

The Station Nightclub Fire An Analysis of Witness Statements

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Organizadores / Organizers



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Outline of presentation*

- Description of fire event
- Methodology for the study
- Analysis results

* Based on a paper presented at the 10th IAFSS Symposium in 2011, co-authored with Guylène Proulx (NRCC) and Jennifer Flynn (NFPA).

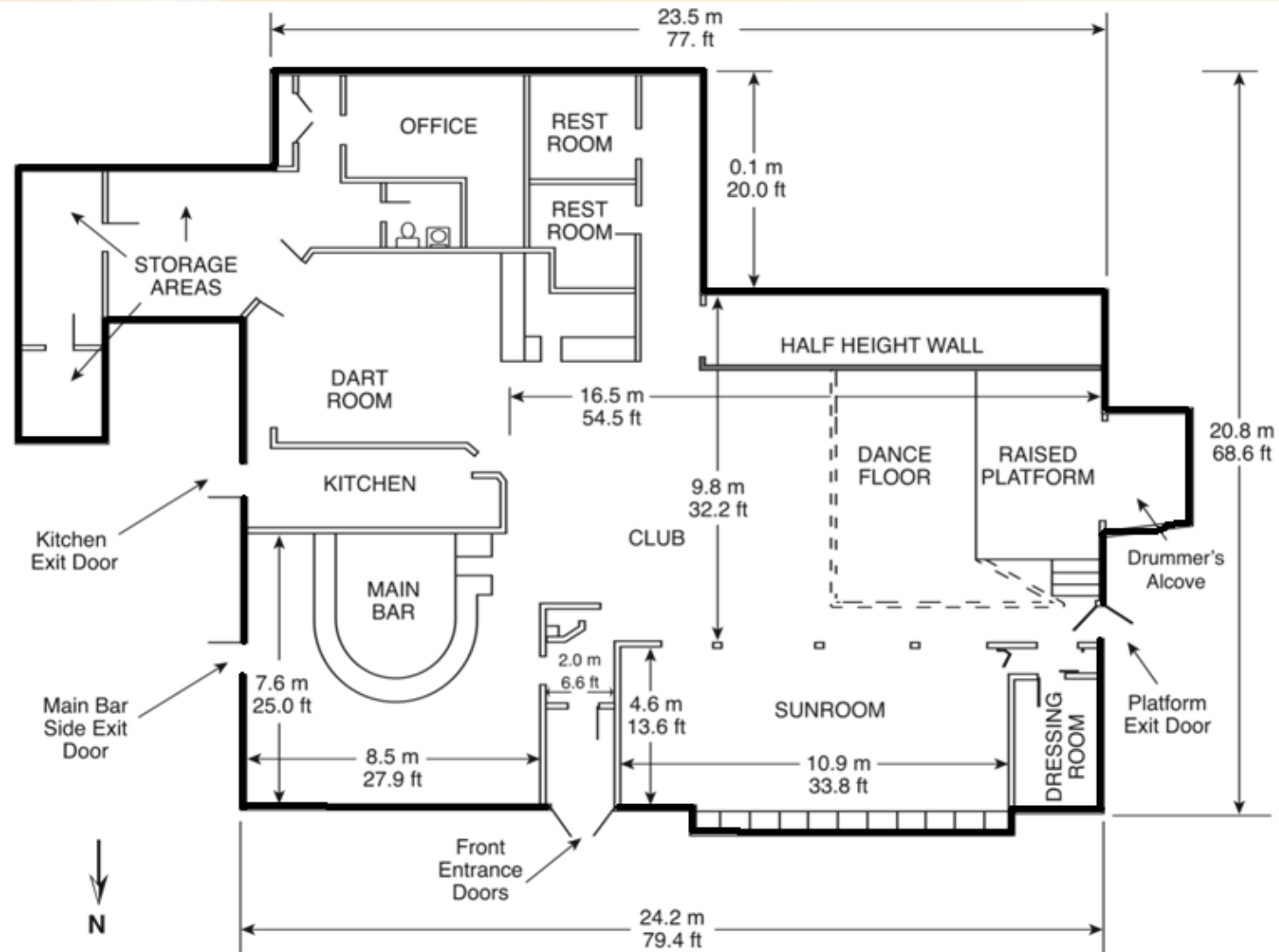
DESCRIPTION OF FIRE EVENT

The Event

- February 20, 2003, 23:00
- Nightclub, West Warwick RI
- Pyrotechnic gerbs start fire on stage
- Crowded club with more than 400 patrons
- Fire spread rapidly
- 100 people killed, 200 injured



Floorplan



7



Building elevation



Pyrotechnic gerbs ignited on stage

(13 seconds)



(COURTESY WCVB)

(approx 20 seconds)



(approx 1 min)



(approx 1m 15s)



After the fire



View from the Interior Showing the Stage and Drummer's Alcove (Photo NFPA).

