**COMPLIANCE CHECKLIST**

**IP4\_Intermediate 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** |  |
| --- | --- | --- | --- |
| 2.2-2.5 | **INTERMEDIATE CARE UNIT** |  |  |
|  |  |  |  |
| A2.2-2.5 | Stepdown unit used for patients who require frequent monitoring of vital signs and/or nursing intervention |  |  |
|  | progressive care unit  **or**        specialty care unit such as cardiac, surgical (e.g., thoracic, vascular), neurosurgical/neurological monitoring, or chronic ventilator respiratory care unit |  |  |
|  |  |  |  |
| 2.2-2.5.1.2 | Location: |  |  |
|  | intermediate care beds located in separate unit  **or**        designated as part of another unit |  |  |
|  |  |  |  |
| 2.1‑1.2.3 | Shared Services: |  |  |
|  | No combined functions unless specifically allowed in this checklist |  |  |
|  |  |  |  |
| 2.2-2.5.2 | **PATIENT ROOM** |  |  |
|  |  |  |  |
| 2.2-2.2.2.1 | Capacity: |  |  |
| (1) | maximum number of beds per room is one bed |  |  |
| (2) | **or**        renovation work is undertaken        present capacity is more than one patient in each room        proposed room capacity is no more than present capacity        maximum 2 patients in each room |  |  |
|  |  |  |  |
| 2.2-2.5.2.2 | Space Requirements: |  |  |
| (1)(a) | single-patient rooms  check if not included in project | Ventilation:        Min. 6 air changes per hour | Table 7.1 |
|  | min. clear floor area 150 sf | Lighting: | 2.1‑8.3.4.3(1) |
|  |  | General lighting |  |
| (2)(a) | min. clearance 4’-0” between sides of bed & any wall or any other fixed obstruction | Reading light for each patient bed        controls accessible to patients in bed | (a) |
| (2)(b) | min. clearance 4’-0” between foot of bed & any wall or any other fixed obstruction | Night‑light located in each patient room        no central control of night‑lights outside room | (b) |
| (1)(a) | multiple-patient rooms  check if not included in project | night‑light illuminates path from room entrance to bedside |  |
|  | min. clear floor area 120 sf per bed | night‑light illuminates path between bed & toilet room |  |
| (2)(a) | min. clearance 4’-0” between sides of bed & any wall or any other fixed obstruction | Power:        Min. 12 receptacles in total        Min. 2 receptacles at each side of the head of the bed | Table 2.1-1 |
| (2)(b) | min. clearance 4’-0” at foot of each bed to permit passage of equipment & beds | Min. 2 receptacles on all other walls (not including any TV receptacle) |  |
| 2.2-2.5.2.3 | Windows in Patient Rooms: | Min. 1 receptacle for each motorized bed |  |
| 2.1‑7.2.2.5(1) | each patient room provided with natural light by means of window to outside | Nurse Call System:        Patient station | Table 2.1-2 |
| 2.1‑7.2.2.5(2) | operable windows in patient rooms  check if not included in project | Staff assistance station        Emergency call station |  |
|  | window operation is limited with either stop limit/restrictor hardware or open guard/screen | Medical Gases:        1 OX, 1 VAC per bed | Table 2.1-3 |
|  | prevents passage of 4‑inch diameter sphere through opening |  |  |
| 2.1‑7.2.2.6 | insect screens |  |  |
| 2.1‑7.2.2.5(3) |  |  |  |
| (a) | min. net glazed area be no less than 8% of required min. clear floor area |  |  |
| (b) | max. 36” windowsill height above finished floor |  |  |
|  |  |  |  |
| 2.2-2.5.2.4 | Patient Privacy: |  |  |
| 2.1‑2.1.2 | provisions are made to address patient visual & speech privacy |  |  |
|  |  |  |  |
| 2.2-2.5.2.5 | Handwashing Station in Patient Room: |  |  |
| 2.1‑2.2.5.1  (1) | provided in patient room in addition to that in toilet room        adjacent\* to entrance to patient room for use by health care personnel & others  Multiple‑Patient Rooms:  check if not included in project |  |  |
| (2) | handwashing station located outside patients cubicle curtains |  |  |
|  |  |  |  |
| 2.2-2.5.2.6 | Patient toilet room |  |  |
| 2.1‑2.2.6.2 | in patient care units patient toilet room serve no more than one patient room |  |  |
| 2.1‑2.2.6.3  (1)  (2)  (3) | toilet        handwashing station        bedpan washer | Ventilation:        Min. 10 air changes per hour        Exhaust        Negative pressure | Table 7.1 |
|  |  | No recirculating room units |  |
