

**MINUTES OF THE NFPA  
TECHNICAL COMMITTEE ON ASSEMBLY  
OCCUPANCIES**

**July 8-9, 2003  
Quincy, MA**

**Item 1, Call to Order**

The meeting of the NFPA Technical Committee on Assembly Occupancies was called to order by the Chair, Ralph Gerdes at 10:00 a.m. on July 8, 2003 at NFPA headquarters in Quincy, Massachusetts.

**Item 2, Introduction of Members and Guests**

The following Technical Committee Principal and Alternate members were present:

<b>NAME</b>	<b>COMPANY</b>
Ralph Gerdes, Chair	Ralph Gerdes Consultants, LLC
Scott Adams, Principal	Park City UT Fire Service District/Representing International Fire Marshals Association (IFMA)
Stanton M. Alexander, Principal	North American Testing Company
Scott R. Bartlett, Principal	Simplex Time Recorder Co./Representing National Electrical Manufacturers Association
George Bushey, Principal	Rosser International
William Conner, Principal	Schuler & Shook Inc./Representing American Society of Theater Consultants
Ronald Farr, Principal	Kalamazoo MI Township Fire Department/Representing Michigan Fire Inspectors Society
Robert Fiedler, Principal	City of Lincoln, NE Bureau of Fire Prevention
William E. Fitch, Principal	Omega Point Laboratories Inc.
Wesley Hayes, Jr., Principal	Polk County FL Fire Services Division/Representing International Fire Marshals Association (IFMA)
Roland Huggins, Principal	American Fire Sprinkler Association, Inc.
Jonathan Humble, Alternate to D. McGee	American Iron and Steel Institute
Kevin Kelly, Principal	National Fire Sprinkler Association

John Lake, Principal	Marion County FL Fire Rescue/Representing NE Florida Fire Prevention Association
Vern L. Martindale, Principal	Church of Jesus Christ of Latter-day Saints
Joseph J. Messersmith, Jr., Principal	Portland Cement Association
Gregory R. Miller, Principal	Code Consultants Inc./Representing National Association of Theatre Owners
Jake Pauls, Principal	Jake Pauls Consulting Services in Building Use and Safety
Steven Peavey, Principal	Altamonte Springs FL Fire Department/Representing Florida Fire Marshals & Inspectors Assn.
John W. Pritchett, Principal	Athens-Clarke County GA Fire Department
Ed Roether, Principal	HOK SVE
Karl Ruling, Principal	Entertainment Services & Technology Assn./Representing US Institute for Theatre Technology
Robert Treiber, Alternate to K. Kelly	National Fire Sprinkler Association, Inc.
Jeffrey S. Tubbs, Principal	Arup Fire
Daniel R. Victor, Principal	Interkal, LLC/Representing National School Supply & Equipment Association
Paul Wertheimer, Principal	Crowd Management Strategies

The following Technical Committee Principal Members were absent:

<b>NAME</b>	<b>COMPANY</b>
Weston E. Bacon, Jr., Principal	Bacon Hedland Management, Inc./Representing International Association of Exposition Management
Bhola Dhume, Principal	City of New Orleans LA Department of Safety & Permits
Keith Nagelski, Principal	Soft Play, LLC/Representing International Play Equipment Manufacturers Association
Joseph Psuik, III, Principal (Guest Mount Allen attended)	San Diego Convention Center/Representing International Association of Assembly Managers, Inc.
Philip R. Sherman, Principal	Philip R. Sherman, P.E.

The following NFPA staff was also in attendance:

Ron Coté, Nonvoting Secretary
Arthur Cote
Gary Keith
John Nicholson
Kirsten Paoletti

Guests in attendance during all or part of the meeting were:

NAME	COMPANY
Mount Allen	IAAM
Jack Hagel	Associated Press
Steve Kurkjian	Boston Globe
Peter Lord	Providence Journal
Julie Reynolds	Julie Reynolds Communications
Richard Skinner	National Fire Sprinkler Association

### **Item 3, Approval of Minutes**

The minutes of the March 13, 2003 meeting were approved as written and distributed.

### **Item 4, Review of Rhode Island Legislative Commission Report**

The Report "Making Rhode Island the Safest State" issued on June 5, 2003 was discussed.

### **Item 5, Main Entrance/Exit**

Proposed changes submitted by John Lake were discussed. A task group was formed to address the subject for the next revision cycle. The task group consists of John Lake—Chair, George Bushey, Jake Pauls, Steven Peavey and Ed Roether with Ron Coté to provide staff support.

### **Item 6, Nightclub Fire History**

The information received from the NFPA Fire Analysis Division was characterized as historical but missing any of the recent international nightclub fires. Kevin Kelly agreed

to make available to the committee any international nightclub fire information assembled by Russ Fleming, NFSA.

