Healthcare Facility Hub

ICRA Containment Quick-Reference Card • ASHE ICRA 2.0 & CDC Guidelines

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DIRECT COMPLIANCE DEFINITION (CDC / ASHE ICRA 2.0 / NFPA 241)

Healthcare construction containment is the physical system that prevents dust, opportunistic fungal spores (*Aspergillus spp.*), and contaminated air from migrating from work zones into occupied healthcare spaces. The ASHE ICRA 2.0 matrix dictates *which class* of precautions is mandatory (Class I through V). Containment governs barrier construction, HVAC isolation, negative pressurization, entry staging, and sign-off.

1. ASHE ICRA 2.0 Class of Precautions Matrix (Table 3)

GOVERNING CLASS FINDER

Patient Risk Group (Table 2)	Type A Inspection / Non-Invasive	Type B Small Scale / Minimal Dust	Type C Demolition / Moderate Dust	Type D Major Project / Multi-Shift
Low Risk (Office / Non-Patient)	Class I	**Class II**	**Class II**	**Class III***
Medium Risk (Outpatient / PT / Admitting)	Class I	**Class II**	**Class III***	**Class IV**
High Risk (ED / Radiology / Peds / Surgical)	Class I	**Class III**	**Class IV**	**Class V**
Highest Risk (BMT / Oncology / ICU / OR / Sterile)	**Class III**	**Class IV**	**Class V**	**Class V**

Activity Types (ASHE ICRA 2.0 Table 1)

- **Type A:** Non-invasive visual inspection, no dust; max 1 ceiling tile per 50 sq ft with limited exposure time.
- **Type B:** Small scale, short duration, minimal dust; cutting walls/ceilings where dust is controlled; prolonged above-ceiling MEP runs.
- **Type C:** Any work generating moderate-to-high dust, or any demolition/removal of fixed building components/assemblies.
- **Type D:** Major demolition and construction projects, heavy dust generation, multi-shift operations.

Patient Risk Groups (ASHE ICRA 2.0 Table 2)

- **Low:** Administrative offices, non-patient public corridors.
- **Medium:** Outpatient clinics (non-invasive), physical therapy, radiology waiting, admission/discharge.
- **High:** ED, labor & delivery, pediatrics, inpatient surgical units, pharmacy, laboratories.
- **Highest:** Oncology, bone marrow / organ transplant, ICUs, burn units, cardiac cath labs, sterile processing, ORs.

2. The Four Mandatory Matrix Rules

ASHE & CDC PROTOCOLS

RULE 1: PERMIT TRIGGER (ICRA 2.0)

Formal Infection Control Permit and approval required for **Class III when work is Type C**, and for **all Class IV and Class V** jobs prior to any mobilization.

RULE 2: ENVIRONMENTAL HAZARDS RAISE

Presence of **sewage, mold, asbestos, gray water, or black water** mandates **Class IV** in Low/Medium risk and **Class V** in High/Highest risk, regardless of Activity Type.

RULE 3: THE ASTERISK RAISE RULE (*)

Class III areas from Type C work in Medium risk or Type D work in Low risk that **cannot be sealed and fully isolated** from occupied patient space must be raised to **Class IV negative air exhaust** rules.

RULE 4: SURROUNDINGS ASSESSMENT (TABLE 4)

Evaluate all surrounding spaces (below, above, lateral, behind, front) for noise, vibration, dust, shafts, and utility impacts. **Adopt the higher patient risk group** if multiple units are affected.

3. The Five Core Containment Elements (ASHE Table 5 Condensed)

ENGINEERING CONTROLS

Element	Class I	Class II	Class III	Class IV	Class V
1. Barrier	None; replace ceiling tile immediately.	Per standing facility procedure.	HEPA vac, poly containment, or sealed room door.	Critical barriers (poly/hard) to deck if tile removed; taped.	Critical barriers per NFPA 241 plus dedicated anteroom.
2. Penetrations	n/a	n/a	Seal visible gaps per policy.	Seal 100% floor & ceiling penetrations; UL firestop.	Same as Class IV, including anteroom penetrations.
3. HVAC Isolation	n/a	Per policy	Isolate/cap return & supply diffusers in zone.	Remove/cap return & supply; prevent pressurization.	Same as Class IV; balance surrounding zones.
4. Pressure	n/a	n/a	Neutral to negative at all times when contained.	Entire zone negative; cascade outside to inside.	Cascade: Occupied Corridor → Anteroom → Work Zone.
5. HEPA Exhaust	n/a	n/a	Not specified (unless raised by asterisk).	Outdoor ≥25 ft from intakes/doors; indoor ≥99.97% HEPA.	Same as Class IV; never into shared or recirc ductwork.

4. Daily Monitoring Protocols & Field Check Essentials

FIELD INSPECTION CADENCE

Contractor Shift Start & End

- **Manometer:** Verify reading against permit setpoint; confirm alarm enabled.
- **Smoke Test:** Spot-check airflow inward at door gaps and thresholds.
- **Barriers:** Inspect seams, floor-to-deck poly, zippered entries for tears.
- **Negative Air:** Inspect duct connections, pre-filters, exhaust terminus.

Anteroom & Dust Control

- **Door Protocol:** Doors self-close and latch; *never prop open*; one door at a time.
- **Walk-Off Mats:** Adhesive mats tacky and changed immediately when soiled.
- **PPE / Clothing:** Shoe covers changed on exit; disposable coveralls for Class V.
- **Housekeeping:** Corridor damp-wiped; inside swept with HEPA vacuum.

Waste & Debris Removal

- **Covered Carts:** Rigid, hard-lidded, smooth cleanable carts only.
- **Damp Wipe:** Damp-wipe cart wheels and exteriors before leaving zone.
- **Route & Time:** Dedicated freight elevator and off-peak travel times.
- **Spent Filters:** Bag all used pre-filters and HEPA filters before moving.

5. Breach Response Sequence & Teardown Verification

EMERGENCY & CLOSEOUT

6-Step Containment Breach Protocol

1. **Stop Work:** Immediately halt all dust-producing activities.
2. **Restore Seal & Identify Root Cause:** Fix torn poly, latch propped door, replace loaded pre-filter, or restore power.
3. **Clean External Corridor:** HEPA vacuum and damp wipe corridor surfaces as far as dust migrated.
4. **Notify IP & Clinical Lead:** Review affected unit; assess patient relocation or particle counts.
5. **Document Incident:** Log time found, duration, cause, remediation, and restart authorization.
6. **Retain Records:** Preserve pressure and inspection logs as clinical and legal evidence.

Teardown & Sign-Off Verification (Table 6)

- **Dust Work Complete:** All construction, sanding, and touch-ups 100% finished before barriers move.
- **Negative Air Maintained:** Keep HEPA machines running during initial zone clean and barrier dismantle.
- **Dismantle Protocol:** Barrier curtains in place; HEPA vac screw removal; *no drywall cutting*; vacuum stud tracks.
- **HVAC Restoration:** Uncap diffusers only after critical barrier removal; replace air filters; flush water lines.
- **Joint Sign-Off:** Formal inspection by Infection Preventionist and Engineering prior to reoccupancy and terminal clean.