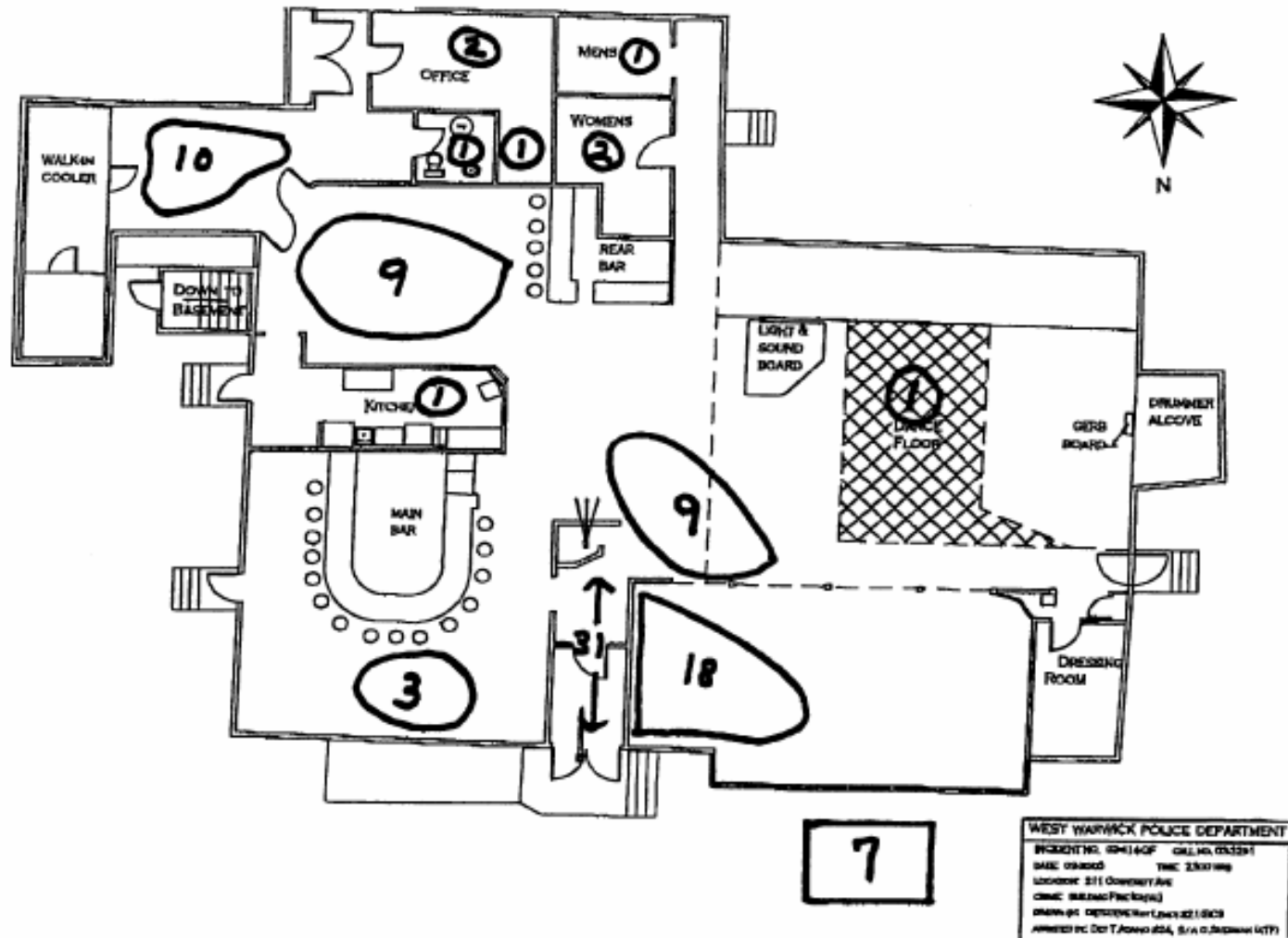
Timeline of events

Elapsed Time	Event
0	Pyrotechnics Activated
9 seconds	Flame Visible on Wall
19 seconds	Flames Progressing Upward – Crowd Begins to React
25 seconds	Flames at Ceiling
35 seconds	Band Stops Playing
48 seconds	Alarms Heard
1 minute	Smoke at Ceiling Throughout Room
1:15	Cameraman at Front door – Smoke at Ceiling and out Front Door
1:30	Fire visible at Stage Door
1:43	Black Smoke at Bottom of Sunroom Windows
1:53	Black Smoke at Front Door – Occupants Piled at Door
2:00	Alarms no Longer Audible from the Outside of Building
2:23	Occupants Exiting at Windows Near Bar (Left of front Exit)
3:00	Black Smoke at All Front Openings

Timeline (continued)

Elapsed Time	Event
3:25	Black smoke fills entire front door (victims still piled at door)
4:00	Black smoke thickening at all front openings
4:30	Sirens audible in background
4:30-4:45	View of platform door -- fire on floor, heavy black smoke, and dripping materials from ceiling
5:00	Fire visible at restroom wing
5:23	Flames at front openings (doors and windows)

Victim locations



METHODOLOGY FOR THE STUDY

Study methodology

- Analyze almost 400 witness statements collected by the police
- Use a questionnaire to interview each statement
- Enter information in a database
- Complete information with grand jury testimony and media interviews, where appropriate

Types of witness statements


- Handwritten by witness
- Short police questionnaire
- Transcript of face-to-face interview
- Investigator's notes taken during face-to-face or telephone interview

Limitations of the data

- Several investigators conducted the interviews; each had a different style
- Witnesses interviewed more than once
- Focus of the interview was to serve the criminal and civil law suits
- Some interviews ended when a witness could not contribute anything to the investigation

Sample witness statement

West Warwick
Witness



Police Department
Statement

Date: 3-11-03
Time: 1225 hrs
Location: WWPD HQ

Police Dept Case # _____

I, PAMELA JO BEINEKE, voluntarily without threats or promises, make the following statement to members of the West Warwick Police Department:

Q: What is your name?
A: PAMELA BEINEKE

Q: What is your address?
A: [REDACTED]
SHARON

Q: What is your phone number?
A: 781 784 [REDACTED]

Q: What is your date of birth?
A: [REDACTED]

Q: What is your occupation?
A: REGISTERED NURSE

Q: What is your SS#?
A: [REDACTED]