### **Item 7, Sprinkler Threshold Task Group Report**

The CCI April 9, 2003 report *An Analysis to Establish a Nightclub Sprinkler Threshold*, distributed with the meeting agenda, was discussed. Greg Miller distributed two additional analysis summaries which are included as **Attachment A** to these minutes. The Task Group Chair, Jeff Tubbs distributed a progress update and proposed work plan which appears as **Attachment B** to these minutes. The task group agreed to perform additional computer runs for purposes of sensitivity analysis. Roland Huggins–AFSA and Kevin Kelly–NFSA offered use of computational resources.

### **Item 8, Discussion on TIAs Recently Balloted**

All 7 TIAs were discussed. Actions taken are summarized below in Item 9.

### **Item 9, Development of Recommendations to Standards Council re: Pending TIAs**

The technical committee recommendations to the Standards Council appear as **Attachment C** to these minutes.

### **Item 10, Other Business**

Pre-cast Concrete Aisle Step Construction Tolerances. Ed Roether raised the issue. A task group was formed to address the subject. The task group consists of Ed Roether–Chair, George Bushey, Wes Hayes, Jonathan Humble, Jim Messersmith and Dan Victor with Ron Coté to provide staff support.

NFPA 102. Staff advised that NFPA 102 would be re-packaged as an extract document and processed through the 2005 May Meeting revision cycle, the same as NFPA 101 and NFPA 5000. Staff will prepare the materials for consideration at the next meeting.

TCC Voting on TIAs. The technical committee asked that the technical correlating committees (BLD-AAC and SAF-AAC) and the Standards Council be advised that correlating committees should be limited in their votes on TIAs to addressing correlation issues. The TCC is not as closely involved as the TC in the technical deliberations to judge the merits and emergency nature of a TIA.

TIA Balloting. The technical committee asked that in the future it receive copies of the ballot re-circulation of the technical correlating committee. Currently the TCC receives

copies of the TC ballot results and comments, but the process does not work in the reverse order.

### **Item 11, Next Meeting**

The committee will meet on Tuesday, February 3, 2004 in Phoenix to prepare the ROP for NFPA 5000, NFPA 101, and NFPA 102. An 8:00 a.m. start is scheduled. Staff asked members to plan for a long meeting that might run into the evening. Members were asked to make travel plans that would permit them to be in Phoenix on the evenings of February 2 and 3.

### **Item 12, Adjournment**

The chair, Ralph Gerdes, recessed the meeting at 5:00 p.m. on Tuesday, July 8. On Wednesday, July 9, the meeting was reconvened at 8:00 a.m. and adjourned at 9:35 a.m.

