clean linen carts in designated corridor alcoves, clean workroom or closets |  |  |
|  |  |  |  |
| 2.1‑2.8.13.2 | Equipment & supply storage room or alcoves        sized to provide min. 10 sf per patient bed |  |  |
|  |  |  |  |
| 2.1‑2.8.13.3 | Storage space for gurneys, stretchers & wheelchairs |  |  |
|  |  |  |  |
| 2.2-2.8.8.13 | Emergency equipment storage |  |  |
| (1) | each patient care unit has at least one emergency equipment storage location |  |  |
| (2) | provided under visual observation of staff |  |  |
| (3) | storage locations in corridors do not encroach on minimum required corridor width |  |  |
|  |  |  |  |
| 2.2-2.8.8.14 | Environmental services room | Ventilation:        Min. 10 air changes per hour | Table 7.1 |
| (1) | not shared with other patient care units or departments | Exhaust        Negative pressure |  |
| (2) | directly accessible\* to NICU | No recirculating room units |  |
| 2.1‑2.8.14.2 |  |  |  |
| (1) | service sink or floor‑mounted mop sink |  |  |
| (2) | provisions for storage of supplies & housekeeping equipment |  |  |
| (3) | handwashing station  **or**        hand sanitation station |  |  |
|  |  |  |  |
| 2.2-2.8.8.15 | Diagnostic Treatment & Service Areas: (provided in same building) |  |  |
| (1) | respiratory therapy |  |  |
| (2) | blood gas lab |  |  |
| (3) | developmental therapy |  |  |
| (4) | social work |  |  |
| (5) | laboratory services |  |  |
| (6) | pharmacy services |  |  |
| (7) | radiology services |  |  |
| (8) | other ancillary services |  |  |
|  |  |  |  |
| 2.2-2.8.8.16 | Lactation support space        immediately accessible\* to NICU for lactation support & consultation |  |  |
| (1) | handwashing station        counter |  |  |
| (2)(a) | refrigeration & freezing |  |  |
|  | immediately accessible\* to NICU |  |  |
| (2)(b) | storage for pump & attachments & educational materials |  |  |
|  | immediately accessible\* to NICU |  |  |
|  |  |  |  |
| 2.2-2.8.8.17 | Infant feeding preparation facilities |  |  |
| (1)(a) | space for preparation & storage of formula & additives to human milk & formula provided in unit or other location away from patient bedside |  |  |
| (1)(b) | work area & equipment layout designed to provide for flow of materials from clean to soiled to maintain aseptic preparation space |  |  |
| (2) | infant feedings prepared on-site  check if not included in project |  |  |
| (a) | feeding preparation room with following spaces: |  |  |
|  | anteroom or anteroom area |  |  |
|  | preparation area |  |  |
|  | Storage space |  |  |
|  | Cleanup area |  |  |
|  |  |  |  |
| (3) | space for mixing additives into liquid formula or human milk provided in unit or in another location away from patient bedside |  |  |
| (4) | provisions for human milk storage provided in designated space in infant feeding preparation room or in designated spaces on patient care unit |  |  |
|  |  |  |  |
| (5) | Special Design Elements: |  |  |
| 2.1‑7.2.3.1(6) | surfaces in food preparation sanitation/ warewashing & serving areas be non‑absorbent smooth & easily cleaned |  |  |
| 2.1‑7.2.3.2(3) (a) | walls non‑absorbent, smooth, easily cleaned & light in color |  |  |
|  |  |  |  |
| 2.2-2.8.9 | **SUPPORT AREAS FOR STAFF** |  |  |
| 2.2-2.8.9.1 | Staff lounge        provided in or adjacent\* to unit        Staff locker room        provided in or adjacent\* to unit |  |  |
|  | Staff toilet room        provided in or adjacent\* to unit | Ventilation:        Min. 10 air changes per hour | Table 7.1 |
|  |  | Exhaust        Negative pressure        No recirculating room units |  |
| 2.2-2.8.9.2  (2) | On-call staff accommodations (may be located outside NICU) |  |  |
| 2.2-2.6.9.4 |  |  |  |
| (1) | accommodations for sleeping & rest |  |  |
| (a) | space for chair |  |  |
| (b) | space for bed |  |  |
| (2) | individually secured storage for personal items |  |  |