Q: What is your work phone number?
A: [REDACTED] (MISS)

ARRIVED AT APPROX. 9:30-9:45 PM. WITH GARY B. + PETE C. WE PURCHASED OUR TICKETS IN DECEMBER BEFORE CHRISTMAS AT STRAWBERRY'S IN CANTON MA (3 TICKETS). WE STOOD TO THE LEFT OF THE STAGE UP ON THE PLATFORM AREA AGAINST THE WALL. WE HATE BEING LIKED LEANING UP AGAINST THE REGGAE FARM (I HAVE NOTED THAT FARM BEING PRESENT PREVIOUSLY IT WAS GLITTER ON IT). I WAS WEARING A RED 3/4 SLEEVE JERSEY, V-NECK AND BLUE JEANS AND HIKING BOOTS. I HAVE LONG BLONDE HAIR. GARY B. WAS HOLDING MY LEATHER JACKET FOR ME. I DO NOT DRINK ETOH. WHEN THE SPARKLER WENT OFF AND THEN THE "TIRCH FLAMES" STARTED. I SAW THE MAN IDENTIFIED AS PAUL VANNER MOVE PAST ME. I WAS SURPRISED TO MYSELF THAT FLAMES WERE NOT BEING IMMEDIATELY EXTINGUISHED SO I TURNED TO LEAVE TALKING ALONG THE PLATFORM PAUL VANNER WAS RETURNING. AT THE STEP DOWN WITH A SMALL FIRE EXTINGUISHER. I HEARD SOMEONE TELL HIM. IT WAS TOO LATE FOR US. WE GOT PAST THE BACKROOM ALCOVE + TURNED LEFT TO WALK THE FRONT DOOR. AT THAT POINT PANIC WAS HAPPENING. IT SEEMED THAT THE CROWD WAS NOT GOING AND PUSHING. WE PROCEEDED OFF TOWARD THE BAR. THE SMOKE WAS BARKING. ALARMS WERE SOUNDING. PEOPLE WERE SCREAMING. GARY B. GOT OUT THE USEWATER. THE LEFT OF FRONT OF BUILDING. WE GOT OUT AT THE EXIT. WE LEFT THE PARKING LOT AT ABOUT 11:00 PM WHEN RESCUE ARRIVED. WE LEFT THE PARKING LOT AT 1:20 BEHIND THE "INN" TO GO HOME. I HAD BEEN IN ONLY ABOUT 5 OR 6 BREATHS SMOKE. A SMALL CUT ON HAND (LT) + CUT ON RT KNEE I WAS VERY LUCKY.

ness: Det M T 128 (LAPD) Signature: Daniel Bousika

The questionnaire

Name _____ Gender _____ Age _____ Any disability? _____

1. At what time did you arrive at The Station on February 20, 2003?
2. What door did you use to enter? _____
3. That night, were you there as ☐ an employee ☐ a customer ☐ other (specify) _____
4. How would you describe your familiarity with The Station:
☐ present or former employee, so quite familiar ☐ visited occasionally
☐ a regular customer (there at least once a week) ☐ only there a few times before
☐ a frequent customer (there often but not weekly) ☐ first time at The Station
5. If you were at The Station as a customer, were you ...? ☐ On my own ☐ With others
If With Others, how many other people were with you? _____ Relationship? _____
6. Did you notice the lighted exit signs before the fire? ☐ Yes ☐ No
7. Were you aware of the location of the various exits? ☐ Yes ☐ No
If Yes, check all exits you were aware of before the fire:
☐ front/main door ☐ door by stage ☐ door near kitchen/offices ☐ door in bar
8. Had you used one of those exits before ? ☐ Yes ☐ No
9. Did you consume alcohol that night? What did you drink? How many drinks did you have? _____
10. Did you take any drugs? What did you take? _____
11. Just before the show, how did you feel, on a scale of 1 to 10, 1 being sober and 10 intoxicated? _____
12. How would you judge the conditions of the other customers on the same scale? _____
13. How crowded was the club that night? _____

The questionnaire

THE FIRE

14. How did you first become aware that there was something unusual occurring?
15. In the initial moments, what did you think was happening?
16. How serious did you believe the situation to be at first?
- ☐ Not at all serious ☐ Only slightly serious ☐ Moderately serious ☐ Extremely serious
17. How were others around you reacting at first?
18. What did you do after becoming aware of the fire? (state sequence of actions as you recall them)
- First
Second
Third
Fourth
Fifth
19. Among the different things you did before starting to evacuate did you ...
- a) Try to find other member(s) of your group? ☐ Yes ☐ No Comment _____
- b) Try to fight the fire? ☐ Yes ☐ No If YES, how? _____ Comment _____
- c) Get personal belongings? ☐ Yes ☐ No Comment _____
20. If you were with others, were you able to gather your group together before starting to leave?
- ☐ Yes ☐ No Comments _____

The questionnaire

While leaving the building:

21. Did you notice lighted exit signs? ☐ Yes ☐ No
22. Were the lights on? ☐ Yes ☐ No
23. Did you hear the smoke alarms? ☐ Yes ☐ No
24. Did you receive instructions on what to do or where to go from staff or management? ☐ Yes ☐ No

If YES, what were the instructions:

Did you comply with the instructions? ☐ Yes ☐ No

25. Did you leave the building: ☐ Unassisted ☐ Assisted by friend(s)
☐ Assisted by firefighter(s) ☐ Assisted by other (specify) _____

26. Did you leave by: ☐ front door ☐ door by stage ☐ door in kitchen ☐ door in bar ☐ window

If you left through a window, can you describe its location?