Minutes prepared by Ron Coté, P.E.  
Nonvoting Secretary and Staff Liaison

Attachments

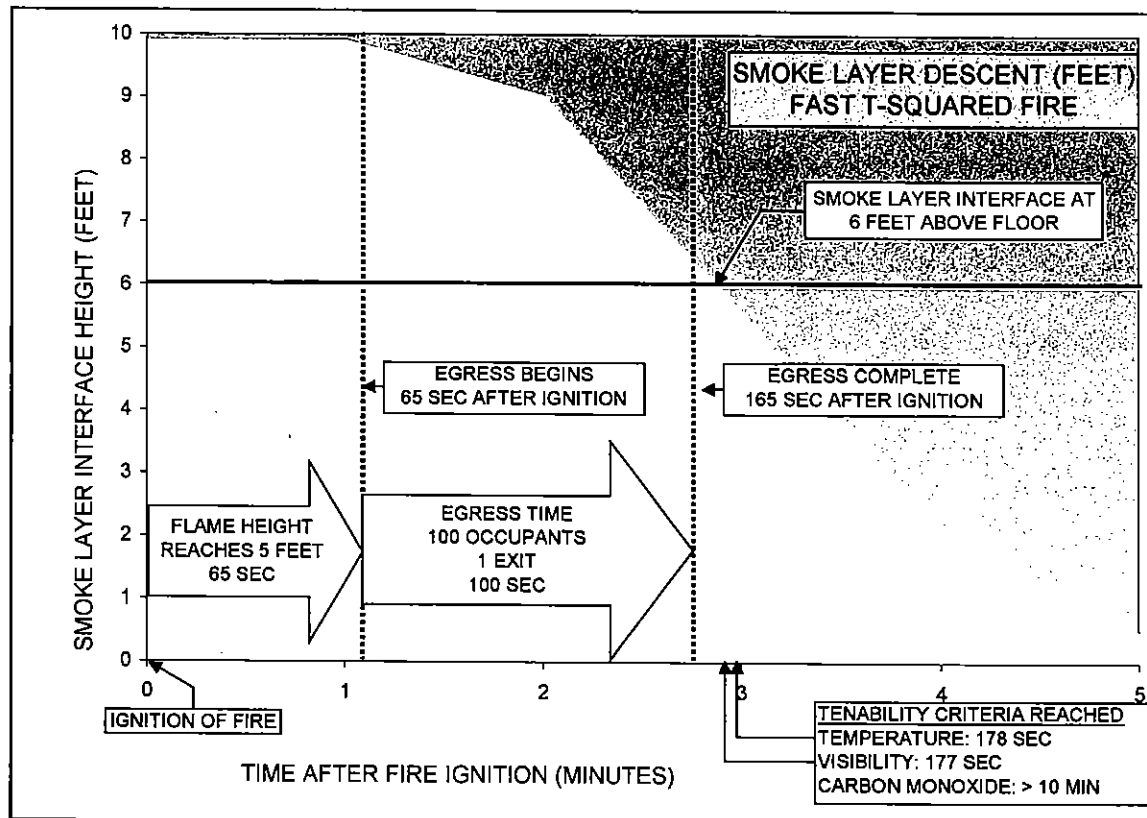
# **ATTACHMENT A**

## ANALYSIS SUMMARY

The results below are for a revised egress analysis using an occupant flow rate of 60 persons per minute per 3'0" door. The fire modeling portion of the analysis, used to determine the time to untenable conditions, and the analysis methodology have not changed. The summary table is for 100 occupants exiting through one 3'0" door at a rate of 60 persons/min. The graph illustrates the results for the fast t-squared fire scenario.

Timed Egress Analysis Summary.

FIRE GROWTH RATE	TIME TO START EGRESS (SECONDS)	EGRESS TRAVEL TIME (SECONDS)	TOTAL EGRESS TIME FROM IGNITION (SECONDS)	TIME TO UNTENABLE CONDITIONS (SECONDS)
FAST T-SQUARED	65	100	165	177
MEDIUM T-SQUARED	131	100	231	268



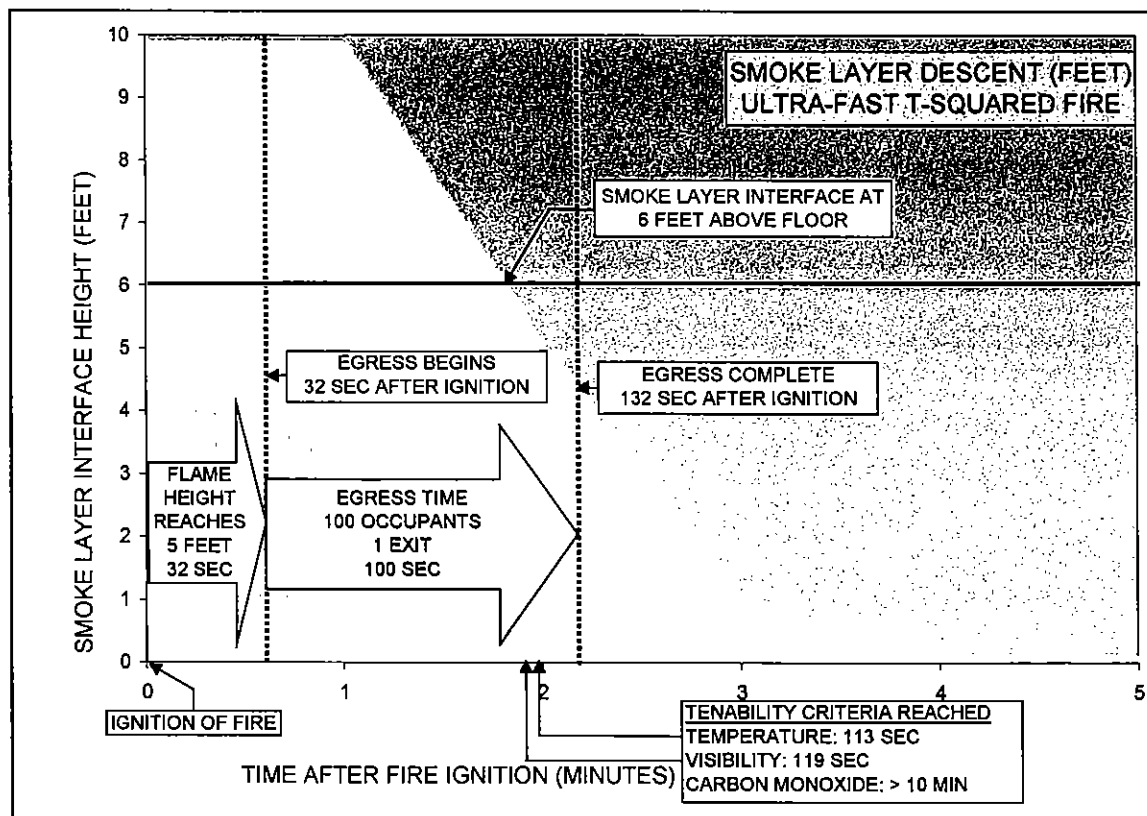
Timed egress analysis summary graph.

## ANALYSIS SUMMARY

The results below are for a revised egress analysis using an occupant flow rate of 60 persons per minute per 3'0" door. The analysis methodology has not changed, but an ultra-fast t-squared fire has also been modeled. The summary table is for 100 occupants exiting through one 3'0" door at a rate of 60 persons/min. The graph illustrates the results for the ultra-fast t-squared fire scenario.

