COMPLIANCE CHECKLIST

IP15_Surgical Services

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:

Satellite Name: (if applicable)

Building/Floor Location:

Satellite Address: (if applicable)

Submission Dates:

Project Description:

Initial Date:

Revision Date:

Architectural Requirements **Building Systems Requirements**

2.2-3.4 **Surgical Services**

2.2-3.4.1.1 Location & Layout:

(4) ___ surgery department divided into unrestricted areas, semi-restricted areas & restricted areas

(1) ___ semi-restricted & restricted areas of surgery department located & arranged to prevent unrelated traffic

(2) ___ clinical practice setting designed to facilitate movement of patients & personnel into through & out of defined areas in surgery department

(3) ___ signs that clearly indicate need for surgical attire shown on plans at all entrances to semi-restricted areas

2.2-3.4.2 **PROCEDURE ROOMS**

☐ check if not included in project

2.2-3.4.2.1(1) Application:

(a) ___ room designated for the performance of patient care that requires high-level disinfection or sterile instruments & some environmental controls but not required to be performed with the environmental controls of an operating room

___ hospital has completed clinical assessment of procedures to be performed to determine appropriate room type & location for procedures & documented this in functional program included in Project Narrative

2.2-3.4.2.1(2) Location:

(a) ___ procedure room meet requirements of semi-restricted area

(b) ___ procedure room accessed from semi-restricted corridor or from unrestricted corridor

2.2-3.4.2.2 Space Requirements:

(1)(a) ___ min. clear floor area 130 sf

(1)(b) ___ anesthesia machine & associated supply carts are used

☐ check if not included in project

___ min. clear floor area 160 sf

(1)(c) ___ procedure room sized to accommodate personnel & equipment needed for particular procedures,

___ procedure room sized to accommodate additional personnel & equipment that may be needed for emergency rescue

(2)(a) ___ min. clearance 3'-6" on each side of table, gurney or procedural chair

___ min. clearance 3'-0" at head & foot of table, gurney or procedural chair

Ventilation:

___ Min. 15 air changes per hour Table 7-1

___ Positive pressure

___ No recirculating room units

Power:

___ Min. 12 receptacles in total Table 2.1-1

___ Min. 8 receptacles convenient to table placement with at least one on each wall

Nurse Call System:

___ Emergency call station Table 2.1-2

Medical Gases:

___ 1 OX, 2 VAC, 1 MA Table 2.1-3

Architectural Requirements **Building Systems Requirements**

(2)(b) ___ anesthesia machine & associated supply carts are used
___ min. clearance 6'-0" at head of table, gurney or procedural chair

2.2-3.4.2.3 ___ Documentation area
(1) ___ accommodations for written and/or electronic documentation provided in procedure room
2.1-2.8.3.1 ___ work surface to support documentation process
2.2-3.4.2.3(2) ___ use of documentation area allows for direct observation of patient
2.2-3.4.2.4 ___ Provisions made for patient privacy

2.2-3.4.2.5 Handwashing Facilities:
(1) ___ handwashing station located in procedure room
or
(2) ___ hand scrub station directly accessible* to procedure room

2.2-3.4.3 **OPERATING ROOMS**
2.2-3.4.3.1(1) Application: Rooms designated for invasive procedures as defined in Glossary
___ procedures performed in aseptic surgical field & penetrates protective surfaces of patient body, may require entry into or opening of sterile body cavity, or involve insertion of indwelling foreign body, or include excision & grafting of burns
___ procedures that do not begin as invasive procedures but have recognized measurable risks of requiring conversion to invasive procedures
(2) ___ Operating room meets requirements of restricted area

2.2-3.4.3.2 ___ General Operating Room
☐ check if not included in project
Space Requirements:
(3) (may include minor wall encroachments max. 12" deep by max. 10% of wall length)
(1)(a) ___ min. clear floor area 400 sf
(1)(b) ___ min. clearance 8'-6" on each side of operating table
___ min. clearance 6'-0" at head of operating table
___ anesthesia work zone with clear floor area 6'-0" x 8'-0"
___ min. clearance 7'-0" at foot of operating table

Ventilation:	
___ Min. 20 air changes per hour	Table 7-1
___ Positive pressure	
___ No recirculating room units	
Lighting:	
___ General lighting in addition to special lighting units provided at surgical table	2.1-8.3.4.3(4)(a)
Power:	
___ Min. 36 receptacles in total	Table 2.1-1
___ Min. 16 receptacles convenient to table placement	
___ Min. 2 on each wall	
Nurse Call System:	
___ Emergency call station	Table 2.1-2
Medical Gases:	Table 2.1-3
___ 2 OX, 5 VAC, 1 MA, 1 WAGD	

