

COMPLIANCE CHECKLIST

IP24: Hyperbaric Suite

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 2014 Edition of the FGI Guidelines for Design and Construction of Hospitals and Outpatient Facilities. 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 (2000) and applicable related standards contained in the appendices of the Code
- State Building Code (780 CMR)
- Joint Commission on the Accreditation of Health Care Organizations
- CDC Guidelines for Preventing the Transmission of Mycobacterium Tuberculosis in Health Care Facilities
- USP 797
- 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 Part II of the 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 symbols, unless otherwise directed in the checklist. If a functional space is not affected by a renovation project, the symbol "E" may be indicated on the requirement line (___) before the name of the functional space (associated requirements on indented lines below that name, or associated MEP requirements do not have to be completed in this case). If more than one functional space serves a given required function (e.g. patient room or exam room), that clarification should be provided in the Project Narrative, and the requirement lines are understood to only address the functional spaces that are involved in the project.

X = Requirement is met, for new space, for renovated space, or for existing direct support space for an expanded service.

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

E = Requirement relative to an existing suite or area that has been *licensed* for its designated function, is *not affected* by the construction project and *does not pertain to a required direct support space* for the specific service affected by the project.

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).

4. All room functions marked with "X" must be shown on the plans with the same name labels 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, and waste anesthesia gas disposal outlets (if required) are identified respectively by the abbreviations "OX", "VAC", "MA", & "WAGD".
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.

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

2.2-3.13

HYPERBARIC SUITE

- 2.2-3.13.1 Hyperbaric treatment area
- 2.2-3.13.1.1 meets requirements of "Hyperbaric Facilities" Chapter in NFPA 99
- 2.2-3.13.1.2 (1) Class A hyperbaric chamber (multiplace)
 - check if not included in project
 - (a) space to house Class A chambers & supporting equipment accommodates equipment manufacturer specifications
 - manufacturer specifications have been submitted
 - (b) min. clearance 3'-0" around chamber
 - stretcher access area in front of chamber entry min. clearance 8'-0"
 - wheelchair access area in front of chamber entry min. clearance 5'-0"
 - (c) entries designed for wheelchairs or wheeled gurneys with access ramps flush with chamber entry doorway
- (2) Class B hyperbaric chamber (monoplace)
 - check if not included in project
 - (a) space to house Class B chambers & supporting equipment accommodates equipment manufacturer specifications
 - manufacturer specifications have been submitted
 - (b) min. clearance 2'-0" around chamber
 - min. clearance 3'-0" between control sides of two chambers
 - check if not included in project (only if only one chamber proposed)
 - min. clearance 12 inches between foot end of each chamber & any wall or obstruction
 - area in front of chamber entry designed for stretcher access min. clearance 8'-0"
 - (c) oxygen service valve for each chamber
- 2.2-3.13.4 Pre-procedure patient holding area
 - check if not included in project (only if two or fewer Class B hyperbaric chambers)
 - 2.2-3.13.4.1 (1) located under staff control
 - located out of traffic flow from chamber
 - does not obstruct access to exits from hyperbaric suite
 - (2) stretcher patients in holding area out of direct line of normal traffic
 - 2.2-3.13.4.2 patient holding area sized to accommodate inpatients on stretchers or beds

Medical Gases:
 2 OX, 2 VAC

Table 2.1-4

Architectural Requirements

Building Systems Requirements

2.2-3.13.6 **SUPPORT AREAS FOR HYPERBARIC SUITE**
(may be shared with adjacent wound care suite)

- 2.2-3.12.6.6 Medication safety zone - medication preparation room
- 2.1-2.6.6.2(1)
 - (a) under visual control of nursing staff
 - (b) work counter
 - handwashing station
 - lockable refrigerator
 - locked storage for controlled drugs
 - (c) Sharps Containers:
 - check if not included in project
 - sharps containers placed at height that allows users to see top of container
 - (d) space to prepare medicines in addition to any self-contained medicine-dispensing unit

- Ventilation:
 - 4 air changes per hour Table 7.1
- Nurse Call System:
 - Duty station Table 2.1-2