27. Did you move through smoke at any time? ☐ Yes ☐ No

If YES, how far did you move through smoke? _____ ft How far could you see at the time? _____ ft

28. Did you see fire or flames during your escape? ☐ Yes ☐ No If Yes, where?

29. Did you encounter any obstructions to escape that have not been mentioned yet? ☐ Yes ☐ No

If YES, describe what happened and where

30. Were you physically helped by others to evacuate? ☐ Yes ☐ No

If YES, who helped you? _____ How did they help you?

31. Did you physically help others to evacuate? ☐ Yes ☐ No

If YES, who did you help? _____ How did you help?

The questionnaire

32. Were you injured? ☐ Yes ☐ No

If YES, what was the injury (i.e., burns, broken ankle, smoke inhalation)?
when and how did it occur?

33. What did you do once outside (e.g. call F.D., watch, help, look for friends, call family/friends, etc.)

34. Did you reenter the building?

PRIOR EXPERIENCE

35. Did you have previous training on actions to take in a fire? ☐ Yes ☐ No

Type (class, actual drills, simulations)

 Last time (mm/yy)

 Given by

Did the training help during the fire at The Station? ☐ Yes ☐ No Explain:

FINAL COMMENTS

36. Report any additional comments that you think might have been missed through the questionnaire.

37. What is the most important lesson learned during this experience that you would like to share with others?

The database

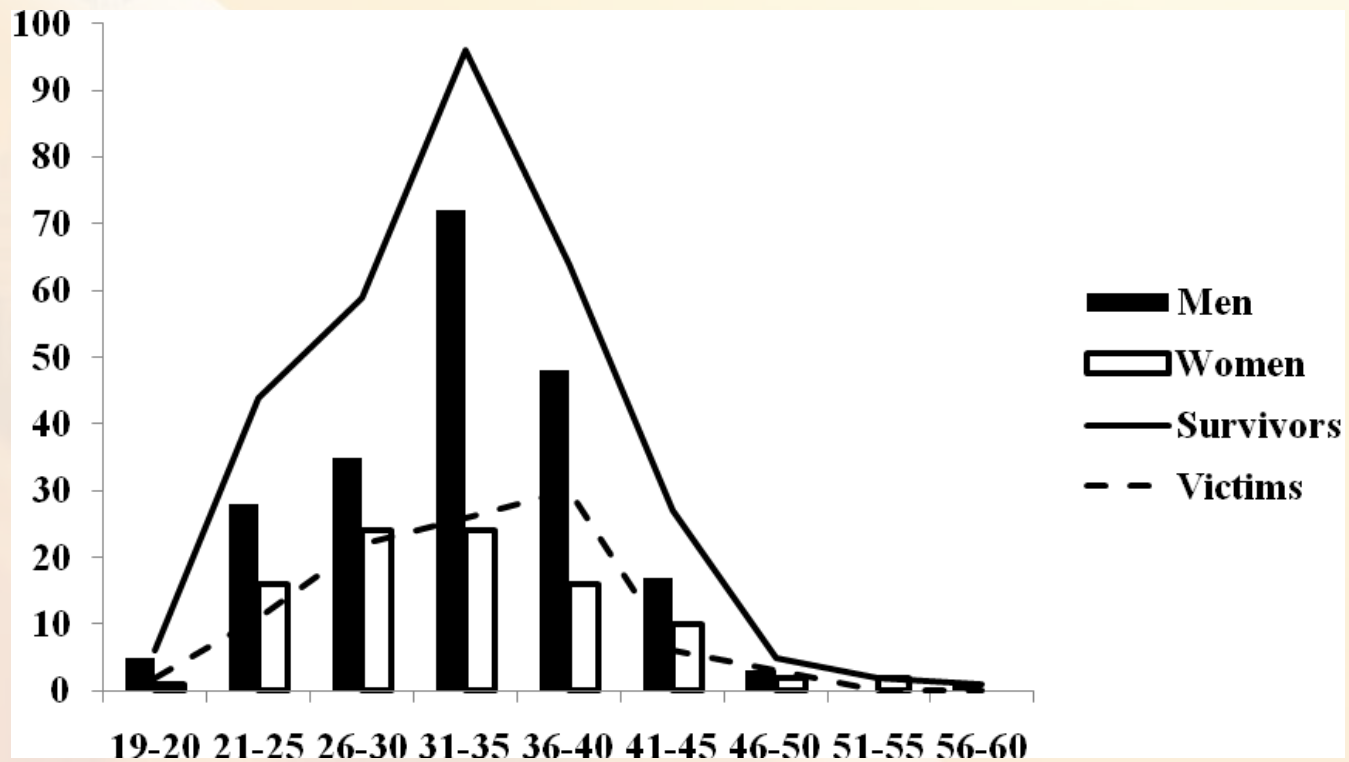
#	Mult	Rvw	First name	Last name	Sex	Age	Date of Record (dim/y)	Time arrived	Entry door	Role (c)	Familiarity	Alone/Others	How many others (v)	Relationship	Met others (#, Exit sign before
101		rfl	Sandra	Adams	f	21	3/3/03; 4/17/03	9:45; 9:30	main	cus	1st time	others	4	friends	
314		rfl	Jon W.	Alberghini Jr	m	36	3/8/03	7:30	main	cus		others	1	friend (Malagrina 212)	
102	a	rfl	Kerrie	Amato	f		2/21/03; 4/2/03	22:00	main	cus	8-10 years ago	others	1	friends (Maland 1 (Perrault 404)	
421		rfl	Bethany J.	Andrade	f	39	4/10/03	10:15-10:30		cus	10 times before	others	1	husband (Andr 2 (DeSanto 147 and his girlfriend - c	
422		rfl	Joseph J.	Andrade	m	40	4/10/03	10:15-10:30		cus	once before	others	1	wife (Andrade 42 (DeSanto 147 and his girlfriend - c	
103	a	rfl	John R.	Arpin	m	32	2/21/2003; 2/28/03	19:30		staff (all	yes - staff				
315	a	rfl	Elizabeth	Aruda	f	23	2/21/2003; 2/23/03	7:30-8:00	main	cus	more than 30	others	2	friends (Marion dec; Silva 273))	
104	a	rfl	Kristen Lee	Aruda	f	24	3/13/03			cus	regular past 5 yrs				
443	ws	rfl	William	Ashley	m		3/6/03		front	cus	3 or 4 times	others	1	nephew (Mahoney 444)	
375		rfl	Craig	Ballard	m	41	5/14/03	21:00		cus	1st time	others	1	ex-wife (Telgar 2 - Micel 69? And Jude 44? - both c	
105		rfl	Shawn L.	Bannister	m	35	2/21/03	10-10:15	main	cus		others	1	girlfriend	
106	a	rfl	Ron	Barak	m	34	2/21/03; 2/23/2003	21:30	main	cus	1st time	alone, met others		4 friends - Derjono	
316	a	rfl	David	Barber	m	31	2/23/2003; 4/9/03	9:45; 10:00	main	cus	once before	others	4	friends (Johnson dec; Griffith dec; Moran dec; Barak	
107	a	rfl	Joseph P.	Barber	m	30	2/21/03; 2/25/03	in and out all day		staff (o	yes - staff	others	1	friend (Gaumnitz 391)	
441	ws	rfl	Kevin	Barber	m		2/27/03			cus					
108		rfl	Robert A.	Barlow Jr	m	28	1/8/03 (with mother); 4/24/03	end of Trip's performance		cus	many	others	3	friends (Paskowski 237 and two others)	
109	a	rfl	Philip Bernard	Barr Jr.	m	21	3/03 (parents); 4/27/03; 4/30	21:00	main	cus	2nd time	others	1	friend (Ciabots friend (Ciabots 130)	
110		rfl	Ray F.	Beauchaine	m	37	3/12/03	22:45	main	cus	regular, over	others	1	wife (Lauren - dec)	
317		rfl	Kerry Lynn	Beers	f	29	4/11/03	8:30		cus		others	1	husband (Schri yes (no details)	
111	a	rfl	Kevin J.	Beese Sr	m	38	2/21/03; 2/22/03; 2/25/03	in and out		staff (m	yes - staff				yes