	Architectural Requirements	Building Systems Requirements
2.2-3.4.3.3	___ Documentation area	
(1)	___ accommodations for written and/or electronic documentation	
(2)	___ use of documentation area allows for direct observation of patient	
2.2-3.4.3.4	___ Visual information display	
	___ at least one medical visual information display provided in operating room	
2.2-3.4.3.5(3)	Communications System:	
(a)	___ all operating rooms are equipped with emergency communication system that incorporates push activation of emergency call switch	
(b)	___ each operating room have system for emergency communication with surgery department control station	
(2)	___ Operating room for image-guided surgery ☐ check if not included in project	
(3)	Space Requirements: (may include minor wall encroachments of max. 12" deep by max. 10% of wall length)	
	___ uses portable imaging equipment or surgical procedures that require additional personnel and/or large equipment	
(a)	___ sized to accommodate personnel & equipment planned to be in room during procedures	
	New Construction & Major Renovations: ___ min. clear floor area 600 sf ___ min. clear dimension 20'-0" **or**	
(b)	Limited Renovations: ___ min. clear floor area 500 sf ___ min. clear dimension 20'-0"	
2.2-3.4.3.3	___ Documentation area	
(1)	___ accommodations for written and/or electronic documentation	
(2)	___ use of documentation area allows for direct observation of patient	
2.2-3.4.3.4	___ Medical image viewers (e.g. X-ray film or digital)	
2.2-3.4.3.5(3)	Communications System:	

Ventilation:	
___ Min. 20 air changes per hour	
___ Positive pressure	Table 7-1
___ No recirculating room units	
Lighting:	
___ General lighting in addition to special lighting units provided at surgical table	2.1-8.3.4.3(4)(a)
Power:	
___ Min. 36 receptacles in total	Table 2.1-1
___ Min. 16 receptacles convenient to table placement	
___ Min. 2 on each wall	
Nurse Call System:	
___ Emergency call station	Table 2.1-2
Medical Gases:	
___ 2 OX, 5 VAC, 1 MA, 1 WAGD	Table 2.1-3

Architectural Requirements **Building Systems Requirements**

(a) ___ all operating rooms are equipped with emergency communication system that incorporates push activation of emergency call switch

(b) ___ each operating room have system for emergency communication with surgery department control station

2.2-3.4.3.6 ___ Equipment storage rooms for open-heart or complex orthopedic & neurosurgical surgery

___ provided in semi-restricted area

2.2-3.4.4 **HYBRID OPERATING ROOM**

☐ check if not included in project

2.2-3.4.4.1 Application:

___ hybrid operating rooms (Class 3 imaging rooms)

2.2-3.4.4.2 Space Requirements:

2.2-3.4.3.2 (3) (may include minor wall encroachments max. 12" deep by max. 10% of wall length)

(1)(a) ___ min. clear floor area 400 sf

(1)(b) ___ min. clearance 8'-6" on each side of operating table

___ min. clearance 6'-0" at head of operating table

___ anesthesia work zone with clear floor area 6'-0" x 8'-0"

___ min. clearance 7'-0" at foot of operating table

2.2-3.4.4.2(1) ___ clear floor area, clearance & storage requirements for imaging equipment contained in room

2.2-3.4.4.2(2) ___ any mobile storage units do not encroach on required clear floor area & clearances

2.2-3.4.2.2(1) ___ imaging rooms are sized & configured to comply with manufacturer's recommendations for installation service & maintenance

___ installation plans from manufacturer have been submitted to DPH Plan Review

2.2-3.4.3.3 ___ Documentation area

(1) ___ accommodations for written and/or electronic documentation

(2) ___ use of documentation area allows for direct observation of patient

2.2-3.4.3.4 ___ Medical image viewers (e.g. X-ray film or digital)

Ventilation:	
___ Min. 20 air changes per hour	Table 7-1
___ Positive pressure	
___ No recirculating room units	
Lighting:	
___ General lighting in addition to special lighting units provided at surgical table	2.1-8.3.4.3(4)(a)
Power:	
___ Min. 36 receptacles in total	Table 2.1-1
___ Min. 16 receptacles convenient to table placement	
___ Min. 2 on each wall	
Nurse Call System:	
___ Emergency call station	Table 2.1-2
Medical Gases:	
___ 2 OX, 5 VAC, 1 MA, 1 WAGD	Table 2.1-3

Architectural Requirements **Building Systems Requirements**

2.2-3.4.3.5(3) Communications System:
(a) ___ all operating rooms are equipped with emergency communication system that incorporates push activation of emergency call switch
(b) ___ each operating room have system for emergency communication with surgery department control station

2.2-3.4.4.3 ___ Control room
(1) ___ sized & configured in compliance with manufacturer recommendations for installation service & maintenance
(2) ___ control room physically separated from hybrid operating room with walls & door
or
___ open control area serves only one operating room & is built maintained & controlled same as operating room

(4) ___ view panels that provide for view of patient & surgical team

2.2-3.4.4.4 Structural Support:
___ floor & ceiling structures designed to support weight of imaging equipt as well as other fixed ancillary equipt & movable ancillary equipt

2.2-3.4.4.5 ___ Hybrid operating room protected from disruptive environmental vibrations & other disturbances in accordance with imaging equipment manufacturer's technical specifications

2.2-3.4.4.6 ___ System component room
2.2-3.4.2.5(1) Location:
(a) ___ accessed only from unrestricted or semi-restricted space outside imaging room
2.2-3.4.2.5(2) Space Requirements:
___ room sized to accommodate following as indicated by imaging equipment manufacturer
(a) ___ transformers
(b) ___ power distribution equipment
(c) ___ power conditioning/UPS equipment
(d) ___ computers
(e) ___ associated electronics & electrical gear

Architectural Requirements **Building Systems Requirements**

2.2-3.4.4.7 Radiation Protection:
2.2-3.4.1.3 ☐ check if not included in project (only if imaging equipment does not emit ionizing radiations)
___ certified radiation physicist has specified type, location & amount of radiation protection
___ specifications of radiation shielding have been submitted to DPH Radiation Control Program