- 2.2-3.12.6.7 Nourishment area or room
 - (2) drinking water dispensing unit for patient use separate from handwashing station

- 2.1-2.6.7.2
 - (1) handwashing station
 - (2) work counter
 - (3) refrigerator
 - (4) microwave
 - (5) storage cabinets
 - (6) space for temporary storage of unused & soiled food service implements

- Ventilation:
 - 2 air changes per hour Table 7.1

- 2.1-2.6.7.3 provisions & space for separate temporary storage of unused & soiled meal trays not picked up at mealtime

2.1-2.6.9 Clean workroom or clean supply room

- 2.1-2.6.9.1 clean workroom used for preparing patient care items
 - (1) work counter
 - (2) handwashing station
 - (3) storage facilities for clean & sterile supplies

- Ventilation:
 - 4 air changes per hour Table 7.1
 - Positive pressure
- Nurse Call System:
 - Duty station

or

- 2.1-2.6.9.2 clean supply room used only for storage & holding as part of system for distribution of clean & sterile supplies

- Ventilation:
 - 4 air changes per hour Table 7.1
 - Positive pressure

2.1-2.6.10 Soiled workroom or soiled holding room

- 2.1-2.6.10.1 soiled workroom room
 - (1) handwashing station
 - (2) flushing-rim clinical service sink with bedpan washer
 - (3) work counter
 - (4) space for separate covered containers

- Ventilation:
 - 10 air changes per hour Table 7.1
 - Exhaust
 - Negative pressure
- Nurse Call System:
 - Duty station

or

Architectural Requirements

- 2.1-2.6.10.2 (1) soiled holding room
- (a) handwashing station or hand sanitation station
- (b) space for separate covered containers

2.2-3.12.6.11 Stretcher/wheelchair storage space

2.2-3.13.6.1 Reception/control desk

2.2-3.13.6.4 Consultation/treatment room

- 2.2-3.13.6.11 Equipment & Supply Storage:
- (1) clean linen & supply storage
 - (2) gas cylinder room
 - (a) space to house eight (H) cylinders
 - two gas manifolds (min. two (H) cylinders on each manifold)

2.2-3.13.6.12 Environmental services room

- immediately accessible* to hyperbaric suite

- 2.1-2.6.12.2 (1) service sink or floor-mounted mop sink
- (2) provisions for storage of supplies & housekeeping equipment
- (3) handwashing station or hand sanitation station

- 2.2-3.13.6.13 (1) Compressor room
- sized for chamber compressors, accumulator tanks & fire suppression system
 - meets requirements of NFPA 99 "Hyperbaric Facilities" chapter
- (2) reserve breathing gases housed in compressor room
- located in close proximity to hyperbaric chamber room
- or**
- reserve breathing gases housed in separate storage room
 - located in close proximity to hyperbaric chamber room

2.2-3.13.7 **SUPPORT AREAS FOR STAFF**
(may be shared with adjacent wound care department)

- Staff toilet room with handwashing station
- immediately accessible* to hyperbaric suite for staff use

Building Systems Requirements

- Ventilation:
- 10 air changes per hour Table 7.1
 - Exhaust
 - Negative pressure

- Ventilation:
- 10 air changes per hour Table 7.1
 - Exhaust

Architectural Requirements

Building Systems Requirements

- 2.2-3.13.8 **SUPPORT AREAS FOR PATIENTS**
(may be shared with adjacent wound care suite)
- 2.2-3.13.8.1 Patient waiting area
 check if not included in project
(only if two or fewer Class B hyperbaric chambers in suite)
 - (1) screened from unrelated traffic
 under staff control
 separated from hyperbaric suite by door
 - (3) hyperbaric suite routinely used for inpatients
 check if not included in project
 outpatient waiting & inpatient holding areas separated & screened to provide visual & acoustic privacy between them
- 2.2-3.13.8.2 Patient changing rooms
 - (1) (a) seat or bench made of non-absorbable material
 - (b) mirror
 - (c) provisions for hanging patient clothing & for securing valuables
 - (2) at least one changing room accommodates wheelchair patients
- 2.2-3.13.8.3 Patient toilet room with handwashing station
 directly accessible* to hyperbaric suite