Timed Egress Analysis Summary.

FIRE GROWTH RATE	TIME TO START EGRESS (SECONDS)	EGRESS TRAVEL TIME (SECONDS)	TOTAL EGRESS TIME FROM IGNITION (SECONDS)	TIME TO UNTENABLE CONDITIONS (SECONDS)
ULTRA-FAST T-SQUARED	32	100	132	113
FAST T-SQUARED	65	100	165	177
MEDIUM T-SQUARED	131	100	231	268



Timed egress analysis summary graph.

# **ATTACHMENT B**

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To	Chair, Ralph Gerdes	Reference number 73757/01/JST
cc	Secretary, Ron Cote Members, NFPA TC on Assembly Occupancies and Membrane Structures	File reference NFPA TC AXM
From	Jeffrey Tubbs, P.E. Chair, Task Group on Sprinkler Thresholds	Date July 7, 2003
Subject	Task Group on Sprinkler Thresholds Progress Update and Proposed Work Plan	

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This memo intends to provide a progress update and proposed work plan from the Task Group on Sprinkler Thresholds to the Technical Committee on Assembly Occupancies and Membrane Structures.

The overall approach is to simulate a range of fire scenarios to approximate smoke movement, estimate order-of-magnitude conditions and determine the time to onset of hazardous conditions within the various configurations and scenarios. The next step will be to estimate occupant movement times for various room sizes and exit width conditions. Although little minimal information is available to predict or estimate occupant pre-movement times, Proulx [1] [2] provides some guidance for order of magnitude ranges of pre-movement times. Egress times, combined with ranges of occupant decision times, can then be compared to the times to onset of hazardous conditions, allowing comparisons of various protection schemes, and providing insight to various sprinkler thresholds.

FDS Version 3.0 [3] [4] will be used to estimate tenability; Table 1 describes the ranges of inputs for the tenability analysis. STEPS [5] [6] will be used to predict occupant movement times; Table 2 describes the ranges of inputs used for the occupant movement times. Initial simulations of the larger compartments have resulted in simulations of one to two weeks, even with dual processor PC's with 2 GB of RAM. Based upon these initial simulation times, these ranges will need to be further pared in order to allow a reasonable number of scenarios.

In order to assist with this project and allow timely feedback to the Committee, the initial approach was to pursue a number of funding sources to support student involvement. The task group could then outline a range of scenarios and review modeling results, while students would perform the bulk of the effort. Various funding agencies were pursued, but none seemed promising; therefore, it was decided to proceed without funding.

Code Consultants, Inc. issued "An Analysis To Establish A Nightclub Sprinkler Threshold" as a first-pass of the modeling to provide initial feedback to the Committee. Due to time constraints, the analysis described in this report was not reviewed in depth by the Task Group, but was forwarded to the committee for discussion.

It is the intent that the overall task group results be complete and available several weeks before the May 2005 Edition Proposal Closing Deadline (17 October 2003); however, this may need to be revised. At a minimum, a progress report will be submitted in October.

July 7, 2003

Page 2 of 2

- [1] Proulx, G., "Occupant Response to Fire Alarm Signals," *National Fire Alarm Code Handbook, Appendix C*, National Fire Protection Association, Quincy, MA, 1999
- [2] Proulx, G., "Movement of People: The Evacuation Timing," *SFPE Handbook of Fire Protection Engineering, 3<sup>rd</sup> Edition*, National Fire Protection Association, Quincy, MA, 2002
- [3] McGrattan, K., Forney, G., Floyd, J., Hostikka, S., Prasad, K., NISTIR 6484, 2002 Ed., Fire Dynamics Simulator (Version 3) – Users's Guide, National Institute of Standards and Technology, Gaithersberg, MD, 2002
- [4] McGrattan, K., Baum, H, Rehm, R., Hamins, A., Forney, G., Floyd, J., Hostikka, S., Prasad, K., NISTIR 6483, Fire Dynamics Simulator (Version 3) – Technical Reference Guide, National Institute of Standards and Technology, Gaithersberg, MD 2002
- [5] Pellesier, E., STEPS (Simulation of Transient Evacuation and Pedestrian movementS) – Users Manual, Mott, MacDonald, LTD, London, UK 2002
- [6] Pellesier, E., STEPS (Simulation of Transient Evacuation and Pedestrian movementS) – Quickstart Manual, Mott, MacDonald, LTD, London, UK 2002

**TABLE 1: Tenability Analysis**

Input	Range
Simulation Area	Three compartment sizes: 2500 s.f., 5000 s.f. and 7500 s.f.
Compartment Height	Compartment heights of 8 feet and 20 feet. One or two critical scenarios will be simulated with a compartment height of 14 feet.
Fire Scenario	Three main fire scenarios: (1) 'fast fire' growth rate until sprinkler activation, constant fire size after sprinkler activation; (2) 'fast fire' growth rate until 150 % of the heat release rate at sprinkler activation, constant fire size after 150 % of the heat release rate at sprinkler activation; and (3) 'fast fire' growth rate until the fire reaches 5 Mw, constant after 5Mw. One or two critical scenarios will be simulated with 'medium' and 'ultra-fast' fire growth rates.
Sprinklers	Quick response sprinklers will be spaced at 15 feet by 15 feet. One or two critical scenarios will be simulated with normal response links.