2.2-3.4.4.8 Specific requirements for hybrid operating rooms with intraoperative computerized tomography (CT) systems:
☐ check if not included in project

2.2-3.4.4.8(1)
2.2-3.4.1.3(1) ___ Shielded control room
(a) Space Requirements:
___ sized & configured according to manufacturer recommendations
(c) ___ shielded view window designed to provide full view of patient at all times (use of additional closed-circuit video monitoring permitted)
(d) ___ control room enclosed with walls & door

2.2-3.4.4.8(2) Specific Requirements for Hybrid Operating Rooms with Intraoperative MRI Systems:
☐ check if not included in project
2.2-3.4.5.1 Planning Configuration of MRI Suite:
(1) ___ conforms to 4-zone screening & access control protocols identified by American College of Radiology
___ **Zone I**: all areas that are freely accessible to the general public
___ **Zone II**: interface between the publicly accessible uncontrolled Zone I & strictly controlled Zone III (space for screening questions, patient histories, medical insurance questions)
___ **Zone III**: no free access by unscreened persons or non-MRI personnel due to interactions between persons or equipment & MRI scanner
___ **Zone IV**: MRI scanner room where access must be supervised by MRI personnel

	Architectural Requirements	Building Systems Requirements
(2)	___ MRI suite as well as spaces around, above & below designed to prevent unscreened individuals from entering 5-gauss volume around MRI equipment	
(3)	Specific Support Areas for MRI Suite:	
(a)	___ space for patient interviews & clinical screening	
(b)	___ space for physical screening	
(c)	___ ferromagnetic (only) detection & warning systems	
(d)	___ access controls	
(e)	___ space to accommodate site-specific clinical & operational requirements such as image-guided procedures emergent imaging or general anesthesia support ☐ check if not included in project	
(f)	___ space for containment of non-MRI-safe objects outside restricted MRI safety zones	
(g)	___ space for storage (patient lockers) of patient belongings & non-MRI-safe items	
(4)	___ any area in which magnetic field strength is equal to or greater than 5 gauss is physically restricted by use of key locks or pass-key locking systems	
2.2-3.4.5.4	___ MRI control room	
(1)	___ operator console positioned so operator has full view of principal approach & entrance to MRI scanner room	
(2)	___ outward-swinging door ☐ check if not included in project ___ door in open position does not obstruct view of entry opening from operator's console	
2.2-3.4.1.3(1)	Space Requirements:	
(a)	___ sized & configured according to manufacturer's recommendations ___ installation plans from manufacturer have been submitted to DPH Plan Review	
2.2-3.4.1.3(1) (c)	___ shielded view window designed to provide full view of examination/ procedure table & patient at all times including full view of patient during imaging activities (use of additional closed-circuit video monitoring permitted)	
2.2-3.4.1.3(1) (d)	___ control room enclosed with walls & door	

Architectural Requirements **Building Systems Requirements**

2.2-3.4.5.9 Special Design Elements for MRI Scanner Room:

(1)(a) ___ ferromagnetic materials that may become detached or otherwise interfere with operation of MRI scanner are not used in MRI scanner rooms

(1)(b) ___ MRI scanner room be located and/or shielded to avoid electromagnetic interference from elevators or other electromagnetic equipment

(2)(a) ___ floor structure designed to support weight of MRI scanner equipment minimize disturbance to MRI magnetic field & mitigate disruptive environmental vibrations

(2)(b) ___ MRI rooms be marked with lighted sign with red light to indicate that magnet is always on

(2)(c) ___ acoustic control provided to mitigate noise emitted by MRI scanner per Table 1.2-6

Superconducting MRI cryogen venting: 2.2-3.5.5.3

___ Cryogen vent (quench) pipe is provided in accordance with equipment manufacturer's technical specifications (for MRI equipment protection) (1)

Cryogen venting points of discharge:

___ clearly marked & shielded from staff & maintenance personnel areas (a)

___ substantially removed from all public & patient routes of travel

___ minimum clearances from air intakes operable windows or doors as defined by MRI system manufacturer (b)

___ designed with weather head sufficient to protect against horizontally driven rain (c)

___ Accessible areas around cryogen vent discharge marked to indicate safety exclusion zone in accordance with MRI equipment manufacturer standards (d)

___ Emergency exhaust & passive pressure relief provided in accordance with equipment manufacturer's technical specifications for building occupant protection (2)

2.2-3.4.4.8(3) Specific Requirements for Hybrid Operating Rooms with Vascular Imaging Systems:

☐ check if <u>not</u> included in project

2.2-3.4.1.3(1) ___ Shielded control alcove or room

(a) Space Requirements:

___ sized & configured according to manufacturer's recommendations

(c) ___ shielded view window designed to provide full view of examination/ procedure table & patient at all times including full view of patient during imaging activities (use of additional closed-circuit video monitoring permitted)