|  |  | Nurse Call System:        Bath station | Table 2.1-2 |
| 2.2-2.5.2.7 | Patient Bathing Facilities: |  |  |
| (1)(a) | located in toilet room directly accessible from each patient room  **or** |  |  |
| (1)(b) | located in central bathing facility |  |  |
|  |  |  |  |
| (2) | Central Bathing Facilities:  check if not included in project |  |  |
| (a) | each bathtub or shower in individual room or enclosure that provides privacy for bathing drying & dressing | Ventilation:        Min. 10 air changes per hour        Exhaust        Negative pressure | Table 7.1 |
| (b) | at least one shower or bathtub provided for each patient care unit | No recirculating room units |  |
|  | at least one bathing facility with space for attendant to accommodate patients on gurneys, carts & wheelchairs (may be shared with multiple patient care units located on separate floors) | Nurse Call System:        Bath station | Table 2.1-2 |
| (c) | following functions be provided |  |  |
|  | toilet in separate enclosure in or directly accessible to each central bathing facility | Ventilation:        Min. 10 air changes per hour        Exhaust | Table 7.1 |
|  | handwashing sink in or directly accessible to each central bathing facility | Negative pressure        No recirculating room units |  |
|  | storage for soap & towels in or directly accessible to each central bathing facility | Nurse Call System:        Bath station | Table 2.1-2 |
|  |  |  |  |
| (3) | Mobile Lifts, Shower Gurney Devices & Wheelchair Access: |  |  |
| (a) | doorways designed to allow entry of portable/mobile mechanical lifts & shower gurney devices |  |  |
| (b) | thresholds designed to facilitate use & prevent tipping of wheelchairs & other portable wheeled equipment |  |  |
| (c) | patient shower rooms designed to allow entry of portable/mobile mechanical lifts & shower gurney devices |  |  |
| (d) | floor drain grates be designed to facilitate use & prevent tipping of wheelchairs & other portable wheeled equipment |  |  |
|  |  |  |  |
| 2.2-2.5.2.8 | Patient Storage: |  |  |
| 2.1‑2.2.8 | separate wardrobe, locker, or closet suitable for garments & for storing personal effects |  |  |
|  |  |  |  |
| 2.2-2.5.4 | **SPECIAL PATIENT CARE ROOMS** |  |  |
|  |  |  |  |
| 2.2-2.5.4.2 | Airborne infection isolation (AII) room |  |  |
| (1) | at least one AII room in patient care unit |  |  |
| 2.1‑2.4.2.2 | complies with requirements applicable to patient rooms | Ventilation:        Min. 12 air changes per hour | Table 7.1 |
| (1) | capacity one bed | Exhaust |  |
| (2) | personal protective equipment (PPE) storage at entrance to room | Negative pressure        No recirculating room units |  |
| (3) | handwashing station |  |  |
|  |  |  |  |
| (4) | patient toilet room        serves only one AII room | Ventilation:        Min. 10 air changes per hour | Table 7.1 |
| (5) | bathtub or shower | Exhaust |  |
| 2.1‑2.2.6.3  (1)  (2)  (3) | toilet        handwashing station        bedpan washer | Negative pressure        No recirculating room units |  |
|  |  |  |  |
| 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 | 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 | No recirculating room units |  |
|  |  |  |  |
| (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 |  |  |
|  |  |  |  |
| 2.2-2.5.8 | **SUPPORT AREAS FOR PATIENT CARE UNITS & OTHER PATIENT CARE AREAS** |  |  |
| 2.1‑2.8.1 | Support areas provided on each patient care unit floor |  |  |
|  |  |  |  |
| 2.2-2.5.8.1 | Administrative center or nurse station |  |  |
|  | direct or remote visual observation between administrative center or nurse station, staffed documentation areas, and all patient beds in unit |  |  |
|  |  |  |  |
| 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\* |  |  |
|  |  |  |  |
| 2.1‑2.8.2.2 | Center for reception & communication |  |  |
|  | self‑contained  **or**        combined with administrative center or nurse station |  |  |
|  |  |  |  |
| 2.2-2.5.8.2 | 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) |
| 2.1‑2.8.4 | Nurse or supervisor office |  |  |
|  |  |  |  |
| 2.1‑2.8.5 | Multipurpose room |  |  |
|  | at least one multipurpose room for each facility for patient conferences, reports, education, training sessions & consultation (may serve several patient care units & departments) |  |  |