- Ventilation:
- Min. 10 air changes per hour Table 7.1
 - Exhaust

Architectural Details & MEP Requirements

2.1-7.2.2 ARCHITECTURAL DETAILS

- 2.1-7.2.2.1 NFPA 101 Aisles, corridors & ramps required for exit access in a hospital not less than 8'-0" in clear & unobstructed width
or
 Code Review Sheet establishing compliance with NFPA 101 has been submitted
- Aisles, corridors & ramps in adjunct areas not intended for the housing, treatment, or use of inpatients not less than 44" in clear width
- 2.1-7.2.2.2 CEILING HEIGHT:
 - (1) Min. ceiling height 7'-6" in corridors & normally unoccupied spaces
 - (4) Min. height 7'-6" above floor of suspended tracks, rails & pipes located in traffic path for patients in beds and/or on stretchers
 Min. ceiling height 7'-10" in other areas

2.1-7.2.2.3 DOORS & DOOR HARDWARE:

- (1) (a) Doors between corridors, rooms, or spaces subject to occupancy swing type or sliding doors
 Sliding doors
 check if not included in project
 manual or automatic sliding doors comply with NFPA 101
 code review sheet attached
 no floor tracks
- (2) (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) Doors do not swing into corridors (except doors to non-occupiable spaces & doors with emergency breakaway hardware)

- (4) _____ Lever hardware
- (b) _____ Doors for patient toilet facilities
- (5) _____
- (a) _____ 2 doors separated by horizontal distance equal to one-half length of max. diagonal room dimension
- or**
- _____ door that swings outward
- or**
- _____ door equipped with emergency rescue hardware
- or**
- (b) _____ sliding door
- _____ toilet room door opening in public area or corridor maintains visual privacy
- 2.1-7.2.2.7 **GLAZING MATERIALS:**
- (4) _____ Glazing within 18" of floor
- check if not included in project
- _____ safety glass, wire glass or plastic break-resistant material
- 2.1-7.2.2.8 **HANDWASHING STATIONS:**
- (1) _____ Handw. stations in patient care areas located to be visible & unobstructed
- (3) _____ Anchoring suitable for vertical or horizontal force of 250 lbs.
- (4) _____ Handwashing Station Countertops:
- check if not included in project
- (a) _____ porcelain, stainless steel or solid surface materials
- (b) _____ plastic laminate countertops
- check if not included in project
- _____ substrate marine-grade plywood (or equivalent) with impervious seal
- (5) _____ Designed to prevent storage beneath sink
- (6) _____ provisions for drying hands
- (a) _____ hand-drying device does not require hand contact
- (d) _____ directly accessible* to sinks
- (7) _____ Liquid or foam soap dispensers
- 2.1-7.2.2.9 **GRAB BARS:**
- (2) _____ Grab bars anchored to sustain concentrated load of 250 lbs.
- 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) _____ Smooth non-textured surface free of rough edges
- (5) _____ Eased edges & corners
- (6) _____ Finishes cleanable

- 2.1-7.2.2.12 **NOISE CONTROL:**
- (2) _____ Partitions, floors & ceiling construction in patient areas conform to Table 1.2-6

2.1-7.2.3 SURFACES

- 2.1-7.2.3.1 **FLOORING & WALL BASES:**
- (1) _____ Selected flooring surfaces cleanable & wear-resistant for location
- (2) _____ Smooth transitions between different flooring materials
- (3) _____ Flooring surfaces, including those on stairways, stable, firm & slip-resistant
- (b) _____ Carpet
- check if not included in project
- _____ provides stable & firm surface
- (4) _____ Floors & wall bases of soiled workrooms, toilet rooms & other wet cleaned areas are not physically affected by cleaning solutions

- 2.1-7.2.3.2 **WALLS & WALL PROTECTION:**
- (1)
- (a) _____ Washable wall finishes
- (b) _____ Wall finishes near plumbing fixtures smooth, scrubable & water-resistant
- (2) _____ Monolithic wall surfaces in areas routinely subjected to wet spray or splatter
- (5) _____ No sharp, protruding corners
- (6) _____ Wall protection devices & corner guards durable & scrubable