(d) ___ control room enclosed with walls & door

	Architectural Requirements	Building Systems Requirements
2.2-3.4.5	**PRE- & POSTOPERATIVE PATIENT CARE AREAS**	
2.1-3.4.1.1	___ Patient care stations accommodate lounge chairs, gurneys or beds for pre- & post-procedure (recovery) patient care	
	___ Patient care stations accommodate seating space for family/visitors	
2.1-3.4.1.2	___ Location in unrestricted area	
2.1-3.4.1.3(2)	Layout:	
(a)	___ combination of pre- & post-procedure patient care stations in one area	
	___ patient care stations combined in same area meet most restrictive requirements of areas to be combined	
	or	
(b)	___ separate pre-procedure patient care area & post-procedure recovery area	
	___ patient care stations combined in same area meet most restrictive requirements of areas to be combined	
	or	
(c)	___ three areas: pre-procedure patient care area Phase I post-anesthetic care unit (PACU) & Phase II recovery area	
2.1-3.4.1.4	Number of Patient Care Stations:	
(1)	___ pre- & post-procedure patient care stations are combined into one patient care area	
	☐ check if <u>not</u> included in project	
	___ at least two patient care stations for each operating room	
(2)	___ separate pre-procedure & recovery areas	
	☐ check if <u>not</u> included in project	
2.1-3.4.3	___ pre-procedure patient care room or area provides at least one patient care station per imaging room, procedure room or operating room	
2.1-3.4.4	___ Phase I post-anesthetic care unit (PACU) provides minimum of one Phase I patient care station per Class 3 imaging or operating room	
2.1-3.4.5	___ Phase II recovery room(s) or area	
	___ minimum of one Phase II patient care station per operating room	

	Architectural Requirements	**Building Systems Requirements**
2.1-3.4.2.2 (2)(a)	Space Requirements: ___ patient care bays ☐ check if <u>not</u> included in project ___ min. clearance 5'-0" between sides of patient beds/gurneys/lounge chairs ___ min. clearance 3'-0" between sides of patient beds/gurneys/lounge chairs & adjacent* walls or partitions ___ min. clearance 2'-0" between foot of patient beds/gurneys/lounge chairs & cubicle curtain	Ventilation: ___ Min. 6 air changes per hour Table 7-1 ___ No recirculating room units Power: ___ Min. 8 receptacles in total Table 2.1-1 ___ convenient to head of gurney or bed Nurse Call System: ___ Emergency call station Table 2.1-2 Medical Gases: ___ 1 OX, 3 VAC, 1 MA per station Table 2.1-3
(2)(b)	___ patient care cubicles ☐ check if <u>not</u> included in project ___ min. clearance 3'-0" between sides of patient beds/gurneys/lounge chairs & adjacent* walls or partitions ___ min. clearance 2'-0" between foot of patient beds/gurneys/lounge chairs & cubicle curtain ___ bays or cubicles face each other ☐ check if <u>not</u> included in project ___ aisle with min. clearance 8'-0" independent of foot clearance between patient stations or other fixed objects	Ventilation: ___ Min. 6 air changes per hour Table 7-1 ___ No recirculating room units Power: ___ Min. 8 receptacles in total Table 2.1-1 ___ convenient to head of gurney or bed Nurse Call System: ___ Emergency call station Table 2.1-2 Medical Gases: ___ 1 OX, 3 VAC, 1 MA per station Table 2.1-3
(2)(c)	___ single-patient rooms ☐ check if <u>not</u> included in project ___ min. clearance 3'-0" between sides & foot of beds/gurneys/lounge chairs & adjacent* walls or partitions	Ventilation: ___ Min. 6 air changes per hour Table 7-1 ___ No recirculating room units Power: ___ Min. 8 receptacles in total Table 2.1-1 ___ convenient to head of gurney or bed Nurse Call System: ___ Emergency call station Table 2.1-2 Medical Gases: ___ 1 OX, 3 VAC, 1 MA per station Table 2.1-3
2.1-2.4.2	___ Airborne infection isolation (AII) room in pre-procedure & recovery areas	
2.1-2.4.2.2	___ complies with requirements applicable to single-patient rooms	Ventilation: ___ Min. 12 air changes per hour Table 7-1
(2)	___ personal protective equipment (PPE) storage at entrance to room	___ Exhaust ___ Negative pressure
(3)	___ handwashing station	___ No recirculating room units

	Architectural Requirements	Building Systems Requirements	
(4)	___ patient toilet room ___ serves only one AII room	Ventilation: ___ Min. 10 air changes per hour ___ Exhaust ___ Negative pressure ___ No recirculating room units	Table 7-1
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		
2.1-2.4.2.5	___ room pressure visual or audible alarm		
2.1-3.4.2.4 2.1-2.1.2	Patient Privacy: ___ provisions are made to address patient visual & speech privacy		
2.1-3.4.2.5	___ Handwashing stations		
2.1-2.8.7.1	___ located in each room where hands-on patient care is provided		
2.1-2.8.7.3	___ handwashing station serves multiple patient care stations ☐ check if not included in project		
(1)	___ at least 1 handwashing station for every 4 patient care stations or fewer & for each major fraction thereof		
(2)	___ handwashing stations evenly distributed		

