COMPLIANCE CHECKLIST

IP5_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 2022 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:

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

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 <u>not</u> be used for an existing required support space associated with a new patient care room or area.

☒ = Check box under section titles or individual requirements lines for optional services or functions that are not included in the project 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.

4. All room functions marked with "X" must be shown on the plans with the <u>same name labels</u> as in this checklist.
5. 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.
6. 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".
7. Requirements referenced with "FI" result from formal interpretations from the FGI Interpretations Task Group.
8. 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
2.2-2.6	**INTENSIVE CARE UNIT**	
2.1-1.2.3	Shared Services: ___ No combined functions unless specifically allowed in this checklist	
2.2-2.6.1.2	Location:	
(1)	___ intensive care unit located in same building as services and/or departments required to provide care to intensive care patients (e.g. emergency, respiratory therapy, laboratory, radiology, surgery)	
(2)	___ unit be located so that medical emergency resuscitation teams can respond promptly to emergency calls with minimum travel time	
(3)	___ location does not permit unrelated traffic of staff, public or other patients through unit (except for emergency egress)	
2.2-2.6.2	**INTENSIVE CARE PATIENT CARE AREAS**	
2.2-2.6.2.2	Space Requirements:	Ventilation:
(1)	___ each patient care station is single-patient room	___ Min. 6 air changes per hour — Table 7-1
(2)	___ each patient room has min. clear floor area 200 sf	Lighting:
	___ min. headwall width 13’-0”	___ General lighting — 2.1-8.3.4.3(1)(c)
(3)(a)	___ min. clearance 1'-0" from head of bed to wall	___ Lighting for bed permits staff observation of patient ___ minimizes glare
(3)(b)	___ min. clearance 5’-0” from foot of bed to wall	Power:
(3)(c)	___ min. clearance 5’-0” on transfer side	___ Min. 16 receptacles in total — Table 2.1-1
(3)(d)	___ min. clearance 4’-0” on non-transfer side	___ convenient to head of bed with one on each wall
(5)	___ patient room sized to allow for minimum of two seated visitors without interfering with providers’ access to patient & equipment	Nurse Call System: ___ Patient station — Table 2.1-2 ___ Staff assistance station ___ Emergency call station
		Medical Gases: ___ 1 OX, 3 VAC, 1 MA per bed — Table 2.1-3
2.2-2.6.2.3	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(3)		
(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	

	Architectural Requirements	Building Systems Requirements	
2.2-2.6.2.4	Patient Privacy:		
(1)	___ view panels to corridor with means to allow visual privacy		
(2)	___ existing multiple patient care stations in renovation projects ☐ check if not included in project		
	___ each patient care station has provisions for visual privacy from casual observation by other patients & visitors		
2.2-2.6.2.5	Handwashing Stations:		
(1)	___ handwashing station provided in each patient room		
(2)	___ existing multiple patient care stations in renovation projects ☐ check if not included in project		
(a)	___ at least one handwashing station provided for every 3 patient care stations		
(b)	___ handwashing station located near patient care station		
2.2-2.6.2.6	Toilet Room or Human Waste Disposal Room:	Ventilation:	
(1)	___ enclosed toilet room	___ Min. 10 air changes per hour	Table 7-1
(2)	___ handwashing station		
(1)	___ toilet with bedpan-rinsing device	___ Exhaust	
	___ direct access from patient room	___ Negative pressure	
	or	___ No recirculating room units	
	___ enclosed human waste disposal room		
(2)	___ handwashing station		
(1)	___ bedpan washer-disinfector system		
	___direct access from patient room		
2.2-2.6.4	**SPECIAL PATIENT CARE AREAS**		
2.2-2.6.4.2	___ Airborne infection isolation (AII) room		
(1)	___ at least one AII room provided in one intensive care unit		
2.1-2.4.2.2	___ complies with requirements applicable to patient rooms		
(1)	___ capacity one bed		
(2)	___ personal protective equipment (PPE) storage at entrance to room		
	___ provisions for PPE disposal at entrance to room		
(3)	___ handwashing station		
(4)	___ patient toilet room	Ventilation:	
	___ serves only one AII room	___ Min. 10 air changes per hour	Table 7-1
		___ Exhaust	
		___ Negative pressure	
		___ No recirculating room units	