112	a	rfl	Gary M.	Beineke	m	41	3/11/03	while second t (prob main)		cus	5 times in last	others	1	wife (Pam 113)	
113	a	rfl	Pamela Jo	Beineke	f	40	3/11/03	9:30-9:45	main	cus	been there be	others	2	husband (Gary 112) and friend (Christensen 129)	
423	b	rfl	Julie	Belson	f		2/22/03								
423	a	rfl	Julie	Belson	f	31	3/11/03			cus		others	1	boyfriend (Canillas 378)	
114	a	rfl	Jacqueline Mari	Bernard	f		2/27/03			cus	1st time	others	1	friend (Rancou 1 friend (Ayers dec)	
376	a	rfl	Paul	Bertolo	m	44	2/28/03	21:20		cus		others	2	friends (McGee 213? And Geng ???)	
115	a	rfl	Anthony	Bettencourt	m	31	2/21/2003; 2/26/03	21:00		police d	3-4 times did	details there			yes
318			Daniel M.	Biechle	m	26									
116	a	rfl	Christopher T.	Blacklock	m	39	2/24/03	22:15	main	cus	numerous	others	1	girlfriend (Clarke 131)	
117		rfl	Marc Stephen	Blevins	m	29	2/23/2003; 4/4/2003	22:00	main	cus	4x, last time a	other	1	friend (Hoban - dec)	
377		rfl	Kevin D.	Blom	m	42	2/20/03			cus		other	2	brother (Blom - dec) and friend (Shuber - dec)	
319		rfl	Paul	Boerger	m		2/28/2003; 4/19/2003	21:00		cus	several times	others	2	friends (Kim & Stephanie Napolitano - 226, 356)	
424		rfl	Luis	Bokenho	m		?? 4/29/2003	20:00		cus	1st time	others	3	friends (Lourenco 397, Ferreira 435, Chibante 427)	
118		rfl	Jesse	Boteho	m	30	2/21/03	20:30		cus	once in a gre	alone		yes (3 friends Bowe 119, Alves dec,	
119		rfl	Kevin M.	Bowe	m	34	2/1/2003; 2/25/2003; 3/3/20	21:15	main	cus	6 times before	others	2	friends (Alves - dec; Tremblay 293)	
447	ws	rfl	Paul	Braga	m		no date			cus	frequent cus	others	2	friends (Medeiros, Pimental - both dec)	
120		rfl	David	Brennan	m	32	3/3/2003; 3/11/2003	22:30		cus	4 times	others	3	friends (McNulty 218, Witk 305, Hargreaves 185)	
121		rfl	Jonathan Patric	Brennan	m	19	3/3/2003; 4/19/2003	6:30:00 PM	6 main	cus	several times	others	2	friends (O'Neil and DiBonaventura - both dec)	
320			Robert A.	Brodeur, Jr.	m	33	NO WITNESS STMT??								
122		rfl	Kristen	Brown	f	33	3/6/03	22:15		cus	once before	others	1	friend (Quarry 12 (Ervarian dec; Fleck 336)	
321		rfl	Stephen	Bruno	m	36	2/28/2003; 4/19/2003	22:30	main	cus	several times	others	1	friend (Phillips, knew some staff and emp	
322		rfl	Katrina	Buchka	f	30	2/23/2003; 4/19/2003; 6/11/0	21:10	main	cus	30-30 times	others	2	friends (Kolasa 199 and Camplyes	
123		rfl	Melissa	Bump	f	29	2/23/2003; 4/19/2003	8:30-9:00 pm		cus	3-4 times	others	2	friends (Danno 334 and Kathy?)	
445	J	rfl	Stephen	Burgess	m		2/28/03	10:15-10:30 p	front	cus	very - played	others	1	friend (Stocks - knew people there	
439		rfl	Brian	Butler	m	43	2/24/03	10:35-10:40 p	front	videogr	1st time	alone		worked with st	yes
446	J	rfl	Albert N.	Cambio Jr.	m	37	2/24/03	21:15	front	cus	1st time	other	1	friend (Norbeck	
124		rfl	Kenneth R.	Campagnone	m	30	2/23/2003; 4/25/2003	21:30	front	cus	few times before	alone		2 friends (Kolasa 199 and Trina 322	
378		rfl	Francis J.	Canillas	m	23	3/11/2003; 4/25/2003	21:30	front	cus	once before	other	1	fiancee (Belson 423)	
125		rfl	Kathleen M.	Cardillo	f	34	2/23/2003; 3/1/2003	19:30	front	cus	was there 6-7	other	1	husband (Cardi	
126		rfl	Mario B.	Cardillo Jr	m	34	2/23/03	19:30	front	cus	few times, m	other	1	wife (Cardillo 1) no	
323		rfl	Catherine	Cargnan	f		2/25/2003; 2/27/2003; 5/9/20	21:30	main	cus	10 times before	others	1	boyfriend (DeSanto 147)	
448	ws	rfl	Walter	Carpenter	m		2/28/2003; 4/25/2003	22:30		cus	many times	alone			
127		rfl	Michael S.	Carr	m	29	2/28/2003; 4/25/2003	23:00	front	cus	20 times in p	alone		no	
128		rfl	Walter Franklin	Castle Jr	m	29	2/21/2003; 2/25/03	18:30	front	cus	once before	alone		ran into people	no
425		rfl	Steve J.	Chalfoux	m		5/2/03	19:30	front	cus	not first time	others	1	friend (Hagen 429)	
379		rfl	Susan	Chamberlin	f	39	3/12/2003; 3/18/2003	22:00	front	cus	once before	others	5	friends (Tawney Kelly 345, Edm	