	Architectural Requirements	Building Systems Requirements	
2.1-3.4.4.2	___ At least one route of patient transport provides direct access from semi-restricted area of surgical suite to Phase I recovery area without crossing public corridors		
2.1-3.4.4.3	___ Design of Phase I recovery area provides observation of all patient care stations from nurse station		
2.2-3.4.5.8	**SUPPORT AREAS FOR PRE- & POST-OPERATIVE PATIENT CARE AREAS**		
2.2-3.4.5.8(1)	___ General support areas in this section are provided in or directly accessible* to pre- & postoperative patient care areas		
2.2-3.4.5.8(2)			
2.1-2.8.2	___ 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*		
2.1-2.8.2.2	___ Center for reception & communication ___ self-contained **or** ___ combined with administrative center or nurse station		
2.1-2.8.3	___ Documentation area		
2.1-2.8.3.1	___ work surface to support documentation process		
2.2-3.4.5.8(7)	___ Clinical sink		
2.2-3.4.5.8(8)	___ Medication safety zone		
(a)	___ provided in postoperative patient care areas		
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		

	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		
2.2-3.4.5.8(9)	___ Nourishment area	Ventilation:	
	___ provided in unrestricted patient care area	___ Min. 2 air changes per hour	Table 7-1
2.1-2.8.9.2(1)	___ handwashing station		
2.1-2.8.9.2(2)	___ work counter		
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		
2.2-3.4.5.8(10)	___ Ice-making equipment		
(b)	___ not located in semi-restricted area		
2.2-3.4.5.8(12)			
2.2-3.4.7.12 (1)(a)	___ Soiled workroom or soiled holding room (may be combined with Decontamination Room in Sterile Processing Facility)		
(1)(b)	___ separate soiled workrooms or holding rooms for unrestricted area and semi-restricted area		
	or		
	___ soiled workroom or holding room shared between unrestricted area and semi-restricted area		
	___ direct access provided from semi-restricted area		
	___ separate entrance provided from unrestricted area		

	Architectural Requirements	Building Systems Requirements	
(c)	___ soiled workroom or holding room do not have direct connection with operating rooms or other sterile activity rooms		
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 management system is used ☐ check if <u>not</u> 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 ___ Negative pressure ___ No recirculating room units	Table 7-1
(2)	___ space for separate covered containers for waste & soiled linen		
2.2-3.4.7.12(3) (b)	___ other provisions for disposal of liquid waste are made		
2.2-3.4.5.9	**SUPPORT AREAS FOR STAFF** ___ Staff toilet room located in postoperative patient care area to maintain staff availability to patients		
2.2-3.4.5.10	**SUPPORT AREAS FOR PATIENTS & VISITORS**		
(1)	___ Patient toilet room		
(a)	Location:		
	___ directly accessible* to pre- & postoperative patient care area		
Errata	___ private toilet room directly accessible* from each pre- & postoperative single-patient room used for Airborne Infection Isolation ☐ check if <u>not</u> included in project (only if no AII rooms are provided in pre- & post-operative areas)		
(b)	Number:		
	___ one patient toilet for each eight patient care stations or fewer & for each major fraction thereof		

	Architectural Requirements	Building Systems Requirements
2.2-3.4.6	**SUPPORT AREAS IN SEMI-RESTRICTED AREA**	
2.2-3.4.6.2	___ Nurse or control stations	
(1)	___ access through all entries to semi-restricted area must be controlled	
(2)	___ nurse or control station located in semi-restricted area **or** ___ nurse or control station located in unrestricted area ___ directly accessible* to semi-restricted area	
(3)	___ nurse or control station permits direct or remote visual observation of traffic into the semi-restricted area	
2.2-3.4.6.6	___ Hand scrub facilities	
2.1-2.8.6.1	___ at least one hand scrub position for each operating room	
2.1-2.8.6.2	___ located next to entrance to each room (one hand scrub station consisting of two scrub positions may be shared if located adjacent* to entrance of each room)	
2.1-2.8.6.3	___ placement of scrub station does not restrict min. required corridor width	
2.2-3.4.6.13(1)	___ 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)	Bed or gurney storage ___ storage provided for bed or gurney on which the patient is transported to the operating room or the bed or gurney to be used for transportation after surgery	
(a)	___ storage area (e.g. corridor alcove) is located in the semi-restricted area adjacent to operating room	
(c)	___ bed storage area is in addition to clean equipment and clean & sterile supply storage	
2.2-3.4.6.14	___ Environmental services room	
(1)	___ not shared with other areas	
(2)	___ accessed from semi-restricted corridor	
2.1-2.8.14.2(1)	___ service sink or floor-mounted mop sink	
2.1-2.8.14.2(2)	___ provisions for storage of supplies & housekeeping equipment	Ventilation: ___ Min. 10 air changes per hour Table 7-1

	Architectural Requirements	Building Systems Requirements	
2.1-2.8.14.2(3)	___ handwashing station **or** ___ hand sanitation station	___ Exhaust ___ Negative pressure ___ No recirculating room units	
2.2-3.4.6.15	**"SATELLITE" STERILE PROCESSING FACILITIES** ☐ check if not included in project		
2.1-5.1.2	(only if hospital includes a Central Processing Department or if contractual arrangements are made for off-site processing and support areas for off-site processing are provided in hospital)		
2.1-5.1.2.1(2)	___ Sterile processing facility meet requirements of semi-restricted area		
2.1-5.1.2.1(3)	Layout: ___ sterile processing facilities designed to provide one-way traffic pattern		
2.1-5.1.2.2	___ Two-room sterile processing facility ☐ check if not included in project		
(1)(a)	___ decontamination room & clean workroom physically separated by wall containing door or pass-through window **or** ___ built-in washer/disinfector with pass-through door or window		
(1)(b)	___ Sterilizer access room for maintaining equipment ☐ check if not included in project		
(2)	___ Decontamination room		
(a)	___ sized to meet min. equipment space & clearances needed for equipment used ___ equipment shown on plans	Ventilation: ___ Min. 6 air changes per hour ___ Exhaust ___ Negative pressure ___ No recirculating room units	Table 7-1
(b)	___ work counter(s) ___ handwashing station ___ three-basin sink with counter ___ flushing-rim clinical sink or equivalent fixture **or** ___ alternative methods for disposal of bio-waste ___ space for waste & soiled linen receptacles ___ documentation area ___ instrument air outlet for drying instruments **or** ___ portable compressed air for drying instruments ___ storage for decontamination supplies & personal protective equipment (PPE)		