| (3) | communication system |  |  |
| (4) | at least one toilet, shower & handwashing station | Ventilation:        Min. 10 air changes per hour | Table 7.1 |
|  |  | Exhaust        Negative pressure        No recirculating room units |  |
| 2.2-2.8.10 | **SUPPORT AREAS FOR FAMILIES, PATIENTS & VISITORS** |  |  |
| 2.2-2.8.10.1 | Family & visitor lounge | Communications: |  |
| 2.1‑2.10.1 | each patient care unit provides access to lounge for family & visitors | Public communication services provided in each family & visitor lounge | 2.1‑2.10.1.6 |
| 2.1‑2.10.1.1(1) | accommodates at minimum 3 chairs & 1 wheelchair space |  |  |
| 2.1‑2.10.1.4 | designed to minimize impact of noise & activity on patient rooms & staff functions |  |  |
| 2.2-2.8.10.1(2) | immediately accessible\* to NICU |  |  |
|  |  |  |  |
| 2.2-2.8.10.2  (3) | Parent/infant room  check if not included in project  (only if all NICU rooms are single-infant rooms) |  |  |
|  | provided in NICU that allows parents & infants extended private time together | Ventilation: |  |
| (1)(b) | communication linkage with NICU staff | Min. 4 air changes per hour | Table 7.1 |
| (1)(d) | sleeping facilities for at least one parent | Lighting:        General lighting | 2.1‑8.3.4.3(1)  (c) |
| (1)(e) | sufficient space for infant’s bed & equipment | Lighting for NICU bed permits staff observation of patient |  |
|  |  | minimizes glare |  |
|  |  | Power:        Min. 16 receptacles in total        convenient to head of bed | Table 2.1-1 |
|  |  | Nurse Call System:        Patient station        Staff assistance station        Emergency call for each bed | Table 2.1-2 |
|  |  | Medical Gases:        3 OX, 3 VAC, 3 MA per bed | Table 2.1-3 |
|  |  |  |  |
| (1)(a) | direct private access to sink, shower & toilet facilities | Ventilation:        Min. 10 air changes per hour | Table 7.1 |
|  |  | Exhaust        Negative pressure        No recirculating room units |  |
|  |  |  |  |
| 2.2-2.8.7 | **SPECIAL DESIGN ELEMENTS** |  |  |
| 2.2-2.8.7.1 | Architectural Details: |  |  |
| (1)(a) | ceilings easily cleanable & non-friable |  |  |
| (1)(b) | ceiling construction limit passage of particles from above ceiling plane into clinical environment |  |  |
| (2) | wall sound isolation complies with Table 1.2-6 |  |  |
| (3) | floor sound isolation complies with Table 1.2-6 |  |  |
| 2.2-2.8.7.2 | Lighting: |  |  |
| (1) | indirect lighting & high-intensity lighting in NICU |  |  |
| (2) | color rendering index min. 80        full-spectrum color index min. 55        gamut area of no less than 65 & no greater than 100 |  |  |
| (3) | controls be provided to enable lighting to be adjusted over individual patient care spaces |  |  |
| (4) | darkening for body transillumination is available |  |  |
| (5)(a) | no direct ambient lighting in infant care station |  |  |
| (5)(b) | any direct ambient lighting outside infant care station is located or framed to avoid direct line of sight from infant to fixture |  |  |
| (6) | lighting fixtures are cleanable |  |  |
|  |  |  |  |
| 2.2-2.8.7.3 | Noise Control:        infant rooms, staff work areas, family areas, staff lounge & sleeping areas meet room noise criteria in Table 1.2-5 |  |  |
|  |  |  |  |

\*LOCATION TERMINOLOGY:

Directly accessible: Connected to the identified area or room through a doorway, pass-through, or other opening without going through an intervening room or public space

Adjacent: Located next to but not necessarily connected to the identified area or room

Immediately accessible: Available either in or adjacent to the identified area or room

Readily accessible: Available on the same floor or in the same clinic as the identified area or room

Architectural Details & MEP Requirements

|  |  |
| --- | --- |
| 2.1‑7.2.2 | **ARCHITECTURAL DETAILS** |
|  | CORRIDOR WIDTH: |
