







Fire and Smoke Rating Summary for UMHC Healthcare (Inpatient, I-2) Facilities

NOTE: THIS IS A SUMMARY TO ASSIST IN MAINTAINING THE INTEGRITY OF UMHC HEALTH CARE BARRIERS, ASSUMING EXISTING CONSTRUCTION TYPES, SPRINKLING AND FIRE ALARM.
THIS DOES NOT REPLACE A FULL CODE ANALYSIS. CODES REFERENCED INCLUDE MICHIGAN BUILDING CODE 2012, NPFA 101 2000 AND 2012, AND OTHER REFERENCED NFPA CODES.

Symbol	Type of Assembly	Fire rating of assembly	Door/ Frame Rating	Hardware	Glazing in interior door	Glazing in sidelight, transom or interior window up to 25% of wall	Interior window over 25% of wall area	Damper
 SMOKE BARRIER	Smoke barrier	1 hour	20 minutes or solid core wood	Closer required. No latch at cross corridor dual egress. Astrigal or 1/8" clearance. Other doors in smoke barrier, treat as needed for the use of the room. *	Glazing required in cross-corridor doors. 20 minute Fire Protective. Marking: D-20 Size limited by manufacturers testing.	45 minute Fire Protective Marking: OH-45	60 minute Fire Resistive Marking: W-60	Smoke damper, if the ductwork is open to more than one smoke compartment (Generally required)
 1-HOUR FIRE BARRIER	Hazardous rooms: Storage of combustable materials over 100 SF, all soiled utility rooms, JC over 100 SF, Labs with hazardous materials, boiler rooms, fuel fired heater, paint shop, maintenance shop, trash room, med gas storage rooms, Electrical rooms containing dry type transformers over 112.5 KVA. Fire Command Center.	1 hour	45 minutes (C)	Closer and latch required.	45 minute fire protective glazing DH-45 to maximum size tested	45 minute fire resistive DH-45 in sidelite or transom, OH-45 in interior window, to max. size tested.	1 hour Fire Resistive Marking W-60 Size limited as tested by manufacturer	No flex ductwork penetration permitted. No damper required.
 2-HOUR FIRE BARRIER	More Hazardous rooms: generator rooms, battery rooms, hyperbaric facilities inside a building	2 hour	90 minutes (B)	Closer and latch required, may have special requirements based on hazard.	90 minute Fire Resistive Marking: ≤ 100 sq in D-H-90 >100 sq in D-H-W-90	2 hour Fire Resistive Glazing in Fire Resistive Frame Marking: W-120 Size limited as tested by manufacturer	2 hour Fire Resistive Glazing in Fire Resistive Frame Marking: W-120 Size limited as tested by manufacturer	90 minute fire damper if over 100 sq in. May have special requirements based on hazard.
	Stair Enclosures	2 hour	90 minutes (B)	Closer and latch required. Door swings in direction of egress.	90 minute Fire Resistive Marking: ≤ 100 sq in D-H-90 >100 sq in D-H-W-90	2 hour Fire Resistive Glazing in Fire Resistive Frame Marking: W-120 Size limited as tested by manufacturer	2 hour Fire Resistive Glazing in Fire Resistive Frame Marking: W-120 Size limited as tested by manufacturer	No utilities run through stair enclosure
	Open shafts serving multiple floors, Escalator enclosures, Elevator enclosures	2 hour	90 minutes (B)	Closer and latch required.	90 minute Fire Resistive Marking: ≤ 100 sq in D-H-90 >100 sq in D-H-W-90	2 hour Fire Resistive Glazing in Fire Resistive Frame Marking: W-120 Size limited as tested by manufacturer	2 hour Fire Resistive Glazing in Fire Resistive Frame Marking: W-120 Size limited as tested by manufacturer	90 minute fire and smoke damper
	Horizontal Exit *** Entire barrier (wall)	2 hour	90 minutes (B)	Closer and latch required. May be held open with tie into fire alarm system. Swings in direction of egress, usually dual egress at cross corridor. *	90 minute Fire Resistive Marking: ≤ 100 sq in D-H-90 >100 sq in D-H-W-90	2 hour Fire Resistive Glazing in Fire Resistive Frame Marking: W-120 Size limited as tested by manufacturer	2 hour Fire Resistive Glazing in Fire Resistive Frame Marking: W-120 Size limited as tested by manufacturer	90 minute fire and smoke damper
	Occupancy Separation (two hour)	2 hour	90 minutes (B)	Closer and latch required. May be held open with tie into fire alarm system. Swings in direction of egress, usually dual egress at cross corridor. *	90 minute Fire Resistive Marking: ≤ 100 sq in D-H-90 >100 sq in D-H-W-90	2 hour Fire Resistive Glazing in Fire Resistive Frame Marking: W-120 Size limited as tested by manufacturer	2 hour Fire Resistive Glazing in Fire Resistive Frame Marking: W-120 Size limited as tested by manufacturer	90 minute fire damper if over 100 sq in
 3-HOUR FIRE BARRIER	3 hour barrier (occupancy separation)	3 hour	3 hour (A)	Closer and latch required. Swing in the direction of egress. may be dual-egress	100 sq in or less only, D-H-180	Unusual and may not be available. 3 hour Fire Resistive Glazing in Fire Resistive Frame Marking: W-180 Size limited as tested by manufacturer	Unusual and may not be available. 3 hour Fire Resistive Glazing in Fire Resistive Frame Marking: W-180 Size limited as tested by manufacturer	3 hour fire damper
 CORRIDORS WITH PARTITIONS CAPABLE OF RESISTING THE PASSAGE OF SMOKE	Corridor partition	None, "capable of resisting the passage of smoke". Can stop at intact lay-in ceiling	20 minutes or solid core wood	Latch required. 1/4" gap permitted to be reasonably smoketight. Closer not required but can be installed for convenience or air pressure requirements. Gasketing not required, may be installed for air pressure or acoustical reasons. *	Tempered	Tempered	Tempered	No
 SUITE EXTENTS NON PATIENT SUITE (NP) NON PATIENT PATIENT CARE SUITE (S) SLEEPING (NS) NON SLEEPING	Suite enclosure partition	None, "capable of resisting the passage of smoke". Can stop at intact lay-in ceiling	20 minutes or solid core wood	Need to latch. Closer not required by fire code but may be installed for convenience or air pressure requirements. Often include automatic operators and/or hold opens. Swing in the direction of egress out of suite. Dual egress between suites. No exit from corridor into suite.	Tempered	Tempered	Tempered	No
	Rooms within suites	None	Door not required	No requirements	Tempered	Tempered	Tempered	No
	Combustible storage less than 50 SF including lockers in alcove. Storage rooms and Janitors Closets larger than 50 SF but below 100 SF containing combustable material	Can be in alcove open to corridor	NA	NA	NA	NA	NA	NA
	Atrium walls (can be used as smoke barrier)	sprinkler protected glass or one hour wall	45 minutes (C) or sprinkler protected glass, if door framing does not interfere with sprinkler wetting.	Closer and latch.	45 minute DH	OH 45	One hour fire resistive W 60	Not required
	Communication and Electrical Rooms (without containing dry type transformers over 112.5 KVA)**	None, "capable of resisting the passage of smoke". If no lay in ceiling, run to structure above.	None	Lock/latch for security.	NA	NA	NA	Not required
* Can be Won Door					Glazing Codes:			
** Note in Brehm tower, Electrical and Communications rooms are not sprinkled, therefore the walls are of two hour construction								
*** Horizontal exits are rare, and require standpipes and fire alarm pulls. Typically created when travel distances to exits become to long. CVC Level 2A.								