	Architectural Requirements	Building Systems Requirements	
2.1-2.4.2.3	___ Anteroom ☐ check if not included in project		
(2)(a)	___ provides space for persons to don personal protective equipment (PPE) before entering patient room ___ provides space for persons to doff PPE after leaving patient room	Ventilation: ___ Min. 10 air changes per hour ___ Exhaust ___ No recirculating room units	Table 7-1
(2)(b)	___ 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		
2.2-2.4.4.4	___ Protective environment (PE) room ☐ check if not included in project		
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	___ Positive pressure	
(2)	___ personal protective equipment (PPE) storage at entrance to room	___ No recirculating room units	
(3)	___ handwashing station	___ Supply air diffusers are located above patient bed ___ Exhaust grilles or registers located near patient room door	Part 3/7.2.2

	Architectural Requirements	Building Systems Requirements	
(4)	___ Patient toilet room	Ventilation:	
	___ serves only one PE room	___ Min. 10 air changes per hour	Table 7-1
2.1-2.2.6.3(1)	___ toilet	___ Exhaust	
2.1-2.2.6.3(2)	___ handwashing station	___ Negative pressure	
2.1-2.2.6.3(3)	___ bedpan washer	___ No recirculating room units	
2.1-2.4.2.3	___ Anteroom		
	☐ check if <u>not</u> 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	Table 7-1
		___ No recirculating room units	
(2)	___ all doors to anteroom have self-closing devices		
	or		
	___ audible alarm activated when PE 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 PE room is in use as isolation room		
	___ edge seals provided along sides & top of doorframe for any door into PE 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		
2.2-2.2.4.4(5)	Special Design Elements:		
(a)	___ monolithic ceiling		
	___ surfaces are cleanable		
(b)	___ lighting fixtures have lenses & are sealed		
2.1-7.2.3.1 (7)(a)	___ floors are monolithic & integral coved wall bases are at least 6” high & tightly sealed to wall		

	Architectural Requirements	Building Systems Requirements	
2.2-2.6.8	**SUPPORT AREAS FOR INTENSIVE CARE UNIT**		
2.2-2.6.8.2(1) 2.1-2.8.2.1(1)	___ Administrative center or nurse station ___ 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*		
2.2-2.6.8.2(2)	___ direct or remote visual observation between nurse station or staffed charting stations & all patient care stations in intensive care unit ___ observation provides view of patient while patient is in bed		
2.2-2.6.8.3 (1)	___ Documentation areas ___ provided for each patient in or adjacent* to patient care station		
(2)	___ Information review area located to facilitate concentration		
2.2-2.6.8.4 (1)	___ Nurse or supervisor office ___ office space for intensive care medical & nursing management/administrative personnel ___ immediately accessible* to intensive care unit		
(2)	___ offices linked with unit by telephone or intercommunications system		
2.2-2.6.8.5	___ 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)		
2.2-2.6.8.8 2.1-2.8.8.1(2)	___ Medication safety zones 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		

	Architectural Requirements	Building Systems Requirements	
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		
(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 or hand sanitation dispenser located next to stationary medication-dispensing units or stations		
2.2-2.6.8.9	___ Nourishment area or room		
(2)	___ located within intensive care unit		
	or		
	___ shared with another intensive care unit		
	___ accessible from intensive care unit without travel through public corridor		
2.1-2.8.9.2(1)	___ handwashing station	Ventilation:	
2.1-2.8.9.2(2)	___ work counter	___ Min. 2 air changes per hour	Table 7-1
2.1-2.8.9.2(3)	___ refrigerator		
2.1-2.8.9.2(4)	___ microwave		
2.1-2.8.9.2(5)	___ storage cabinets		
2.1-2.8.9.2(6)	___ space for temporary storage of food service implements		
2.1-2.8.9.3	___ provisions & space for separate temporary storage of unused meal trays		
2.1-2.8.9.4	___ provisions & space for soiled meal trays		
2.2-2.6.8.10	___ Ice-making equipment		
(1)	___ provides ice for treatment & nourishment		
2.2-2.6.8.11	Clean workroom or clean supply room		
(2)	___ located within intensive care unit		
	or		
	___ shared with another intensive care unit		
	___ accessible from intensive care unit without travel through public corridor		