| 2.1‑7.2.2.1  NFPA 101, 18.2.3.4 | Aisles, corridors & ramps required for exit access in a hospital not less than 8'‑0" in clear & unobstructed width  **or**        Detailed code review incorporated in Project Narrative |
|  |  |
|  | Aisles, corridors & ramps in adjunct areas not intended for the housing, treatment, or use of inpatients not less than 44” in clear & unobstructed width  **or**        Detailed code review incorporated in Project Narrative |
|  |  |
| 2.1‑7.2.2.2 | CEILING HEIGHT: |
| (1) | Min ceiling height 7'-6"in corridors & in normally unoccupied spaces |
| (3) | Min. height 7’‑6” above floor of suspended tracks, rails & pipes located in traffic path for patients in beds & on stretchers |
|  | Min. ceiling height 7’‑10” in other areas |
|  |  |
| 2.1‑7.2.2.3  (1)  (a) | DOORS & DOOR HARDWARE:  Door Type:        doors between corridors, rooms, or spaces subject to occupancy swing type or sliding doors |
|  |  |
| (b) | sliding doors  check if not included in project |
|  | manual or automatic sliding doors comply with NFPA 101        detailed code review incorporated in Project Narrative        no floor tracks |
| (2)  (a) | Door Opening:        min. 45.5” clear door width for patient rooms        min. 83.5” clear door height for patient rooms |
| (b) | swinging doors for personnel use in addition to sliding doors  check if not included in project        min. clear width 34.5” |
| (3) | Door Swing: |
| (a) | doors do not swing into corridors except doors to non‑occupiable spaces (e.g. environmental services rooms & electrical closets) & doors with emergency breakaway hardware |
|  |  |
| (4) | Lever hardware or push/pull latch hardware |
| 2.1‑7.2.2.7 | GLAZING MATERIALS:        Glazing within 1 foot 6 inches of floor  check if not included in project |
|  | must be safety glass, wire glass or plastic break‑resistant material |
| 2.1‑7.2.2.8 | HANDWASHING STATIONS: |
| (1)(c) | Handwashing stations in patient care areas located so they are visible & unobstructed |
| (3) |  |
| (a) | Handwashing station countertops made of porcelain, stainless steel, solid‑surface materials or impervious plastic laminate assembly |
| (b) | Countertops substrate  check if not included in project        marine‑grade plywood (or equivalent material) with impervious seal |
| (4) | Handwashing station casework  check if not included in project        designed to prevent storage beneath sink |
| (5) | Provisions for drying hands |
| (a) | hand‑drying device does not require hands to contact dispenser |
| (b) | hand‑drying device is enclosed to protect against dust or soil & to ensure single‑unit dispensing |
| (6) | Liquid or foam soap dispensers |
|  |  |
| 2.1‑7.2.2.12 | NOISE CONTROL: |
| (1) | Recreation rooms, exercise rooms equipment rooms & similar spaces where impact noises may be generated are not located directly over patient bed areas  **or**        Special provisions are made to minimize impact noise |
|  |  |
| (2) | Noise reduction criteria in Table 1.2‑6 applicable to partitions, floors & ceiling construction are met in patient areas |
|  |  |
| 2.1‑7.2.2.14 | DECORATIVE WATER FEATURES: |
| (1) | No indoor unsealed water features |
| (2) | Covered fish tanks  check if not included in project        restricted to public areas |
|  |  |
| 2.1‑7.2.3 | **SURFACES** |
| 2.1‑7.2.3.1 | FLOORING & WALL BASES: |
| (1) | Flooring surfaces cleanable & wear‑resistant for location |
| (3) | Smooth transitions provided between different flooring materials |
| (4) | Flooring surfaces including those on stairways are stable, firm & slip‑resistant |
| (5) | Floors & wall bases of soiled workrooms, toilet rooms & other areas subject to frequent wet cleaning are constructed of materials that are not physically affected by germicidal or other types of cleaning solutions |
|  |  |
| 2.1‑7.2.3.2 | WALLS & WALL PROTECTION: |