ANALYSIS RESULTS

Demographics

355 occupants' witness statements analyzed

- Role in club
 - 325 patrons
 - 11 members of touring bands
 - 10 staff, including one owner
 - 6 employees of radio station or promoter
 - 2 police officers
 - 1 television news videographer
- over 2/3 were men
- 19 to 57 years old; median age was 32
- no one reported any disability



Age distribution of victims and survivors (N=304)

Training and familiarity (1)

- 5 staff members said they had received no training on emergency procedures or evacuation
- 1 staff person had received advice from his father about using the kitchen exit
- 4 customers mentioned training:
 - 2 nurses
 - 1 firefighter
 - 1 son of a firefighter
- No band members mentioned training

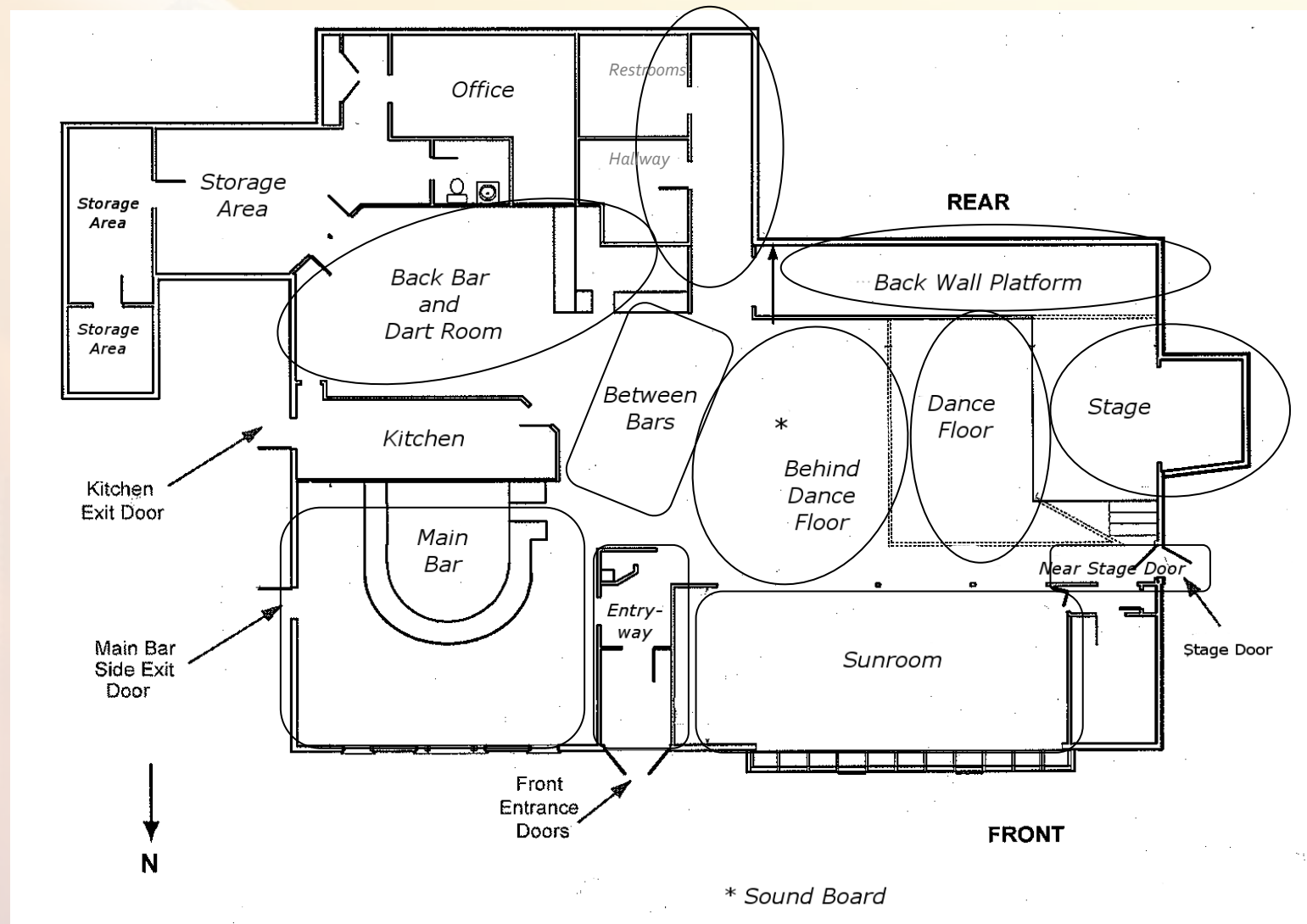
Training and familiarity (2)