- 2.1-7.2.3.3 **CEILINGS:**
- (1) _____ Ceilings in areas occupied by patients, in clean rooms & soiled rooms:
- (a) _____ cleanable with routine housekeeping equipment
- (b) _____ acoustic & lay-in ceilings
- check if not included in project
- _____ do not create ledges or crevices

2.1-8.2 HEATING, VENTILATION, & AIR-CONDITIONING (HVAC) SYSTEMS

- 4/6.3.1 **Outdoor Air Intakes:**
- 4/6.3.1.1 _____ Located min. 25 feet from cooling towers & all exhaust & vent discharges
- _____ Bottom of air intake is at least 6'-0" above grade
- 4/6.3.1.2 **Roof Mounted Air Intakes:**
- check if not included in project
- _____ bottom min. 3'-0" above roof level

4/6.4	Filtration: <input type="checkbox"/> Filter banks conform to Table 6.4	(b)	<input type="checkbox"/> Not located in rooms they support <input type="checkbox"/> Accessible to authorized persons only
4/6.4.1	<input type="checkbox"/> Filter Bank #1 placed upstream of heating & cooling coils	(c)	<input type="checkbox"/> Located in dry, ventilated space free of corrosive gases or flammable material
4/6.4.2	<input type="checkbox"/> Filter Bank No. 2 installed downstream of cooling coils & supply fan	2.1-8.3.2.2	Panelboards:
4/6.7	Air Distribution Systems	(1)	<input type="checkbox"/> Panelboards serving life safety branch emergency circuits only serve same floor, floor above & floor below
4/6.7.1	<input type="checkbox"/> Ducted return or exhaust systems in spaces listed in Table 7.1 with required pressure relationships <input type="checkbox"/> Ducted return or exhaust systems in inpatient care areas	(2)	<input type="checkbox"/> Panelboards serving critical branch emergency circuits only serve same floor <input type="checkbox"/> New panelboards not located in exit enclosures
4/6.7.3	Smoke & Fire barriers: <input type="checkbox"/> HVAC zones coordinated with compartmentation to minimize ductwork penetrations of fire & smoke barriers	(3)	
4/6.9	Duct Lining: <input type="checkbox"/> No duct lining in ductwork located downstream of Filter Bank #2	2.1-8.3.3.1	EMERGENCY ELECTRICAL SERVICE
4/7.	Space Ventilation:	(1)	<input type="checkbox"/> Emergency power per NFPA 99, NFPA 101 & NFPA 110
4/7.1	<input type="checkbox"/> Spaces ventilated per Table 7.1 <input type="checkbox"/> Air movement from clean areas to less clean areas <input type="checkbox"/> Min. number of total air changes indicated either supplied for positive pressure rooms or exhausted for negative pressure rooms <input type="checkbox"/> Recirculating room HVAC units <input type="checkbox"/> check if <u>not</u> included in project <input type="checkbox"/> each unit serves only single space <input type="checkbox"/> min. MERV 6 filter for airflow downstream of cooling coils	2.1-8.3.5	ELECTRICAL EQUIPMENT
2.1-8.2.1.1	Acoustic Considerations:	2.1-8.3.5.2	<input type="checkbox"/> Required handwashing station or scrub sink tied to building electrical service <input type="checkbox"/> check if <u>not</u> included in project <input type="checkbox"/> connected to essential electrical system
(5)	<input type="checkbox"/> Equipment location or acoustic provisions limit noise associated with outdoor mechanical equipment to 65 dBA at building façade	2.1-8.3.6	ELECTRICAL RECEPTACLES
2.1-8.2.1.2	Ventilation & Space-Conditioning:	2.1-8.3.6.2	Receptacles in Patient Care Areas: <input type="checkbox"/> receptacles provided according to Table 2.1-1
(1)	<input type="checkbox"/> All rooms & areas used for patient care have provisions for ventilation	2.1-8.3.7	CALL SYSTEMS
(2)	<input type="checkbox"/> Mechanical ventilation provided for all rooms & areas in facility in accordance with Table 7.1 of Part 4		<input type="checkbox"/> Nurse call equipment legend includes patient stations, bath stations, staff emergency stations & code call stations
2.1-8.3	ELECTRICAL SYSTEMS	2.1-8.3.7.1	<input type="checkbox"/> Nurse call system locations provided as required in Table 2.1-2
2.1-8.3.2	ELECTRICAL DISTRIBUTION & TRANSMISSION	(1)	<input type="checkbox"/> Nurse call systems report to attended location with electronically supervised visual & audible signals
2.1-8.3.2.1(1)	Switchboards Locations:	(2)	<input type="checkbox"/> Call systems meet requirements of UL 1069 <i>Standard for Hospital Signaling & Nurse Call Equipment</i>
(a)	<input type="checkbox"/> Located in areas separate from piping & plumbing equipment	(4)	<input type="checkbox"/> Wireless system <input type="checkbox"/> check if <u>not</u> included in project <input type="checkbox"/> meet requirements of UL 1069
		(5)	
		2.1-8.3.7.3	Bath Stations: <input type="checkbox"/> provided at each patient toilet <input type="checkbox"/> alarm turned off only at bath station where it was initiated <input type="checkbox"/> located to side of toilets within 12" of front of toilet bowl & 3'-0" to 4'-0" above floor