| (1)(a) | Wall finishes are washable |
| (1)(b) | Wall finishes near plumbing fixtures are smooth, scrubbable & water‑resistant |
| (2) | Wall surfaces in areas routinely subjected to wet spray or splatter (e.g. environmental services rooms) are monolithic or have sealed seams that are tight & smooth |
| (5) | Wall protection devices & corner guards durable & scrubbable |
| 2.1‑7.2.3.3 | CEILINGS: |
| (1) | Ceilings provided in all areas except mechanical, electrical & communications equipment rooms |
| (a) | Ceilings cleanable with routine housekeeping equipment |
| (b) | Acoustic & lay‑in ceilings where used do not create ledges or crevices |
|  |  |
| 2.1-7.2.4 | FURNISHINGS: |
| 2.1‑7.2.4.1 | Built‑In Furnishings:  check if not included in project |
|  | upholstered with impervious materials in patient treatment areas |
| 2.1‑7.2.4.3 | Privacy curtains in patient rooms & other patient care areas are washable  check if not included in project |

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| 2.1‑8.2 | **HEATING VENTILATION & AIR‑CONDITIONING (HVAC) SYSTEMS** |
| Part 3/6.1 | UTILITIES: |
| Part 3/6.1.1 | Ventilation Upon Loss of Electrical Power:        space ventilation & pressure relationship requirements of Tables 7.1 are maintained for AII Rooms, PE Rooms in event of loss of normal electrical power |
|  |  |
| Part 3/6.1.2 | Heating & Cooling Sources: |
| Part 3/6.1.2.1 | heat sources sufficient to accommodate facility needs (reserve capacity) even when any one of heat sources or essential accessories is not operating due to breakdown or routine maintenance        capacity of remaining source or sources is sufficient to provide for domestic hot water & heating for intensive care rooms |
|  |  |
| Part 3/6.1.2.2 | Central cooling systems greater than 400 tons (1407 kW) peak cooling load  check if not included in project        cooling sources sufficient to support owner’s facility operation plan upon breakdown or routine maintenance of any one of cooling sources |
|  |  |
| Part 3/6.2 | AIR-HANDLING UNIT (AHU) DESIGN: |
| Part 3/6.2.1 | AHU casing is designed to prevent water intrusion, resist corrosion & permit access for inspection & maintenance |
| . |  |
| Part 3/6.3 | OUTDOOR AIR INTAKES & EXHAUST DISCHARGES: |
| Part 3/6.3.1 | Outdoor Air Intakes: |
| Part 3/6.3.1.1 | located min. of 25 ft from cooling towers & all exhaust & vent discharges        outdoor air intakes located such that bottom of air intake is at least 6'-0" above grade        air intakes located away from public access |
|  |  |
| Part 3/6.3.1.3 | intakes on top of buildings  check if not included in project        located with bottom of air intake min. 3'-0" above roof level |
|  |  |
| Part 3/6.3.1.4 | intake in areaway  check if not included in project        bottom of areaway air intake opening is at least 6'-0" above grade        bottom of air intake opening from areaway into building is at least 3'-0" above bottom of areaway |
|  |  |
| Part 3/6.3.2 | Exhaust Discharges for Infectious Exhaust Air:  check if not included in project |
| Part 3/6.3.2.1 | ductwork within building is under negative pressure for exhaust of contaminated air (i.e. air from AII rooms) |
|  | exhaust discharge outlets with contaminated air located such that they reduce potential for recirculation of exhausted air back into building |
| Part 3/6.3.2.2 | exhaust discharge outlets with contaminated air is arranged to discharge to atmosphere in vertical direction at least 10'-0" above adjoining roof level |
|  | exhaust discharge outlets from AII rooms is located not less than 25 feet horizontally from outdoor air intakes, openable windows/doors & areas that are normally accessible to public |
|  |  |
| Part 3/6.4 | FILTRATION: |