|  |  |  |  |
| 2.2-2.5.8.7 | Handwashing station |  |  |
| 2.1‑2.8.7.1 | located in each room where hands‑on patient care is provided |  |  |
|  |  |  |  |
| 2.2-2.5.8.8 | 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 |
|  |  |  |  |
| 2.2-2.5.8.9 | Nourishment area or room |  |  |
| 2.1‑2.8.9.2 |  | Ventilation: |  |
| (1) | handwashing station | Min. 2 air changes per hour | Table 7.1 |
| (2) | work counter |  |  |
| (3) | refrigerator |  |  |
| (4) | microwave |  |  |
| (5) | storage cabinets |  |  |
| (6) | space for temporary storage of food service implements | Nurse Call System:        Duty station (light/sound signal) | 2.1‑8.5.1.2(3)(b) |
| 2.1‑2.8.9.3 | provisions & space are included for separate temporary storage of unused & soiled meal trays |  |  |
|  |  |  |  |
| 2.2-2.5.8.10 | Ice‑making equipment |  |  |
|  |  |  |  |
| 2.2-2.5.8.11 | 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** | Nurse Call System:        Duty station (light/sound signal) | Table 2.1-2 |
| 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 |
|  |  |  |  |
| 2.2-2.5.8.12 | 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 |  |  |
|  |  |  |  |
| 2.2-2.5.8.13 | Equipment & supply storage rooms or alcoves        provide min. 20 sf per patient bed |  |  |
| 2.1‑2.8.13.3 | Storage space for gurneys, stretchers & wheelchairs |  |  |
|  |  |  |  |
| 2.1‑2.8.13.4 | 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 |  |  |
|  |  |  |  |
| 2.2-2.5.8.14 | Environmental services room | Ventilation:        Min. 10 air changes per hour | Table 7.1 |
| 2.1‑2.8.14.1 | readily accessible\* to unit or floor it serves (permitted to serve more than one patient care unit on floor) | Exhaust        Negative pressure        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 |  |  |
|  |  |  |  |
| 2.2-2.5.9 | **SUPPORT AREAS FOR STAFF** |  |  |
| 2.2-2.5.9.1 | Staff lounge |  |  |
|  | min.100 sf |  |  |
| 2.2-2.5.9.2 | Staff toilet room |  |  |
| 2.1‑2.9.2.1 | readily accessible\* to each patient care unit | Ventilation:        Min. 10 air changes per hour | Table 7.1 |
| 2.1‑2.9.2.2 | toilet & handwashing station | Exhaust        Negative pressure        No recirculating room units |  |
| 2.2-2.5.9.3 | Staff storage facilities |  |  |
| 2.1‑2.9.3.1 | securable closets or cabinet compartments for personal articles of staff        located in or near nurse station |  |  |
|  |  |  |  |
| 2.2-2.5.10 | **SUPPORT AREAS FOR FAMILIES PATIENTS & VISITORS** |  |  |
| 2.1‑2.10.1 | Family & visitor lounge | Communications: |  |
|  | 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 | Size: |  |  |
| (1) | accommodates at minimum 3 chairs & 1 wheelchair space |  |  |
| (2) | accommodates at least 1.5 persons for every adult critical care bed & 1 person for every 4 medical/surgical beds in unit |  |  |
| 2.1‑2.10.1.2 | immediately accessible\* to patient care units served (permitted to serve more than one patient care unit) |  |  |
| 2.1‑2.10.1.4 | designed to minimize impact of noise & activity on patient rooms & staff functions |  |  |
|  |  |  |  |

\*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: | (4) |
| (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)  (b) | DOORS & DOOR HARDWARE:  Door Type:        doors between corridors, rooms, or spaces subject to occupancy swing type or sliding doors        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 & doors with emergency breakaway hardware |
| (4) | Lever hardware or push/pull latch hardware |
|  |  |
| (5) | Doors for Patient Bathing/Toilet Facilities: |
| (a) | two separate doors  **or** |
|  | door that swings outward  **or** |
|  | door equipped with emergency rescue hardware (permits quick access from outside the room to prevent blockage of the door)  **or** |
|  | sliding door other than pocket door |
| (b) | bathing area or toilet room opens onto public area or corridor  check if not included in project |
|  | visual privacy is maintained |
| 2.1‑7.2.2.5 | WINDOWS IN PATIENT ROOMS: |
| 2.1‑7.2.2.5(1) | Each patient room provided with natural light by means of window to outside |
