FIRE SAFETY EVALUATION SYSTEM
HEALTH CARE FACILITIES

(NFPA 101A, "Guide on Alternative Approaches to Life Safety" 2013 Edition)

Complete the following worksheets for each fire/smoke zone*.
Where conditions are the same in several zones, one set of worksheets can be used for those zones.

* Fire/smoke zone is a space separated from all other spaces by floors, horizontal exits, or smoke barriers

Step 1 — Complete Cover Sheet using Worksheet 4.7.1.

WORKSHEET 4.7.1 – COVER SHEET

ZONE_____OF_____ZONES

NAME OF FACILITY	ADDRESS OF FACILITY		
ZONE(S) EVALUATED			
PROVIDER/VENDOR NO.	DATE OF SURVEY		
SURVEYOR SIGNATURE	TITLE	OFFICE	DATE
SURVEYOR ID			
FIRE AUTHORITY SIGNATURE	TITLE	OFFICE	DATE

ADDITIONAL COMMENTS:

CMS FORMS SHALL BE COMPLETED AND RETAINED AS PART OF THE SURVEY RECORD.

Step 2 — Determine Occupancy Risk Parameter Factors using Worksheet 4.7.2.
For each Risk Parameter in Worksheet 7.2, select and circle the appropriate risk factor value.
Choose only one for each of the five Risk Parameters.

WORKSHEET 4.7.2 – OCCUPANCY RISK PARAMETER FACTORS

Risk Parameters	Risk Factor Values					
1. Patient Mobility *(M)*	Mobility Status	Mobile	Limited Mobility	Not Mobile	Not Movable	
	Risk Factor	1.0	1.6	3.2	4.5	
2. Patient Density *(D)*	No. of Patients	1–5	6–10	11–30	>30	
	Risk Factor	1.0	1.2	1.5	2.0	
3. Zone Location *(L)*	Floor	1st	2nd or 3rd	4th to 6th	7th and Above	Basements
	Risk Factor	1.1	1.2	1.4	1.6	1.6
4. Ratio of Patients to Attendants *(T)*	Patients / Attendant	1–2 / 1	3–5 / 1	6–10 / 1	>10 / 1	One or More / None
	Risk Factor	1.0	1.1	1.2	1.5	4.0*
5. Patient Average Age *(A)*	Age	Under 65 Years and Over 1 Year		65 Years and Over or 1 Year and Younger		
	Risk Factor	1.0		1.2		

*A risk factor of 4.0 is charged to any zone that houses patients without any staff in immediate attendance.

Step 3 — Compute Occupancy Risk Factor (F) using Worksheet 4.7.3.
(1) Transfer the circled risk factor values from Worksheet 4.7.2 to the corresponding blocks in Worksheet 4.7.3.
(2) Compute F by multiplying the risk factor values as indicated in Worksheet 4.7.3.

WORKSHEET 4.7.3 - OCCUPANCY RISK FACTOR CALCULATION

	M		D		L		T		A		F
OCCUPANCY RISK	☐	X	☐	X	☐	X	☐	X	☐	=	☐

Step 4 — Compute Adjusted Building Status (R) - Use Worksheets 4.7.4 or 4.7.5.
(1) If building is classified as “NEW” use Worksheet 4.7.4. If building is classified as “Existing” use Worksheet 4.7.5.
(2) Transfer the value of F from Worksheet 4.7.3 to Worksheets 4.7.4 or 4.7.5, as appropriate. Calculate R.
(3) Transfer R to the block labeled R in Worksheet 4.7.9.
(4) In Worksheets 4.7.4 and 4.7.5, results are always rounded up (i.e., 3.2 is rounded to 4.0).

WORKSHEET 4.7.4 ADJUSTED OCCUPANCY RISK FACTOR (NEW)

	F		R
1.0 X	☐	=	☐

WORKSHEET 4.7.5 ADJUSTED OCCUPANCY RISK FACTOR (EXISTING)

	F		R
0.6 X	☐	=	☐

Step 5 — Determine Safety Parameter Values using Worksheet 4.7.6.

(1) Select and circle the safety value for each safety parameter that best describes the conditions in the zone.
(2) Choose only one value for each of the 13 parameters.
(3) If two or more appear to apply, choose the one with the lowest point value.