|  | Two filter banks for inpatient care (see Table 6.4)        Filter Bank No. 1: MERV 7        Filter Bank No. 2: MERV 14        Each filter bank with efficiency of greater than MERV 12 is provided with differential pressure measuring device to indicate when filter needs to be changed |
| Part 3/6.4.1 | Filter Bank No. 1 is placed upstream of heating & cooling coils |
| Part 3/6.4.2 | Filter Bank No. 2 is placed downstream of all wet-air cooling coils & supply fan |
| Part 3/6.5 | HEATING & COOLING SYSTEMS: |
| Part 3/6.5.3 | Radiant heating systems  check if not included in project        ceiling or wall panels with exposed cleanable surfaces or radiant floor heating are provided in AII room, PE room & burn unit |
| Part 3/6.7 | AIR DISTRIBUTION SYSTEMS: |
| Part 3/6.7.1 | pressure relationships required in tables 7.1 maintained in all modes of HVAC system operation        Spaces that have required pressure relationships are served by fully ducted return systems or fully ducted exhaust systems        Inpatient facilities are served by fully ducted return or exhaust systems |
|  |  |
| Part 3/6.7.2 | Air Distribution Devices: |
|  | supply air outlets comply with Table 6.7.2 |
|  |  |
| Part 3/6.7.3 | Smoke Barriers:        HVAC zones coordinated with compartmentation to minimize ductwork penetrations of fire & smoke barriers. |
| Part 3/6.8 | ENERGY RECOVERY SYSTEMS:  check if not included in project |
| Part 3/6.8.1 | Located upstream of Filter Bank No. 2 |
| Part 3/6.8.2 | AII room exhaust systems or combination AII/PE rooms are not used for energy recovery |
|  |  |
| Part 3/6.8.3 | Energy recovery systems with leakage potential  check if not included in project        arranged to minimize potential to transfer exhaust air directly back into supply airstream        designed to have no more than 5% of total supply airstream consisting of exhaust air |
|  |  |
| Part 3/7 | SPACE VENTILATION |
| Part 3/7.1.a  Part 3/7.1.a.1 | Spaces ventilated according to Table 7.1        Air movement is from clean to less-clean areas |
|  |  |
| Part 3/7.1.a.3 | Min. number of total air changes required for positive pressure rooms is provided by total supply airflow        Min. number of total air changes required for negative pressure rooms is provided by total exhaust airflow |
|  |  |
| Part 3/7.1a.5 | Air recirculation through room unit  check if not included in project        complies with Table 7.1 |
|  | room unit receive filtered & conditioned outdoor air        serve only a single space |
|  | provides min. MERV 6 filter located upstream of any cold surface so that all of air passing over cold surface is filtered |
|  |  |
| Part 3/7.2 | ADDITIONAL ROOM-SPECIFIC REQUIREMENTS: |
| Part 3/7.2.1 | Airborne Infection Isolation (AII) Rooms  check if not included in project |
|  | AII rooms have permanently installed device and/or mechanism to constantly monitor differential air pressure between room & corridor        Local visual means is provided to indicate whenever negative differential pressure is not maintained |
|  | Air from AII room is exhausted directly to outdoors |
|  | Exhaust air from AII rooms, associated anterooms & toilet rooms is discharged directly to outdoors without mixing with exhaust air from any other non-AII room or exhaust system |
| Part 3/7.2.1 | Exhaust air grille or register in patient room is located directly above patient bed on ceiling or on wall near head of bed |
|  |  |
|  | Anteroom  check if not included in project        AII room is at negative pressure with respect to anteroom        Anteroom is at negative pressure with respect to corridor |
|  |  |
| Part 3/7.2.2 | Protective Environment (PE) Rooms  check if not included in project |
| Part 3/7.2.2 | Supply air diffusers are located above patient bed |
|  | Exhaust grilles or registers are located near patient room door. |
|  | PE rooms have permanently installed device to constantly monitor differential air pressure between room & corridor local        Visual means is provided to indicate whenever positive differential pressure is not maintained |