| 2.1‑7.2.2.5(2) | Operable windows in patient rooms or suites  check if not included in project        window operation is limited—with either stop limit/restrictor hardware or open guard/screen        prevents passage of 4‑inch diameter sphere through opening |
| 2.1‑7.2.2.6 | insect screens |
|  |  |
| 2.1‑7.2.2.5(3) | Window Size In Patient Rooms: |
| (a) | minimum net glazed area be no less than 8% of required min. clear floor area of room served |
| (b) | maximum 36 inches windowsill height above finished floor |
| 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 |
| 2.1‑7.2.2.9 | GRAB BARS: |
| (1) | Grab bars anchored to sustain concentrated load 250 pounds |
| (2) | Grab bars in toilet rooms used by patients of size anchored to sustain concentrated load 800 pounds |
| (3) | Ends of grab bars constructed to prevent snagging clothes of patients, staff & visitors |
|  |  |
| 2.1‑7.2.2.10 | HANDRAILS: |
| (1) | Handrails installed on both sides of patient use corridors |
| (3) | Rail ends return to wall or floor |
| (4) | Handrail gripping surfaces & fasteners are smooth (free of sharp or abrasive elements) with 1/8‑inch min. radius |
| (5) | Handrails have eased edges & corners |
| (6) | Handrail finishes are cleanable |
|  |  |
| 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 |
| 2.1‑7.2.4.2 | Window Treatments in Patient Rooms & Other Patient Care Areas: |
| (1) | patient-controlled window treatments provided to allow for patient privacy & to control light levels & glare |
| (2) | window treatments do not compromise patient safety        easy for patients, visitors & staff to operate |
| (3) | window treatments selected for ease of cleaning, disinfection or sanitization |
| 2.1‑7.2.4.3 | Privacy curtains in patient rooms & other patient care areas are washable  check if not included in project |
|  |  |
| 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 & essential accessories are provided in number & arrangement 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 & to provide heating for inpatient 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        number & arrangement of cooling sources & essential accessories is sufficient to support 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 3/6.3.2 | 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—HOSPITAL SPACES: |
| 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 |
|  |  |

|  |  |
| --- | --- |
| 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 |
| 2.1-8.3.3 | 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: |
| 2.1‑8.3.4.2 | Luminaires in wet areas have smooth cleanable shatter‑resistant lenses & no exposed lamps |
| 2.1‑8.3.4.3(1) | Reading light for each patient bed |
| (a) | incandescent & halogen lights  check if not included in project |
|  | placed or shielded to protect patient from injury |
|  | light covered by diffuser or lens |
|  | flexible light arms  check if not included in project        mechanically controlled to prevent lamp from contacting bed linen |
| 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 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 |
|  |  |
| 2.1‑8.4.2.5 | 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) | 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, patients, & 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 |
| 2.1‑8.4.3.3 | Showers & Tubs: |
| (1) | nonslip surfaces |
| 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 |
| (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: |
| (1) | each patient sleeping bed provided with patient call station equipped for two‑way voice communication |
| (2)(a) | indicator light that remains lighted as long as voice circuit is operating |
| (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 |
|  |  |
| 2.1‑8.5.1.3 | Bath Stations:        bath station that can be activated by patient lying on floor provided at each patient toilet, bathtub or shower stall |
| (1) | alarm in these areas can only be turned off at bath station where it was initiated |
| (2) | shower/tub bath stations located 3'‑0" to 4’‑0” above floor within view of user & within reach of staff without need to step into shower or tub |
| (3) | toilet bath stations located on the side of toilets within 12” of front of toilet bowl & 3'-0" to 4’‑0” above floor |
|  |  |
| 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 |
|  |  |