	Architectural Requirements	Building Systems Requirements	
2.1-2.8.11.2	___ clean workroom	Ventilation:	
	___ used for preparing patient care items	___ 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
2.2-2.6.8.12	Soiled workroom or soiled holding room		
(2)	___ located within intensive care unit		
	or		
	___ shared with another intensive care unit		
	___ accessible from intensive care unit without travel through public corridor		
2.1-2.8.12.2	___ soiled workroom	Ventilation:	
(1)(a)	___ handwashing station	___ Min. 10 air changes per hour	Table 7-1
(1)(b)	___ flushing-rim clinical service sink with bedpan-rinsing device or equivalent flushing-rim fixture	___ Exhaust ___ Negative pressure ___ No recirculating room units	
(1)(c)	___ work counter		
(1)(d)	___ space for separate covered containers for waste & soiled linen		
(2)	___ fluid waste 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:	
(1)	___ handwashing station or hand sanitation station	___ Min. 10 air changes per hour ___ Exhaust	Table 7-1
(2)	___ space for separate covered containers for waste & soiled linen	___ Negative pressure ___ No recirculating room units	
2.2-2.6.8.13(1)	___ Clean linen storage		
(b)	___ located within intensive care unit		
	or		
	___ shared with another intensive care unit		
	___ access from intensive care unit without travel through public corridor		
2.1-2.8.13.1(1)	___ stored in clean workroom or clean supply room		

	Architectural Requirements	Building Systems Requirements	
	or		
	___ separate closet		
	or		
	___ covered cart distribution system on each floor		
2.1-2.8.13.1(2)	___ storage of clean linen carts in designated corridor alcoves, clean workroom or closets		
2.2-2.6.8.13(2)	___ Equipment storage room or alcoves		
(a)	___ sized to provide min. 20 sf per patient care station		
(b)	___ equipment storage room contains space & provisions for recharging equipment		
(3)	___ Wheelchair & gurney storage		
(4)	___ Emergency equipment storage		
2.1-2.8.13.4(1)	___ each patient care unit has at least one emergency equipment storage location		
2.1-2.8.13.4(2)	___ provided under visual observation of staff		
2.1-2.8.13.4(3)	___ storage locations in corridors do not encroach on minimum required corridor width		
2.2-2.6.8.14	___ Environmental services room	Ventilation:	
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)	___ Min. 10 air changes per hour ___ Exhaust ___ Negative pressure	Table 7-1
2.1-2.8.14.2(1)	___ service sink or floor-mounted mop sink	___ No recirculating room units	
2.1-2.8.14.2(2)	___ provisions for storage of supplies & housekeeping equipment		
2.1-2.8.14.2(3)	___ handwashing station		
	or		
	___ hand sanitation station		
2.2-2.6.8.15	___ Exam room ☐ check if not included in project		
2.1-2.1.2	Patient Privacy: ___ provisions are made to address patient visual & speech privacy		
2.1-3.2.2.1	Space Requirements:	Ventilation:	
(1)	___ min. clear floor area 120 sf	___ Min. 6 air changes per hour	Table 7-1
	___ min. clear dimension 10'-0"	Lighting:	
(2)(a)	___ room size permits room arrangement with min. clearance 3'-0" at each side & at foot of exam table, recliner or chair	___ Portable or fixed exam light	2.1-8.3.4.3(3)
	___ room arrangement (layout #1) shown in the plans	Power: ___ Min. 8 receptacles in total ___ Min. 4 receptacles convenient to head of gurney or bed	Table 2.1-1
		Nurse Call System: ___ Staff assistance station ___ Emergency call station	Table 2.1-2

	Architectural Requirements	Building Systems Requirements	
(2)(b)	___ exam table, recliner or chair is placed at angle closer to one wall than another or against wall to accommodate type of patient being served ☐ check if not included in project ___ room arrangement (layout #2) shown in the plans		
2.1-3.2.2.2(2)	___ storage for supplies		
2.1-3.2.2.2(3)	___ accommodations for written or electronic documentation		
2.1-3.2.2.2(4)	___ space for visitor's chair		
2.1-3.2.2.2(5)	___ handwashing station		
2.2-2.6.8.16	___ Patient-monitoring equipment		
(1)	___ located in each unit for physiological monitoring with visual displays for each patient at bedside & at nurse station or centralized monitoring area		
(2)	___ monitors located to permit easy viewing ___ monitors do not interfere with access to patient		
2.2-2.6.8.17	___ Image-viewing capability unit (may serve more than one intensive care unit)		
2.2-2.6.9	**SUPPORT AREAS FOR STAFF**		
2.2-2.6.9.1	___ Staff lounge		
	___ min.100 sf		
(1)	___ located in or adjacent* to intensive care unit (may serve adjacent* ICU's)		
(2)			
(3)	___ telephone or intercom & emergency call station connections to intensive care unit it serves		
(4)	___ equipment & space for seating		
2.2-2.6.9.2	___ Staff toilet rooms (permitted to be unisex)		
	___ readily accessible* to staff lounge		
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	
2.2-2.6.9.3	___ 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		
2.2-2.6.9.4	___ On-call staff accommodation		
(1)	___ accommodations for sleeping & rest		
(a)	___ space for chair		
(b)	___ space for bed		
(2)	___ individually secured storage for personal items		
(3)	___ communication system		