|  |  |
| Part 3/7.2.3 | Combination Airborne Infectious Isolation/ Protective Environment Room (AII/PE)  check if not included in project |
|  | Supply air diffusers are located above patient bed |
|  | Exhaust grilles or registers are located near patient room door. |
|  | Anteroom  check if not included in project |
|  | anteroom is at positive pressure with respect to both AII/PE room & corridor or common space  **or** |
|  | anteroom is at negative pressure with respect to both AII/PE room & corridor or common space |
|  |  |
|  | First device monitors pressure differential between AII/PE room & anteroom        Second device monitors pressure differential between anteroom & corridor or common space        Local visual means are provided to indicate whenever differential pressures are not maintained |

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| 2.1‑8.3 | **ELECTRICAL SYSTEMS** |
| 2.1‑8.3.2.2 | Panelboards: |
| (1) | panelboards serving life safety branch circuits serve floors on which they are located & floors immediately above & below |
| (2) | panelboard critical branch circuits serve floors on which they are located |
| (3) | panelboards not located in exit enclosures or exit passageways |
| 2.1‑8.3.2.3 | Ground‑Fault Circuit Interrupters in Critical Care Areas:  check if not included in project |
| (2) | each receptacle individually protected by single GFCI device |
|  |  |
| 2.1-8.3.3 | POWER-GENERATING & -STORING EQUIPMENT |
| 2.1-8.3.3.1 | Essential electrical system or emergency electrical power |
| (1) | essential electrical system complies with NFPA 99 |
| (2) | emergency electrical power complies with NFPA 99 |
| 2.1‑8.3.4 | LIGHTING: |
| 2.1‑8.3.4.3(2) | Patient care unit corridors have general illumination with provisions for reducing light levels at night |
| 2.1‑8.3.5 | ELECTRICAL EQUIPMENT: |
| 2.1‑8.3.5.1 | Handwashing sinks & scrub sinks that depends on building electrical service for operation are connected to essential electrical system  check if not included in project |
| 2.1‑8.3.6 | ELECTRICAL RECEPTACLES: |
| 2.1‑8.3.6.1 | Receptacles In Corridors: |
| (1) | duplex‑grounded receptacles for general use installed 50’‑0” apart or less in all corridors        duplex‑grounded receptacles for general use installed within 25’‑0” of corridor ends |
| 2.1‑8.3.6.3 | Essential Electrical System Receptacles: |
| (1) | cover plates for electrical receptacles supplied from essential electrical system are distinctively colored or marked for identification |
| (2) | same color is used throughout facility |
|  |  |
| 2.1‑8.4 | **PLUMBING SYSTEMS** |
| 2.1‑8.4.2 | Plumbing & Other Piping Systems: |
| 2.1‑8.4.2.1(3) | no plumbing piping exposed overhead or on walls where possible accumulation of dust or soil may create cleaning problem |
| 2.1‑8.4.2.2 | Hemodialysis/Hemoperfusion Water Distribution:  check if not included in project |
| (1)(a)  (2)(b)  (1)(b) | separate treated water distribution system        outlet at each individual hemodialysis treatment bay        outlet at hemodialysis equipment repair area        outlet at dialysate preparation area  **or**        dialysis equipment includes sufficient water treatment provisions for use of domestic cold water |
| (1)(a) | drainage system independent from tap water drainage |
| (4) | liquid waste & disposal system for hemodialysis treatment area are designed to minimize odor & prevent backflow |
| (5) | hemodialysis distribution piping is readily accessible\* for inspection & maintenance |
|  |  |
| 2.1‑8.4.2.5 | Heated Potable Water Distribution Systems: |
| (2) | heated potable water distribution systems serving patient care areas are under constant recirculation        non‑recirculated fixture branch piping max. length 25’‑0” |