WORKSHEET 4.7.6 – SAFETY PARAMETER VALUES

Safety Parameters	Parameters Values						
1. Construction	Combustible Types III, IV, and V				Non-Combustible Types I and II		
Floor or Zone	000	111	200	211, 2HH	000	111	222, 322, 442
First	-2	0	-2	0	0	2	2
Second	-7	-2	-4	-2	-2	2	4
Third	-9	-7	-9	-7	-7	2	4
4th and Above	-13	-7	-13	-7	-9	-7	4
2. Interior Finish (Corridors and Exits)	Class C	Class B	Class A				
	-5(0)[f]	0(3)[f]	3				
3. Interior Finish (Rooms)	Class C	Class B	Class A				
	-3(1)[f]	1(3)[f]	3				
4. Corridor Partitions/Walls	None or Incomplete	<1/2 hour	>1/2 to <1 hour	≥1 hour			
	-10(0)[a]	0	1(0)[a]	2(0)[a]			
5. Doors to Corridor	No Door	<20 min FPR	≥ 20 min FPR	≥ 20 min FPR and Auto Closure			
	-10	0	1(0)[d]	2(0)[d]			
6. Zone Dimensions	Dead End			No Dead Ends >30 ft. and Zone Length Is			
	>100 ft.	>50 ft. to 100 ft.	30 ft. to 50 ft.	>150 ft.	100 ft. to 150 ft.	<100 ft.	
	-6(0)[b]	-4(0)[b]	-2(0)[b]	-2(0)[c] (0)[h]	0(0)[h]	1	
7. Vertical Openings	Open 4 or More Floors	Open 2 or 3 Floors	Enclosed with Indicated Fire Resistance				
			<1 hr.	≥1 hr. to <2 hr.	≥2 hr.		
	-14	-10	0	2(0)[e]	3(0)[e]		
8. Hazardous Areas	Double Deficiency		Single Deficiency		No Deficiencies		
	In Zone	Outside Zone	In Zone	In Adjacent Zone			
	-11	-5	-6	-2	0		
9. Smoke Control	No Control	Smoke Barrier Serves Zone	Mechanically Assisted Systems by Zone				
	-5(0)[c]	0	3				
10. Emergency Movement Routes	<2 Routes	Multiple Routes			Direct Exit(s)		
	-8	Deficient	W/O Horizontal Exit(s)	Horizontal Exit(s)			
		-2	0	1	5		
11. Manual Fire Alarm	No Manual Fire Alarm		Manual Fire Alarm				
			W/O F.D. Conn.	W/F.D. Conn.			
	-4		1	2			
12. Smoke Detection and Alarm	None	Corridor Only	Rooms Only	Corridor and Habit. Spaces	Total Spaces in Zone		
	0(3)[g]	2(3)[g]	3(3)[g]	4	5		
13. Automatic Sprinklers	None	Corridor and Habit. Space	Entire Building				
	0	8	10				

[a] Use (0) where parameter 5 is -10.

[b] Use (0) where parameter 10 is -8.

[c] Use (0) on floor with fewer than 31 patients (existing buildings only).

[d] Use (0) where parameter 4 is -10.

[e] Use (0) where Parameter 1 is based on first floor zone or on an unprotected type of construction (columns marked "000" or "200").
For SI Units: 1 ft.² = 0.3048 m²

[f] Use ( ) if the area of Class B or C interior finish in the corridor and exit or room is protected by automatic sprinklers and Parameter 13 is 0; use ( ) if the room with existing Class C interior finish is protected by automatic sprinklers, Parameter 4 is greater than or equal to 1, and Parameter 13 is 0.

[g] Use this value in addition to Parameter 13 if the entire zone is protected with quick-response automatic sprinklers.

[h] Use (0) where zone area ≤ 22,500 ft.² and distance from any point to reach a door in smoke barrier is ≤ 200 ft.

Step 6 — Compute Individual Safety Evaluations using Worksheet 4.7.7.

(1) Transfer each of the 13 circled Safety Parameter Values from Worksheet 4.7.6 to every unshaded block in the line with the corresponding Safety Parameter in Worksheet 4.7.7. For Safety Parameter 13 (Sprinklers) the value entered in the People Movement Safety column is recorded in Worksheet 4.7.7 as 1/2 the corresponding value circled in Worksheet 4.7.6.