	Architectural Requirements	Building Systems Requirements	
(4)	___ at least one toilet, shower & handwashing station	Ventilation: ___ Min. 10 air changes per hour ___ Exhaust ___ Negative pressure ___ No recirculating room units	Table 7-1
2.2-2.6.10	**SUPPORT AREAS FOR FAMILIES & 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(1)	___ accommodates at least 3 chairs & 1 wheelchair space		
2.1-2.10.1.1(2)	___ accommodates at least 1.5 persons for every adult intensive care bed		
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		
2.2-2.6.10.2	___ Place for meditation, bereavement & prayer		
2.1-6.2.5	___ dedicated space accessible to the public		

*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**

2.1-7.2.2.1 CORRIDOR WIDTH:

NFPA 101, 18.2.3.3
- ___ 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

2.1-7.2.2.2 CEILING HEIGHT:

(1) ___ Min. ceiling height 7’-6” in corridors & in normally unoccupied spaces

(2) ___ Min. ceiling height 9'-0" in seclusion rooms & secure holding rooms

(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 DOORS & DOOR HARDWARE:

(1) Door Type:

(a) ___ 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) Door Opening to Patient Rooms:

(a) ___ min 45.5” clear door width
___ min 83.5” clear door height

(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 in behavioral health units & 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

(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)(a) ___ Installed on both sides of patient use corridors
(1)(b) (may be omitted at nurse stations, doors, alcoves & fire extinguisher cabinets)
(2) ___ Rail ends return to wall or floor
(3) ___ Handrail gripping surfaces & fasteners are smooth (free of sharp or abrasive elements)
(4) ___ Handrails have eased edges & corners
(5) ___ Handrails have surface light reflectance value that contrasts with that of wall surface by min. 30%
(6) ___ Handrail finishes are cleanable & able to withstand disinfection

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 cleaning solutions
(7)(a) Floors are monolithic & integral coved wall bases are at least 6" high & tightly sealed to wall in rooms listed below:
___ airborne infection isolation (AII) room
___ protective environment (PE) room
☐ check if not included in project
___ combination AII/PE room
☐ check if not included in project
___ anteroom to AII & PE rooms
☐ check if not included in project
___ soiled workroom & soiled holding room

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 ES 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

2.1-7.2.4.1 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) ___ blinds sheers or other 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 is not operating
___ capacity of remaining source or sources is sufficient to provide for domestic hot water & to provide heating for intensive care nursery & 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 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

.

Part 3/6.3 OUTDOOR AIR INTAKES & EXHAUST DISCHARGES:
Part 3/6.3.1 Outdoor Air Intakes:
Part 3/6.3.1.1
___ located such that shortest distance from intake to any specific potential outdoor contaminant source be equal to or greater than separation distance listed in Table 6-1
___ located min of 25 ft from cooling towers & all exhaust & vent discharges
___ air intakes located away from public access
___ all intakes designed to prevent entrainment of wind-driven rain
___ contain features for draining away precipitation
___ equipped with birdscreen of mesh no smaller than 0.5 inches
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:
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'-0" horizontally from outdoor air intakes, openable windows/doors & areas that are normally accessible to public

Part 3/6.4 FILTRATION:
a. ___ Particulate matter filters, min. MERV-8 provided upstream of first heat exchanger surface of any air-conditioning system that combines return air from multiple rooms or introduces outdoor air
b. ___ Outdoor air filtered in accordance with Table 7-1
c. ___ Air supplied from equipment serving multiple or different spaces is filtered in accordance with Table 7-1
d. ___ Air recirculated within room is filtered in accordance with Table 7-1 or Section 7.1(a)(5)
h. ___ For spaces that do not permit air recirculated by means of room units & have minimum filter efficiency of MERV-14, MERV-16 or HEPA in accordance with Table 7-1, the min. filter requirement listed in Table 7-1 is installed 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 6-2

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 filters required by Part 3/6.8.4

Part 3/6.8.2 ___ AII room exhaust systems or combination AII/PE rooms are not used for energy recovery

Part 3/7 SPACE VENTILATION - HOSPITAL SPACES:

Part 3/7.1.a ___ Spaces ventilated according to Table 7-1

Part 3/7.1.a.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 single space
___ provides min MERV 8 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

or

___ is discharged into the general exhaust stream, provided the All exhaust air first passes through a HEPA filter (all exhaust ductwork kept under negative pressure)

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
___ 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:**

2.1-8.3.4.1

(1) ___ Luminaires in patient areas shall have smooth, cleanable, impact-resistant lenses concealing light source

(2) ___ Luminaires dissipate heat such that touchable surfaces will not burn occupants or ignite materials.