**TABLE 2: Egress Analysis**

Input	Range
Simulation Area	Three compartment sizes will be used 2500 s.f., 5000 s.f. and 7500 s.f.
Occupant Load	Three occupant load (i.e. occ. / foot) variations will be used: (1) 25 % 1:100 and 75 % 1:15; (2) 100 % 1:15; and (3) 50 % 1:7 and 50 % 1:15.
Exits Number and Width	Number of exit doors and overall egress widths from these doors will be assumed to be at 50 %, 100 % and 200 % of the <i>Life Safety Code</i> and <i>Building Construction and Safety Code</i> required egress width. Exit stairs will not be considered in this analysis.
Occupant Travel Speeds	Occupant travel speeds will be varied throughout the population: 25 % traveling at 100 feet per minute and 75 % traveling at 200 feet per minute. Note since queuing will be the dominant restraint, this will have little impact to the overall estimated results; therefore, sensitivities will not be developed for travel speeds.
Door Flows	Doors flows will be set at 60 occupants per minute.

# **ATTACHMENT C**

## Standards Council Agenda 03-7-15

In lieu of further consideration of TIA Log No. 737, please consider issuance of a substitute TIA Log No. 737-**Revised** (shown below). The revised language was developed by the Technical Committee on Assembly Occupancies at its second special meeting held July 8-9. The issue passed at the meeting by a vote of 19 affirmative and 5 negative. Letter balloting of the TC and TCC is being conducted.

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TIA Log No. 737-**Revised**

Reference 12.2.5.4.1 and 13.2.5.4.1

Submitter: Technical Committee on Assembly Occupancies

*Revise 12.2.5.4.1 and 13.2.5.4.1 to prohibit festival seating in assembly occupancies with occupant load more than 250 without a life safety evaluation as follows:*

**12.2.5.4.1** Festival seating, as defined in 3.3.188.1, shall be prohibited within a building, unless otherwise permitted by the following:

(1) Festival seating shall be permitted in assembly occupancies having occupant loads of 250 ~~1000~~ or less.

(2) Festival seating shall be permitted in assembly occupancies where occupant loads exceed 250 ~~1000~~ and where an approved life safety evaluation has been performed. (See 12.4.1.)

**13.2.5.4.1** Festival seating, as defined in 3.3.188.1, shall be prohibited within a building, unless otherwise permitted by the following:

(1) Festival seating shall be permitted in assembly occupancies having occupant loads of 250 ~~1000~~ or less.

(2) Festival seating shall be permitted in assembly occupancies where occupant loads exceed 250 ~~1000~~ and where an approved life safety evaluation has been performed. (See 13.4.1.)

### Submitter's Reason:

1. The NFPA 101 Life Safety Code requirements for festival seating were proposed in 1994 to address unsafe conditions at standing room concerts during times of ingress and egress and because dangerous and deadly crowd crushing, and other safety-compromising crowd dynamics were known to occur (See: NFPA 101 – A.12/A.13.2.5.4.2 and A.12/A.13.2.5.4.3).

2. Historically, festival seating concert and club environments are rock and roll's most injurious and deadly crowd configuration. The worst concert and festival disasters have been triggered by, or have included, festival seating crowd configurations (Source: Crowdsafe Database, 1952 to 2003).

3. Annually, many thousand of US concerts and other pop culture events (dances, raves, etc.) are held in small clubs and concert venues with less than 1,000 capacity

occupant loads. Venues such as The Station (West Warwick, RI) and the E2 club (Chicago, IL) are examples, not exceptions.

4. A greater percentage of the concert-going public would be substantially safer if clubs and concert venues of all sizes were made to submit written Life Safety Evaluations for approval before qualifying for festival seating events.

5. An up-to-date Life Safety Evaluation approved by the authority having jurisdiction (AHJ) could have prevented or reduced the loss of life and devastation that that occurred at The Station and E2 club. Life Safety Evaluations are crucial in assuring public safety.

6. A Life Safety Evaluation is neither burdensome to management nor cost prohibitive (Source: Iowa and West Virginia venue representatives adopting the NFPA 101 Life Safety Code standard for festival seating).

7. Ultimately, the owner is responsible for the safety of the patrons. The Life Safety Evaluation is the preeminent tool that provides the AHJ a way to confirm the owner's management efforts on each of the various events within the facility.

8. NFPA 101 12.7.5.1 and 13.7.5.1 require one crowd manager per each 250 people once an occupant load exceeds 1000. A Life Safety Evaluation addresses crowd procedures and responsibilities. Therefore, a Life Safety Evaluation should be performed when 250 people are within an assembly occupancy.