2.1-8.3.7.4 Staff emergency stations for summoning local staff assistance for non-life-threatening situations at each patient care location

2.1-8.3.7.5 Code call station equipped with continuous audible or visual signal at point of origin

2.1-8.4.2 **PLUMBING & OTHER PIPING SYSTEMS**

2.1-8.4.2.5 Heated Potable Water Distribution Systems:
 (2) systems serving patient care areas are under constant recirculation
 non-recirculated fixture branch piping does not exceed 25'-0" in length

(3) no dead-end piping

(4) water-heating system has supply capacity at minimum temperatures & amounts indicated in Table 2.1-3

(5) handwashing stations supplied as required above

or

handwashing stations supplied at constant temperature between 70°F & 80°F using single-pipe supply

2.1-8.4.2.6 Drainage Systems:
 (1) drainage piping above ceiling of, or exposed in electric closets
 check if not included in project
 special provisions to protect space below from leakage & condensation

2.1-8.4.3 **PLUMBING FIXTURES**

2.1-8.4.3.1(1) Materials material used for plumbing fixtures non-absorptive & acid resistant

2.1-8.4.3.2 Handwashing Station Sinks:
 (1) basins reduce risk of splashing to areas where direct patient care is provided, sterile procedures are performed & medications are prepared
 (2) basin min. 144 square inches
 min. dimension 9 inches
 (3) made of porcelain, stainless steel, or solid-surface materials
 (5) water discharge point of faucets at least 10 inches above bottom of basin
 (7) anchoring for sinks withstands min. vertical or horizontal force of 250 lbs.

(8) fittings operated without using hands for sinks used by medical & nursing staff, patients & public

(a) blade handles or single lever
 min. 4 inches long
 provide clearance required for operation

or

(b) sensor-regulated water fixtures
 meet user need for temperature & length of time water flows
 designed to function at all times & during loss of normal power

2.1-8.4.3.5 Clinical Sinks:
 check if not included in project
 (1) trimmed with valves that can be operated without hands
 (2) handles min. 6 inches long
 integral trap wherein upper portion of water trap provides visible seal

2.1-8.4.4 **MEDICAL GAS & VACUUM SYSTEMS**

Station outlets provided as indicated in Table 2.1-4

2.1-8.4.4.2
 (2) Vacuum discharge at least 25'-0" from all outside air intakes, doors & operable windows

2.1-8.6.2 **ELECTRONIC SURVEILLANCE SYSTEMS**

check if not included in project

2.1-8.6.2.1 Devices in patient areas mounted in unobtrusive & tamper-resistant enclosures

2.1-8.6.2.2 Monitoring devices not readily observable by general public or patients

2.1-8.6.2.3 Receive power from emergency electrical system