2.1-8.3.4.2

(1) Patient rooms:

(a) ___ provide general level of illumination

___ provide exam level of illumination

(b) (may be dimmable & limited to patient care station)

(c) ___ illumination for reading provided for each patient bed

___ patients must be able to adjust illumination without having to get out of bed

(d) ___ no incandescent & halogen light sources

(e) ___ light sources are either encapsulated or covered by diffuser or lens or use fixtures designed to contain fragments

(f) Night-lighting:

___ at least one night-light fixture located in each patient room

___ night-lights used by staff that illuminate path from entry to bedside are switched at room entrance

___ night-light fixture located no more than 18 inches from finished floor illuminates pathway from bed to toilet room

___ night-light color temperature 2,700K or warmer

(2)(a) ___ Corridors in patient care units have general illumination with provisions for reducing light levels at night

(3) Exam/treatment rooms:

___ portable or fixed exam light

(6) Food & nutrition areas:

___ light sources in kitchen & serving areas are either encapsulated or covered by diffuser or lens or use fixtures designed to contain fragments

(7) ___ Uplight fixtures installed in patient care areas are covered

2.1-8.3.5 **ELECTRICAL EQUIPMENT:**

2.1-8.3.5.1 ___ Handwashing sinks that depend on building electrical service for operation are connected to essential electrical system

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) ___ separate treated water distribution system
(2)(b) ___ outlet at each individual hemodialysis treatment bay
___ outlet at hemodialysis equipment repair area
___ outlet at dialysate preparation area

or

(1)(b) ___ 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 to provide continuous hot water at each hot water outlet
___ non-recirculated fixture branch piping is not more than 10'-0" long
(3)(a) ___ no installation of dead-end
(3)(c) piping (installation of empty risers mains & branches for future use is permitted)
(3)(b) Renovations:
☐ check if not included in project
___ dead-end piping is removed

2.1-8.4.2.6 Drainage Systems:
(1)(a) ___ drainage piping above ceiling of or exposed in rooms listed below piping have special provisions to protect space below from leakage & condensation
- operating rooms
- delivery rooms
- procedure rooms
- trauma rooms
- nurseries
- central kitchens
- one-room sterile processing facilities
- clean workroom of two-room sterile processing facilities
- pharmacies
- Class 2 & 3 imaging rooms
- electronic mainframe rooms (EFs & TERs)
- main switchgear
- electrical rooms
- electronic data processing areas
- electric closets

(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 that is not open to restricted 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 & faucets that reduce risk of splashing to areas where direct patient care is provided, sterile procedures are performed, medications are prepared or food is prepared
(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 of faucets is at least 10 inches 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 medical/nursing 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 & during loss of normal power

2.1-8.4.3.3 Showers & Tubs:
(1) ___ nonslip surfaces
(2) Surfaces for personal effects (e.g., shampoo, soap):
☐ check if not included in project
___ surfaces for personal effects are recessed

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 Sinks:
☐ check if not included in project
(1) ___ trimmed with valves that can are operated without hands
(a) (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 Human waste disposal systems:
(1) ___ bedpan-rinsing device
(a) ___ provided in each inpatient toilet room
(b) ___ use cold water only
or
(2) ___ bedpan washer-disinfector system
(a) ___ located in patient toilet room or soiled workroom
(b) ___ electrical & plumbing connections that meet manufacturer requirements are provided
or
(3) ___ disposable bedpan macerator system
(a) ___ installed in soiled workroom
(b) ___ electrical & plumbing connections per manufacturer requirements are provided

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
2.1-8.5.1.1(2) ___ Nurse call systems report to attended location with electronically supervised visual & audible annunciation as indicated in Table 2.1-2
2.1-8.5.1.1(4) ___ Call system complies with UL 1069 “Standard for Hospital Signaling & Nurse Call Equipment”
2.1-8.5.1.1(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 except nursery beds 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
(3)(b) ___ visible & audible signal at the nurse master station of patient care units or patient care areas

2.1-8.5.1.2(4) ___ Nurse call system provided in each patient care area as required in Table 2.1-2

2.1-8.5.1.3 Bath Stations:
___ can be activated by patient lying on floor provided at each patient toilet bathtub sitz bath 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

2.1-8.6.2.1 ___ Display screens in patient areas are mounted in tamper-resistant enclosure that is unobtrusive

2.1-8.6.2.2 ___ Display screens 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