	Architectural Requirements	Building Systems Requirements	
(3)	___ Clean workroom	Ventilation:	
(a)	___ sized to accommodate sterilization equipment used ___ equipment shown on plans	___ Min. 4 air changes per hour ___ Positive pressure ___ No recirculating room units	Table 7-1
(b)	___ work counter ___ handwashing station ___ storage for sterilization supplies ___ documentation area ___ instrument air outlet for drying instruments **or** ___ portable compressed air for drying instruments ___ cooling area for sterilization cart ☐ check if not included in project		
(4)	___ Sterile storage (provided for storage of sterile instruments & supplies)	Ventilation:	
(a)	___ area part of clean workroom **or** ___ separate storage room	___ Min. 4 air changes per hour ___ Positive pressure	Table 7-1
(b)	___ space for case cart storage ☐ check if not included in project (only if case carts are not used)		
2.1-5.1.2.3	___ One-room sterile processing facility ☐ check if not included in project		
(1)	___ consists of decontamination area & clean work area		
(b)	___ two entrances **or** ___ single entrance ___ located approximately equidistant from clean & decontamination sides of room ___ allows for one-way traffic flow		
(2)	___ decontamination area	Ventilation:	
(a)	___ countertop ___ two-basin sink for washing instruments ___ handwashing station ___ separate from instrument-washing sink ___ storage for supplies ___ instrument air outlet for drying instruments **or** ___ portable compressed air for drying instruments	___ Min. 6 air changes per hour ___ Exhaust ___ Negative pressure ___ No recirculating room units	Table 7-1

	Architectural Requirements	Building Systems Requirements	
(b)	___ instrument-washing sink separated from clean work area by 4'-0" foot distance from edge of sink **or** ___ instrument-washing sink separated from clean work area by wall **or** ___ instrument-washing sink separated from clean work area by screen ___ screen extends min. 4'-0" above sink rim		
(3)	___ clean work area	Ventilation:	
(a)	___ countertop	___ Min. 4 air changes per hour	Table 7-1
(b)	___ sterilizer	___ Positive pressure	
(c)	___ storage for supplies	___ No recirculating room units	
(d)	___ instrument air outlet for drying instruments **or** ___ portable compressed air for drying instruments		
2.1-5.1.2.4	___ Equipment & supply storage	Ventilation:	
(1)	___ instrument & supply storage provided for sterile & clean instruments & supplies	___ Min. 4 air changes per hour ___ Positive pressure	Table 7-1
(a)	___ separate room **or** ___ portion of clean workroom		
(b)	___ space for case cart storage ☐ check if not included in project (only if case carts are not used in facility)		
(2)	___ clean/sterile medical/surgical supply receiving room	Ventilation: ___ Min. 4 air changes per hour ___ Positive pressure	Table 7-1
2.1-5.1.2.5	Support Areas for Staff:		
(1)(a)	___ separate changing areas provided for male & female staff (unisex changing area with one or more private changing rooms is permitted)		
(1)(b)	___ staff changing areas meet requirements		
(1)(c)	of unrestricted area (may be shared with other departments or services)		
(2)(a)	___ lockers		
(2)(b)	___ toilet room	Ventilation:	
		___ Min. 10 air changes per hour	Table 7-1
(2)(c)	___ handwashing station	___ Exhaust ___ Negative pressure ___ No recirculating room units	
(2)(d)	___ space for donning surgical attire		
(2)(e)	___ provision for separate storage of clean & soiled work attire		

	Architectural Requirements	Building Systems Requirements	
2.2-3.4.7	**SUPPORT AREAS DIRECTLY ACCESSIBLE TO SEMI-RESTRICTED AREA**		
2.2-3.4.7.12	___ Soiled workroom or soiled holding room		
(c)	___ no direct connection with operating rooms or other sterile activity rooms		
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 management system is used ☐ check if <u>not</u> 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	
2.2-3.4.7.12(3)	___ other provisions for disposal of liquid waste are provided and described in Project Narrative		
2.2-3.4.7.13	___ Clean equipment & clean & sterile supply storage used in the semi-restricted & restricted areas	Ventilation: ___ Min. 4 air changes per hour ___ Positive pressure ___ No recirculating room units	Table 7-1
(1)(a)	___ one storage room or ___ combination of storage rooms		
(1)(b)	Location ___ storage room or area is separate from & has no direct connection with soiled holding room ___ storage room or area is directly accessible to the semi-restricted area (is permitted to be directly accessible to operating rooms)		
(1)(d)	___ storage room or area is directly accessible to operating room ___ designated as semi-restricted or restricted as needed by facility operations **or**		