(2) Add the four columns, keeping in mind that any negative numbers deduct.

(3) Transfer the resulting total values for S1, S2, S3, S4 to blocks labeled S1, S2, S3, S4 in Worksheet 4.7.9 on page 4 of this sheet.

WORKSHEET 4.7.7 - INDIVIDUAL SAFETY EVALUATIONS

Safety Parameters	Containment Safety (S_1)	Extinguishment Safety (S_2)	People Movement Safety (S_3)	General Safety (S_4)
1. Construction				
2. Interior Finish (Corr. and Exit)				
3. Interior Finish (Rooms)				
4. Corridor Partitions and Walls				
5. Doors to Corridor				
6. Zone Dimensions				
7. Vertical Openings				
8. Hazardous Areas				
9. Smoke Control				
10. Emergency Movement Routes				
11. Manual Fire Alarm				
12. Smoke Detection and Alarm				
13. Automatic Sprinklers			**÷ 2 =**	
Total Value	**S_1=**	**S_2=**	**S_3=**	**S_4=**

Step 7 — Determine Mandatory Safety Requirement values using Worksheet 4.7.8A, 4.7.8B, or 4.7.8C.

(1) Using the facility type (i.e., Hospital or Nursing Home), classification (i.e., New, Existing or Rehabilitated) and the floor where the zone is located, circle the appropriate value in each of the three columns found in Worksheet 4.7.8A, 4.7.8B, or 4.7.8C.

(2) Transfer the three circled values to the blocks marked S_a, S_b, and S_c in Worksheet 4.7.9.

(3) The Mandatory Safety Requirement value for basements are based on the distance of the basement level from the closest level of discharge (See 4.6.1.2 and 4.6.1.3).

WORKSHEET 4.7.8A - MANDATORY SAFETY REQUIREMENTS – NEW HOSPITALS, EXISTING HOSPITALS OR NEW NURSING HOMES

Zone Location	Containment (S_a)		Extinguishment (S_b)		People Movement (S_c)	
	New	Existing	New	Existing	New	Existing
1st story	11	5	15(12)[a]	4	8(5)[a]	1
2nd or 3rd story[b]	15	9	17(14)[a]	6	10(7)[a]	3
4th story or higher, but not high rise	18	9	19(16)[a]	6	11(8)[a]	3
High rise	18	17	19(16)[a]	16	11(8)[a]	7

a. Use ( ) in zones that do not contain patient sleeping rooms.

b. For a 2nd story zone location in a sprinklered EXISTING hospital, as an alternative to the mandatory safety requirement values set specified in the table, the following mandatory values *set* shall be permitted to be used: Sa=7, Sb=10, and Sc=7

WORKSHEET 4.7.8B(1) - MANDATORY SAFETY REQUIREMENTS – EXISTING NURSING HOMES

(Nursing homes certified before July 5, 2016 and did **NOT** previously use the Fire Safety Evaluation System for compliance, before October 1, 2022 use Worksheet 4.7.8B(1)*)

Zone Location	Containment (Sa)	Extinguishment (Sb)	People Movement (Sc)
	Existing	Existing	Existing
1st story	0	10	0
2nd story	2	10	2
3rd story	6	14	2
4th story or higher	8	16	2

* Per 42 CFR 483.90(a)(1)(iii)

WORKSHEET 4.7.8B(2) - MANDATORY SAFETY REQUIREMENTS – EXISTING NURSING HOMES

(Nursing homes certified before July 5, 2016 and previously used the Fire Safety Evaluation System for compliance before October 1, 2022, use Worksheet 4.7.8B(2)*)

Zone Location	Containment (Sa)	Extinguishment (Sb)	People Movement (Sc)
	Existing	Existing	Existing
1st story	5	4	1
2nd or 3rd story	9	6	3
4th story or higher	9	6	3

* Per 42 CFR 483.90(a)(1)(iii)

WORKSHEET 4.7.8C - MANDATORY SAFETY REQUIREMENTS – MAJOR REHABILITATION IN NONSPRINKLERED EXISTING HOSPITALS

Zone Location	Containment (Sa)	Extinguishment (Sb)	People Movement (Sc)
	Existing	Existing	Existing
1st story	13	17(14)*	8(5)*
2nd or 3rd story	17	19(16)*	10(7)*
4th story or higher	18	19(16)*	11(8)*

*Use ( ) in zones that do not contain patient sleeping rooms.