## Standards Council Agenda 03-7-16

The Technical Committee on Assembly Occupancies held a second special meeting on July 8-9. By a vote of 19 affirmative and 5 negative, the committee reaffirmed the action it took on TIA Log No. 738 (copy shown below). The TIA passed TC ballot, but failed TCC ballot. The Technical Committee on Assembly Occupancies requests the Standards Council issue the TIA.

# FOR INFO ONLY – NO ADDITIONAL AXM BALLOT NEEDED

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Life Safety Code®

TIA Log No. 738

Reference 12.7.5 and 13.7.5

Submitter: Technical Committee on Assembly Occupancies

*Revise 12.7.5 and 13.7.5 to lower the threshold for crowd managers in assembly occupancies as follows:*

### **12.7.5\* Crowd Managers.**

**12.7.5.1** ~~In assembly~~ Assembly occupancies ~~having occupant loads exceeding 1000,~~ shall be provided with a minimum of one trained crowd manager or crowd manager supervisor. Where the occupant load exceeds 250, additional trained crowd managers or crowd manager supervisors shall be provided at a ratio of 1 crowd manager/supervisor for every 250 occupants unless otherwise permitted by the following:

- (1) this requirement shall not apply to assembly occupancies used exclusively for religious worship with an occupant load not exceeding 2000.
- (2) The ratio of trained crowd managers to occupants shall be permitted to be reduced where, in the opinion of the authority having jurisdiction, the existence of an approved, supervised automatic sprinkler system and the nature of the event warrant.

**12.7.5.2** The crowd manager shall receive approved training in crowd management techniques.

### **13.7.5\* Crowd Managers.**

**13.7.5.1** ~~In assembly~~ Assembly occupancies ~~having occupant loads exceeding 1000,~~ shall be provided with a minimum of one trained crowd manager or crowd manager supervisor. Where the occupant load exceeds 250, additional trained crowd managers or crowd manager supervisors shall be provided at a ratio of 1 crowd manager/supervisor for every 250 occupants unless otherwise permitted by the following:

- (1) this requirement shall not apply to assembly occupancies used exclusively for religious worship with an occupant load not exceeding 2000.

(2) The ratio of trained crowd managers to occupants shall be permitted to be reduced where, in the opinion of the authority having jurisdiction, the existence of an approved, supervised automatic sprinkler system and the nature of the event warrant.

**13.7.5.2** The crowd manager shall receive approved training in crowd management techniques.

Submitter's Reason: Assembly facilities such as clubs need a certain minimal level of management capability for life safety independent of their size. The threshold of 1000 does not make sense for the problems encountered recently and previously with smaller assembly facilities. The current exceptions give latitude for the AHJ to have a higher threshold for assembly occupancies that have not been problematic for life safety.

## Standards Council Agenda 03-7-17

In lieu of further consideration of TIA Log No. 739, please consider issuance of a substitute TIA Log No. 739-**Revised** (shown below). The revised language was developed by the Technical Committee on Assembly Occupancies at its second special meeting held July 8-9. The revised language represents a blending of the thresholds proposed by TIA Log No. 739 and TIA Log No. 742. The issue passed at the meeting by a vote of 18 affirmative and 7 negative. Letter balloting of the TC and TCC is being conducted.

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TIA Log No. 739-**Revised**

Reference 13.3.5.1

Submitter: Technical Committee on Assembly Occupancies

*Insert a new 13.3.5.1 (and renumber existing 13.3.5.1 through 13.3.5.3) to require sprinklers in existing nightclubs and similar assembly occupancies with occupant load exceeding 100 as follows:*

**13.3.5.1** Where occupant load exceeds 100, the following assembly occupancies shall be protected throughout by an approved, supervised automatic sprinkler system in accordance with Section 9.7:

**(1) Bars**

**(2) Dance Halls**

**(3) Discotheques**

**(4) Nightclubs**

**(5) Assembly occupancies with festival seating**

### **Submitter's Reason:**

Due to the history of large loss fires in nightclubs and similar occupancies, sprinkler protection is warranted in existing buildings. Multiple loss of life fires in assembly occupancies include the Beverly Hills Supper Club, the Happy Land Social Club and The Station. After much discussion, the committee agreed that sprinklers could offset other fire protection deficiencies.

The decision to establish the 100 person occupant load threshold was prompted by further information provided by a study on sprinkler thresholds by a task group of the assembly occupancies technical committee. The study was based on fire modeling and egress modeling to define a reasonable expected number of persons that can exit prior to the area reaching untenable conditions. The report cited is *An Analysis to Establish a Nightclub Sprinkler Threshold*, prepared by Code Consultants, Inc, St. Louis, MO, April 9, 2003.

The technical committee on assembly occupancies felt that this change should be processed as a tentative interim amendment so that it would apply to the 2003 edition of NFPA 101. If the change awaited the 2006 edition, it would be a several years before the code was published and the change was adopted by authorities having jurisdiction, delaying the positive impact on life safety.