- 29% at club for the first time
 - 11% had been there once before
- 5% were on their own; most were with others, some with family groups
 - difficult to determine which groups remained intact
- Of the 82 customers who mentioned awareness of exits,
 - 32 were aware of most or all exits
 - 24 were not aware of alternate exits
 - 14 were aware of the stage exit
 - 10 were aware of the main bar exit
 - 2 were aware of the kitchen exit

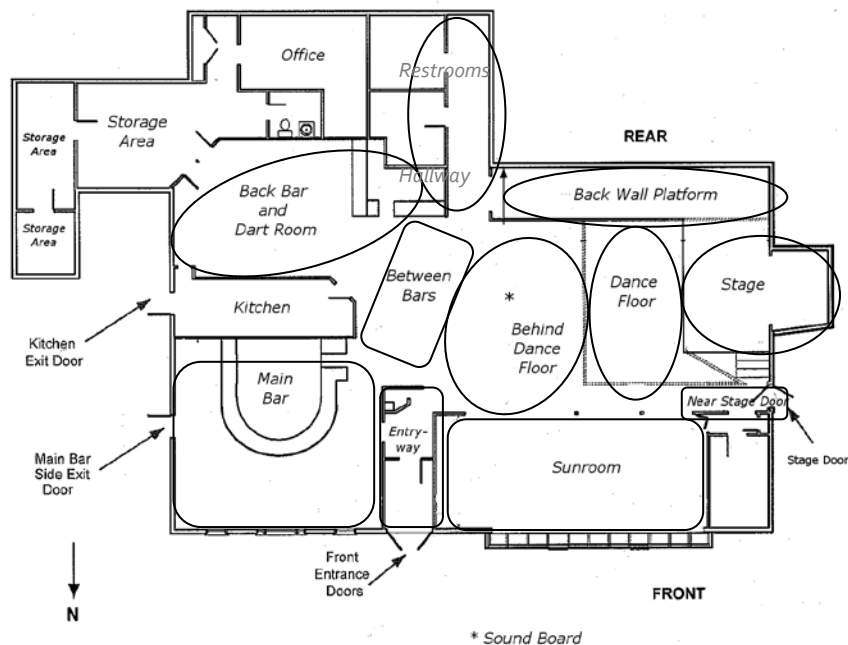
Perception of the crowd

- Several mentioned moderate drinking; a few mentioned a friendly, relaxed atmosphere
 - 56 survivors mentioned consuming alcohol (2 said they were intoxicated; 5 stated they were not drunk)
 - 20 said they were not drinking
- NIST reported an allowed occupancy of 404, with tables and chairs removed – at least 455 people were present
 - 50 of 182 survivors reported uncomfortably crowded conditions
 - 32 said it was not excessively or uncomfortably crowded
 - Many noted that conditions were most crowded near stage and easier to move around in main bar and in back of crowd
 - 3 said it was not crowded

Areas of floor plan defined for analysis



Location at ignition



Unclear	8	2.3%
Stage	4	1.1
Near stage door	17	4.8
Near stage or on dance floor	75	21.1
Back wall platform	15	4.2
Sunroom	16	4.5
Behind dance floor	74	20.8
Back hallway	14	3.9
Between bars	29	8.2
Rear bar/Dart room	28	7.9
Entryway	17	4.8
Main bar	37	10.4
Center stage-side	7	2.0
Unknown/not rptd	14	3.9
Total	355	100.0

Response and reaction to cues

Awareness of fire (277 reports)

- 90% were aware immediately
- 5% noticed the reaction of others
- 3% were told by friends/others
- 1% noticed heat
- 1% noticed music stopped

Response and reaction to cues

Seriousness (191 reports)

- 54% viewed situation as serious
 - 56% decided to leave immediately
 - 31% stated situation was not good/not part of show
 - 8% headed friends' advice to leave
 - 5% went for extinguishers or radioed fire department
- 42% thought the fire was part of the performance, that someone would put it out, it would self-extinguish or wasn't too bad
- 3% watched to see what would happen
- 2% described themselves as mesmerized/'in awe'