	Architectural Requirements	Building Systems Requirements
(1)(e)	___ storage room or area is directly accessible to only a semi-restricted area ___ designated as semi-restricted area.	
(2)	Space requirements	
(a)	___ each surgical suite has at least 300 sf or 100 sf per operating room for clean equipment and supply storage, whichever is greater	
(3)	___ Documentation area ☐ check if not included in project ___ documentation area located in this storage room is in addition to documentation area in operating room	
(4)	___ No sink in this storage room	
(5)	___ No sterilizer in this storage room	
2.2-3.4.8	**OTHER SUPPORT AREAS IN SURGERY DEPARTMENT**	
2.2-3.4.8.13(1)	___ Clean linen storage (may be in designated location in clean supply & equipment storage room)	
(3)	___ Storage space for gurneys, stretchers & wheelchairs	
(5)	___ Medical gas storage ___ space for supply & storage of medical gases used in facility including space for reserve cylinders provided ___ protected in accordance with NFPA 99 Health Care Facilities Code	
(6)	___ Storage for large clinical equipment ☐ check if not included in project	
2.2-3.4.8.16	___ Storage for blood, organs, tissue & pathological specimens	
(1)	___ equipment temperature controls alarms & monitoring	
2.1-4.1.2.3	___ Refrigerated storage facilities	
(1)	___ refrigerator	
(2)	___ blood storage facilities	
2.2-3.4.8.17	___ Area for preparation & examination of frozen sections	
	___ located in Surgical Department **or** ___ located in general laboratory ___ immediate results are obtainable	

	Architectural Requirements	Building Systems Requirements	
2.2-3.4.9	**SUPPORT AREAS FOR SURGERY DEPARTMENT STAFF**		
2.2-3.4.9.1	___ Staff lounge		
2.2-3.4.9.4	___ Staff changing area & toilet facilities		
(1)	___ one or more private changing rooms or areas for male & female staff working in semi-restricted & restricted areas of surgery department		
(2)(a)	___ lockers		
(2)(b)	___ showers	Ventilation:	
(2)(c)	___ toilets	___ Min. 10 air changes per hour ___ Exhaust ___ Negative pressure ___ No recirculating room units	Table 7-1
(2)(d)	___ handwashing stations		
(2)(e)	___ space for donning & doffing surgical attire		
(2)(f)	___ provisions for separate storage of clean & soiled surgical attire		
2.2-3.4.10	**SUPPORT AREAS FOR PATIENTS FAMILIES & VISITORS**		
2.2-3.4.10.3	___ Patient changing area		
(2)	☐ check if <u>not</u> included in project (only if patients are assigned private holding rooms or cubicles)		
(1)(a)	___ provisions for storing patients' belongings during procedures		
(1)(b)	___ toilet room	Ventilation: ___ Min. 10 air changes per hour ___ Exhaust ___ Negative pressure ___ No recirculating room units	Table 7-1
(1)(c)	___ space for changing or gowning		
2.2-3.4.10.4	___ Waiting area for families & visitors		

*LOCATION TERMINOLOGY:

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

<u>Adjacent</u>: Located next to but not necessarily connected to the identified area or room

<u>Immediately accessible</u>: Available either in or adjacent to the identified area or room

<u>Readily accessible</u>: 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 NFPA 101, 18.2.3.3 CORRIDOR WIDTH:

___ 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 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
(b) 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) Door Opening:
(a) ___ min. 45.5" clear door width for diagnostic/treatment areas
___ min. 83.5" clear door height for diagnostic/treatment areas
(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

(5) Doors for Patient 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) ___ toilet room opens onto public area or corridor
☐ check if not included in project
___ visual privacy is maintained

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
☐ check if not included in project (only in the case of hand scrub facilities)
(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
(7) ___ No mirror at hand scrub stations or at handwashing stations in clean & sterile supply areas

2.1-7.2.2.9 GRAB BARS:
(1) ___ Grab bars anchored to sustain concentrated load 250 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

2.1-7.2.2.11 RADIATION PROTECTION:
☐ check if no radiation emitting equipment is included in project
___ Protection for X-ray & Gamma-ray installations are shown in the plans
___ Documentation for radiation protection has been submitted separately to the DPH Radiation Control Program

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 operating suites
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

2.1-7.2.3 **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
(7)(a) Floors are monolithic & integral coved wall bases are at least 6” high & tightly sealed to wall in rooms listed below:
___ operating room
___ procedure rooms where cystoscopy, urology, & endoscopy procedures are performed
☐ check if not included in project
___ airborne infection isolation (AII) room
___ 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. 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) Semi-Restricted Areas:
☐ check if not included in project
(a) ___ ceiling finishes are scrubbable, non absorptive, non perforated, & capable of withstanding cleaning with chemicals
(b) ___ lay-in ceilings
___ gasketed or each ceiling tile weighs at least one pound per square foot
(c) ___ use of perforated tegular serrated or highly textured tiles not are permitted in semi-restricted areas
or
___ ceilings of monolithic construction

(3) Restricted Areas:
☐ check if not included in project
(a) ___ ceilings of monolithic construction (except for central diffuser array)
(b) ___ modular or prefabricated laminar (or controlled) flow ceiling system in operating rooms & Class 3 imaging rooms/hybrid operating rooms in place of monolithic ceiling construction
☐ check if not included in project
___ seams & access doors are continuously gasketed.
___ assembly is constructed with structural frame engineered & rated for systems supported & equipped with seismic bracing as required
___ accommodations are made to provide access for testing maintenance & replacement of items