## Standards Council Agenda 03-7-18

In lieu of further consideration of TIA Log No. 741, please consider issuance of a substitute TIA Log No. 741-**Revised** (shown below). [Part 3 of the TIA, related to Inspections, is addressed as part of TIA Log No. 742, Council Agenda 03-7-19.] The revised language was developed by the Technical Committee on Assembly Occupancies at its second special meeting held July 8-9. The issue passed at the meeting by a vote of 20 affirmative and 3 negative. Letter balloting of the TC and TCC is being conducted.

NFPA 101@-2003

*Life Safety Code*®

TIA Log No. 741-**Revised**

Reference 12.3.5.1

Submitter: Technical Committee on Assembly Occupancies

*Insert a new 12.3.5.1 (and renumber existing 12.3.5.1 through 12.3.5.3) to require sprinklers in new nightclubs and similar assembly occupancies as follows:*

**12.3.5.1** The following assembly occupancies shall be protected throughout by an approved, supervised automatic sprinkler system in accordance with Section 9.7:

**(1) Bars**

**(2) Dance Halls**

**(3) Discotheques**

**(4) Nightclubs**

**(5) Assembly occupancies with festival seating**

### **Submitter's Reason:**

Due to the history of large loss fires in nightclubs and similar occupancies, sprinkler protection is feasible and warranted in new nightclubs and similar assembly occupancies. Multiple loss of life fires in assembly occupancies include the Beverly Hills Supper Club, the Happy Land Social Club and The Station. After much discussion, the committee agreed that sprinklers could offset other fire protection deficiencies.

All new nightclubs should be protected by an automatic sprinkler system. These occupancies are constantly changing configurations, are often overcrowded, hang combustible materials from walls and ceilings, and the occupants are frequently impaired. Recent incidents have further proven that these occupancies need to be protected by sprinkler systems to ensure the safety of the occupants when things go wrong. These occupancies also are an enforcement problem with changes taking place sometimes daily. Over the years, there have been many large losses of life fire incidents in assembly occupancies and the installation of sprinkler systems will reduce these statistics.

The technical committee on assembly occupancies felt that this change should be processed as a tentative interim amendment so that it would apply to the 2003 edition of NFPA 101. If the change awaited the 2006 edition, it would be a several years before the

code was published and the change was adopted by authorities having jurisdiction, delaying the positive impact on life safety.

## Standards Council Agenda 03-7-19

In lieu of further consideration of TIA Log No. 742, please consider issuance of a substitute TIA Log No. 742-**Revised** (shown below). [Parts 1 and 2 of the TIA, related to Sprinklers, are addressed as part of TIA Log No. 741, Council Agenda 03-7-18.] The revised language was developed by the Technical Committee on Assembly Occupancies at its second special meeting held July 8-9. The issue passed at the meeting by a vote of 22 affirmative and 1 negative. Letter balloting of the TC and TCC is being conducted.

NFPA 101®-2003

*Life Safety Code®*

TIA Log No. 742-**Revised**

Reference 12.7.1 and 13.7.1

Submitter: Technical Committee on Assembly Occupancies

*Insert a new 12.7.1 and 13.7.1 (and renumber existing 12.7.1 through 12.7.11 and 13.7.1 through 13.7.11) to require means of egress inspections as follows:*

### **12.7.1 Means of Egress Inspection.**

**12.7.1.1** The building owner or agent shall inspect the means of egress to ensure it is maintained free of obstructions, and correct any deficiencies found, prior to each opening of the building to the public.

**12.7.1.2** The building owner or agent shall prepare and maintain records of the date and time of each inspection on approved forms, listing and deficiencies found and actions taken to correct them.

### **13.7.1 Means of Egress Inspection.**

**13.7.1.1** The building owner or agent shall inspect the means of egress to ensure it is maintained free of obstructions, and correct any deficiencies found, prior to each opening of the building to the public.

**13.7.1.2** The building owner or agent shall prepare and maintain records of the date and time of each inspection on approved forms, listing and deficiencies found and actions taken to correct them.

### **Submitter's Reason:**

It is important that the egress system be inspected prior to each opening of an assembly occupancy building. There is little additional cost associated with complying with the proposed text; and compliance would increase the likelihood the means of egress system is unlocked, not blocked, and ready for use.

The technical committee on assembly occupancies felt that this change should be processed as a tentative interim amendment so that it would apply to the 2003 edition of NFPA 101. If the change awaited the 2006 edition, it would be a several years before the code was published and the change was adopted by authorities having jurisdiction, delaying the positive impact on life safety.

## Standards Council Agenda 03-7-23

In lieu of further consideration of TIA Log No. 740, please consider issuance of a substitute TIA Log No. 740-**Revised** (shown below). The revised language was developed by the Technical Committee on Assembly Occupancies at its second special meeting held July 8-9. The issue passed at the meeting by a vote of 19 affirmative and 5 negative. Letter balloting of the TC and TCC is being conducted.