| (3)(a)  (3)(c) | no installation of dead‑end piping (except for empty risers mains & branches for future use) |
| (3)(b) | any existing dead‑end piping is removed  ☐ check if not included in project |
| (4)(a) | water‑heating system supplies water at temperatures & amounts indicated in Table 2.1‑4 |
|  |  |
| 2.1‑8.4.2.6 | Drainage Systems: |
| (1)(a) | drainage piping installed above ceiling of or exposed in electronic data processing areas & electric closets  check if not included in project |
|  | special provisions to protect space below from leakage & condensation |
| (1)(b) | drip pan for drainage piping above ceiling of sensitive area  check if not included in project        accessible        overflow drain with outlet located in normally occupied area |
|  |  |
| 2.1‑8.4.3 | PLUMBING FIXTURES: |
| 2.1‑8.4.3.1(1) | Materials used for plumbing fixtures are non‑absorptive & acid‑resistant |
|  |  |
| 2.1‑8.4.3.2 | Handwashing Station Sinks: |
| (1) | designed with basins that will reduce risk of splashing to areas for direct patient care & medication preparation |
| (2) | sink basins have nominal size of no less than 144 square inches        sink basins have min. dimension 9 inches in width or length |
| (3) | sink basins are made of porcelain, stainless steel or solid‑surface materials |
| (5) | faucet water discharge point min. 10” above bottom of basin |
| (7) | anchored so that allowable stresses are not exceeded where vertical or horizontal force of 250 lbs. is applied |
| (8) | sinks used by staff & public have fittings that can be operated without using hands (may be single‑lever or wrist blade devices) |
| (a) | blade handles  check if not included in project        at least 4 inches in length |
|  | provide clearance required for operation |
| (b) | sensor‑regulated water fixtures  check if not included in project |
|  | meet user need for temperature & length of time water flows |
|  | designed to function at all times and during loss of normal power |
|  |  |
| 2.1‑8.4.3.4 | Ice‑Making Equipment:        copper tubing provided for supply connections to ice‑making equipment |
| 2.1‑8.4.3.5 | Clinical Flushing-Rim Sinks:  check if not included in project |
| (1)  (a) | trimmed with valves that can are operated without hands (may be single‑lever or wrist blade devices) |
| (b) | handles are at least 6 in. long |
| (2) | integral trap wherein upper portion of water trap provides visible seal |
| 2.1‑8.4.3.7 | Bedpan‑Rinsing Devices: |
| (1) | bedpan‑rinsing devices provided in each inpatient toilet room |
| (2) | use cold water only |
|  |  |
| 2.1‑8.4.4 | **MEDICAL GAS & VACUUM SYSTEMS** |
|  | Station outlets provided as indicated in Table 2.1‑3 |
|  |  |
| 2.1‑8.5.1 | **CALL SYSTEMS** |
| 2.1‑8.5.1.1 |  |
| (1) | Nurse call stations provided as required in Table 2.1‑2 |
| (2) | Nurse call systems report to attended location with electronically supervised visual & audible annunciation as indicated in Table 2.1‑2 |
| (4) | Call system complies with UL 1069 “Standard for Hospital Signaling & Nurse Call Equipment” |
| (5) | Wireless nurse call system  check if not included in project |
|  | complies with UL 1069 |
|  |  |
| 2.1‑8.5.1.2 | Patient Call Stations: |
| (2)(b) | reset switch for canceling call |
| (3)(a) | visible signal in corridor at patient’s door  Multi‑Corridor Patient Areas:  check if not included in project |
|  | additional visible signals at corridor intersections |
| 2.1‑8.5.1.5 | Emergency call stations are equipped with continuous audible or visual confirmation to person who initiated the code call |
|  |  |
| 2.1‑8.6.2 | **ELECTRONIC SURVEILLANCE SYSTEMS**  check if not included in project |
| 2.1‑8.6.2.2 | monitoring devices are located so they are not readily observable by general public or patients |
| 2.1‑8.6.2.3 | electronic surveillance systems receive power from essential electrical system |