___ diffuser arrangement & airflow design complies with ASHRAE 170 (see below)
___ devices & related controls are UL/ETL labeled

(c) ___ ceiling finishes scrubbable & capable of withstanding cleaning & disinfecting chemicals

(d) ___ access openings are gasketed

2.1-7.2.4 FURNISHINGS:

2.1-7.2.4.1 ___ built-in furnishings upholstered with impervious materials in patient treatment areas with risks of exposure & contamination from bodily fluids & other fluids

2.1-7.2.4.3 ___ Privacy curtains in patient care areas are washable

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 Table 7-1 are maintained for AII Rooms PE Rooms Operating 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 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 heating for operating rooms & recovery 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 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 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'-0" from cooling towers & all exhaust & vent discharges
___ air intakes located away from public access
___ all intakes are designed to prevent entrainment of wind-driven rain
___ contain features for draining away precipitation
___ equipped with birdscreen of mesh no smaller than 0.5 in

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 additionally 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, minimum 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)
e. ___ Design includes all necessary provisions to prevent moisture accumulating on filters located downstream of cooling coils & humidifiers
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, operating room or procedure room

Part 3/6.7 AIR DISTRIBUTION SYSTEMS:
Part 3/6.7.1 ___ Maintain pressure relationships required in tables 7.1 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 & recovery rooms 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
___ Air movement is from clean to less-
Part 3/7.1.a.1 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 3/7.1.a.4 ___ Entire min. outdoor air changes per hour required by Table 7-1 for each space meet filtration requirements of Section 6.4
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 room exhaust air first passes through a HEPA filter (all exhaust ductwork kept under negative pressure)

___ 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
___ All room is at negative pressure with respect to anteroom
___ Anteroom is at negative pressure with respect to corridor

Part 3/7.4.1 Operating Rooms
☐ check if not included in project
___ Each OR has individual temperature control
___ OR is provided with primary supply diffuser array designed as follows:
___ airflow is unidirectional downwards & average velocity of diffusers is 25 to 35 CFM/ft^2
___ diffusers are concentrated to provide airflow pattern over patient & surgical team
___ coverage area of primary supply diffuser array extends min 12" beyond footprint of surgical table on each side
___ no more than 30% of portion of primary supply diffuser array is used for non-diffuser uses
___ additional supply diffusers provided within room outside of primary supply diffuser array
☐ check if not included in project
___ each OR has at least two low sidewall return or exhaust grilles spaced at opposite corners or as far apart as possible with bottom of these grilles installed approximately 8" above floor

Part 3/7.4.3 Imaging Procedure Rooms
☐ check if not included in project
___ Anesthetic gases are administered
___ ventilation requirements for operating rooms are met
or
___ No anesthetic gases are administered

2.1-8.3 **ELECTRICAL SYSTEMS**

2.1-8.3.2 **ELECTRICAL DISTRIBUTION & TRANSMISSION**

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 Operating rooms:
☐ check if not included in project
(2)(a) ___ Where GFCIs are used in operating room, each single or duplex receptacle is stand-alone GFCI receptacle
(2)(b) ___ Where GFCI breakers are used, no more than one single or duplex receptacle is connected to individual GFCI breaker

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 have smooth, cleanable, impact-resistant lenses concealing light source
2.1-8.3.4.1(2) ___ Luminaires designed to dissipate heat such that touchable surfaces will not burn occupants or ignite materials.

(4) Operating rooms:
(a) ___ general lighting in addition to special lighting units provided at surgical & obstetrical tables
(b) ___ general lighting & special lighting are on separate circuits

(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 & scrub sinks that depends on building electrical service for operation are connected to essential electrical system
2.1-8.3.5.2 ___ Electronic health record system servers & centralized storage provided with uninterruptible power supply

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 is not more than 25'-0" long

(3)(a) ___ no installation of dead-end piping (except for empty risers

(3)(c) 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 rooms listed below piping have special provisions (e.g double wall containment piping or oversized drip pans) 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) Floor Drains:

(a) ___ no floor drains in procedure rooms operating rooms Class 2 & Class 3 imaging rooms

(b) ___ floor drain in dedicated cystoscopy procedure room

☐ check if not included in project

___ recessed floor sink w/ automatic trap primer

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" 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

2.1-8.4.3.4 Ice-Making Equipment:
___ copper tubing provided for supply connections to ice-making equipment

2.1-8.4.3.5 Clinical Flushing-Rim Sinks:
(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

2.1-8.4.3.6 Scrub Sinks:
(1) ___ freestanding scrub sinks are trimmed with foot knee or electronic sensor controls
(2) ___ no single-lever wrist blades except for temperature pre-set valve

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(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:
___ bath station that can be activated by patient lying on floor provided at each patient toilet
(1) ___ alarm in these areas can be turned off only at bath station where it was initiated
(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

2.1-8.5.3 **EMERGENCY COMMUNICATION SYSTEM**
___ Emergency-radio communication system provided in each facility
2.1-8.5.3.1 ___ operates independently of building’s service & emergency power systems during emergencies
2.1-8.5.3.2 ___ frequency capabilities to communicate with state emergency communication networks

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