Step 8 — Identify Zone Fire Safety Equivalency using Worksheet 4.7.9.

(1) Transfer the three circled values from Worksheet 4.7.8A, 4.7.8B, or 4.7.8C to the blocks marked Sa, Sb, and Sc in Worksheet 4.7.9.

(2) For each row check “Yes” if the value in the answer block is zero or greater. Check “No” if the value in the answer block is a negative number.

WORKSHEET 4.7.9 - ZONE FIRE SAFETY EQUIVALENCY EVALUATION

					YES	NO
Containment Safety (S_1)	minus	Mandatory Containment (Sa)	≥ 0	S_1 ☐ — S_a ☐ = C ☐		
Extinguishment Safety (S_2)	minus	Mandatory Extinguishment (Sb)	≥ 0	S_2 ☐ — S_b ☐ = E		
People Movement Safety (S_3)	minus	Mandatory People Movement (Sc)	≥0	S_3 ☐ — S_c ☐ = P ☐		
General Safety (S_4)	minus	Occupancy Risk (R)	≥ 0	S_4 ☐ — R ☐ = G ☐		

Step 9 — Evaluate other considerations not previously addressed using Worksheet 4.7.10.
Complete one copy of this separate worksheet for each facility.
For each consideration, select and mark the appropriate column.

WORKSHEET 4.7.10 FACILITY FIRE SAFETY REQUIREMENTS WORKSHEET

		Met	Not Met	Not Applic.
A.	Building utilities conform to the requirements of Section 9.1.			
B.	In new facilities only, life-support systems, alarms, emergency communication systems, and illumination of generator set locations are powered as prescribed by 18.5.1.2 and 18.5.1.3.			
C.	Heating and air conditioning systems conform with the air conditioning, heating, and ventilating systems requirements within Section 9.2, except for enclosure of vertical openings, which have been considered in Safety Parameter 7 of Worksheet 4.7.6.			
D.	Fuel-burning space heaters and portable electrical space heaters are not used.			
E.	There are no flue-fed incinerators.			
F.	An evacuation plan is provided and fire drills conducted in accordance with 18.7.1/18.7.2 and 19.7.1/19.7.2.			
G.	Smoking regulations have been adopted and implemented in accordance with 18.7.4 and 19.7.4.			
H.	Draperies, upholstered furniture, mattresses, furnishings, and decoration combustibility is limited in accordance with 18.7.5 and 19.7.5.			
I.	Fire extinguishers are provided in accordance with the requirements of 18.3.5.12 and 19.3.5.12.			
J.	Exit signs are provided in accordance with the requirements of 18.2.10.1 and 19.2.10.			
K.	Emergency lighting is provided in accordance with 18.2.9.1 or 19.2.9.1.			
L.	Standpipes are provided in all new high rise buildings as required by 18.4.2.			

Step 10 — Determine the equivalency Conclusion to determine if the level of life safety is at least equivalent to that prescribed by the Life Safety Code using Worksheet 4.7.11.

WORKSHEET 4.7.11- CONCLUSIONS

1. ☐ All of the checks in Worksheet 4.7.9 are in the “Yes” column and all applicable considerations in Worksheet 4.7.10 are marked as “Met”. The level of safety is at least equivalent to that prescribed by NFPA 101, *Life Safety Code*, for health care occupancies.

2. ☐ All of the checks in Worksheet 4.7.9 are in the “Yes” column and all considerations in Worksheet 4.7.10 marked as “Not Met” have been evaluated and mitigated to the satisfaction of the AHJ. The level of safety is at least equivalent to that prescribed by NFPA 101, *Life Safety Code*, for health care occupancies.

3. ☐ One or more of the checks on Worksheet 4.7.9 are in the “No” column or any considerations in Worksheet 4.7.10 marked as “Not Met” have NOT been evaluated and mitigated to the satisfaction of the AHJ. The level of safety is not shown by this system to be equivalent to that prescribed by NFPA 101, *Life Safety Code*, for health care occupancies.