NFPA 5000™-2003

*Building Construction and Safety Code™*

TIA Log No. 740-**Revised**

Reference 16.2.5.4.1

Submitter: Technical Committee on Assembly Occupancies

*Revise 16.2.5.4.1 to prohibit festival seating in assembly occupancies with occupant load more than 250 without a life safety evaluation as follows:*

**16.2.5.4.1** Festival seating, as defined in 3.3.474.1, shall be prohibited within a building unless otherwise permitted by the following:

~~Exception No. 1:~~ (1) Festival seating shall be permitted in assembly occupancies having occupant loads of 250 ~~1000~~ or less.

~~Exception No. 2:~~ (2) Festival seating shall be permitted in assembly occupancies where with occupant loads exceed ~~greater than~~ 250 ~~1000~~ with and an approved life safety evaluation has been performed. (See 16.4.1.)

### Submitter's Reason:

1. The NFPA 101 Life Safety Code requirements for festival seating were proposed in 1994 to address unsafe conditions at standing room concerts during times of ingress and egress and because dangerous and deadly crowd crushing, and other safety-compromising crowd dynamics were known to occur (See: NFPA 101 – A.12/A.13.2.5.4.2 and A.12/A.13.2.5.4.3).

2. Historically, festival seating concert and club environments are rock and roll's most injurious and deadly crowd configuration. The worst concert and festival disasters have been triggered by, or have included, festival seating crowd configurations (Source: Crowdsafe Database, 1952 to 2003).

3. Annually, many thousand of US concerts and other pop culture events (dances, raves, etc.) are held in small clubs and concert venues with less than 1,000 capacity occupant loads. Venues such as The Station (West Warwick, RI) and the E2 club (Chicago, IL) are examples, not exceptions.

4. A greater percentage of the concert-going public would be substantially safer if clubs and concert venues of all sizes were made to submit written Life Safety Evaluations for approval before qualifying for festival seating events.

5. An up-to-date Life Safety Evaluation approved by the authority having jurisdiction (AHJ) could have prevented or reduced the loss of life and devastation that that occurred at The Station and E2 club. Life Safety Evaluations are crucial in assuring public safety.

6. A Life Safety Evaluation is neither burdensome to management nor cost prohibitive (Source: Iowa and West Virginia venue representatives adopting the NFPA 101 Life Safety Code standard for festival seating).

7. Ultimately, the owner is responsible for the safety of the patrons. The Life Safety Evaluation is the preeminent tool that provides the AHJ a way to confirm the owner's management efforts on each of the various events within the facility.

8. NFPA 101 12.7.5.1 and 13.7.5.1 require one crowd manager per each 250 people once an occupant load exceeds 1000. A Life Safety Evaluation addresses crowd procedures and responsibilities. Therefore, a Life Safety Evaluation should be performed when 250 people are within an assembly occupancy.

## Standards Council Agenda 03-7-24

In lieu of further consideration of TIA Log No. 743, please consider issuance of a substitute TIA Log No. 743-**Revised** (shown below). The revised language was developed by the Technical Committee on Assembly Occupancies at its second special meeting held July 8-9. The issue passed at the meeting by a vote of 20 affirmative and 3 negative. Letter balloting of the TC and TCC is being conducted.

NFPA 5000™-2003

*Building Construction and Safety Code™*

TIA Log No. 743-**Revised**

Reference 16.3.5.1.1

Submitter: Technical Committee on Assembly Occupancies

*Insert a new 16.3.5.1.1 (and renumber existing 16.3.5.1.1 and 16.3.5.1.2) to require sprinklers in new nightclubs and similar assembly occupancies as follows:*

**16.3.5.1.1** The following assembly occupancies shall be protected throughout by an approved, supervised automatic sprinkler system in accordance with Section 55.3:

(1) Bars

(2) Dance Halls

(3) Discotheques

(4) Nightclubs

(5) Assembly occupancies with festival seating

### Submitter's Reason:

Due to the history of large loss fires in nightclubs and similar occupancies, sprinkler protection is feasible and warranted in new nightclubs and similar assembly occupancies. Multiple loss of life fires in assembly occupancies include the Beverly Hills Supper Club, the Happy Land Social Club and The Station. After much discussion, the committee agreed that sprinklers could offset other fire protection deficiencies.

All new nightclubs should be protected by an automatic sprinkler system. These occupancies are constantly changing configurations, are often overcrowded, hang combustible materials from walls and ceilings, and the occupants are frequently impaired. Recent incidents have further proven that these occupancies need to be protected by sprinkler systems to ensure the safety of the occupants when things go wrong. These occupancies also are an enforcement problem with changes taking place sometimes daily. Over the years, there have been many large losses of life fire incidents in assembly occupancies and the installation of sprinkler systems will reduce these statistics.

The technical committee on assembly occupancies felt that this change should be processed as a tentative interim amendment so that it would apply to the 2003 edition of NFPA 5000. If the change awaited the 2006 edition, it would be a several years before the code was published and the change was adopted by authorities having jurisdiction, delaying the positive impact on life safety.