Response and reaction to cues

- 4 employees, 3 people with the bands, and 1 customer attempted to fight the fire
- Very few patrons reported gathering possessions, possibly due to nature of venue
 - a bartender took cash register and tip jar
 - a server hid tray of drinks in kitchen
 - a seller took box of CDs from merchandise table
 - band members took their instruments

Response and reaction to cues

Of 153 people who were with others

- 124 were with their group and did not need to find others
- 16 did not try to find others in their group
- 5 tried to find others
- 8 tried to find some but not all members of their group

The evacuation

- 130 mentioned moving through smoke; 9 said they did not move through smoke
- Obstructions
 - 130 mentioned crowdedness or other people, including 31 who were caught in pile-up at front door
 - 64 mentioned smoke causing difficulty with seeing exits, finding their way, or breathing
 - 19 mentioned darkness or being unable to see
 - 13 had to break windows and 3 mentioned difficulty in breaking windows
 - 13 mentioned a bouncer blocking access to stage door

The evacuation

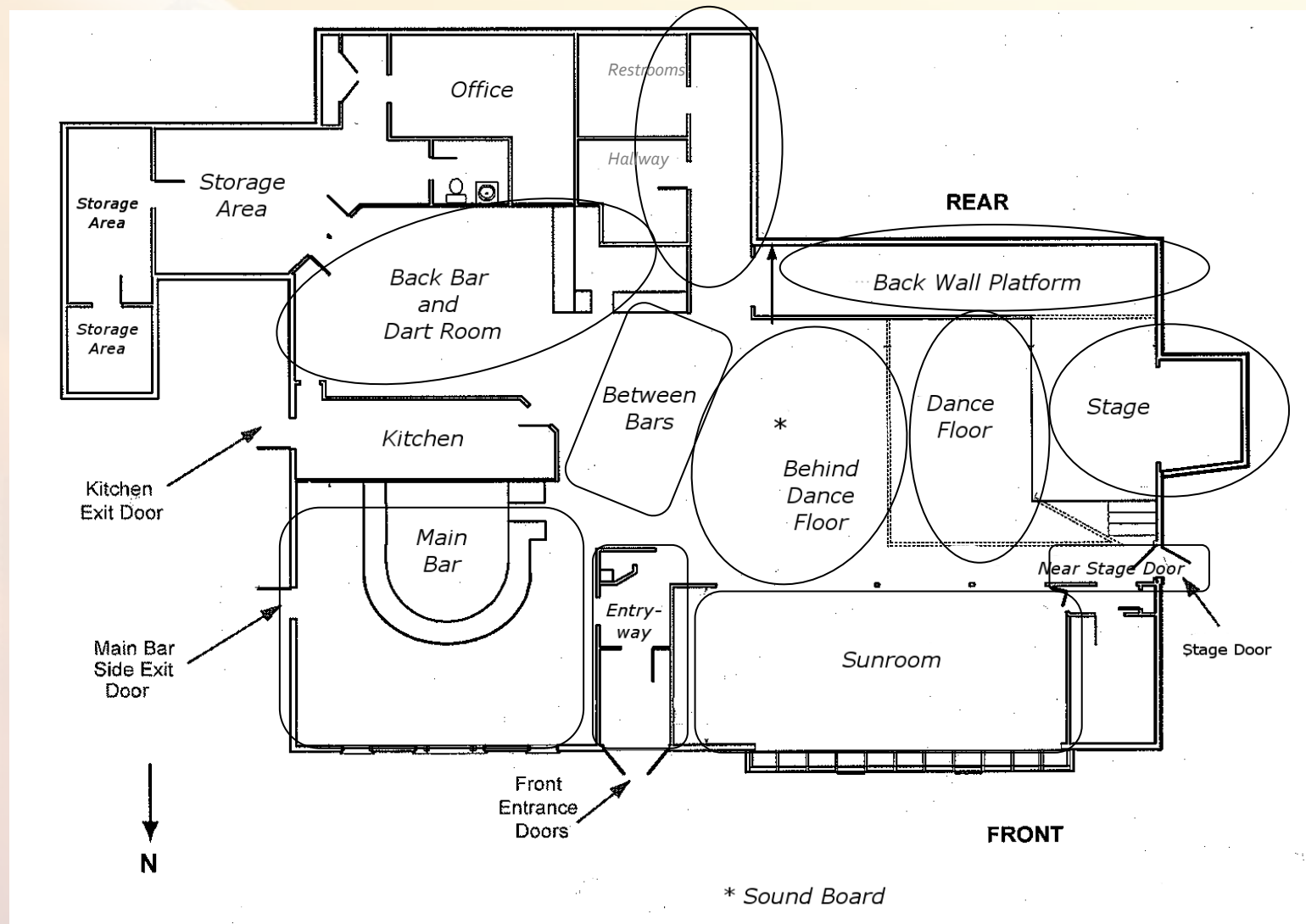
- Difficulties in evacuating
 - 74 fell or were knocked down, or dropped down to the floor to breathe more easily
 - 22 mentioned having to crawl to escape
 - 44 were pushed by the crowd
 - 21 became separated from the person they were evacuating with
 - 23 people said they did not hear the alarms
- Many reported helping or being helped by others

Exit choice and travel paths

Of 347 for whom exit usage could be determined

- 127 used front or main entrance
- 62 others tried to use that exit but could not
 - 34 went out a window
 - 25 used another door

Areas of floor plan defined for analysis



Area at Ignition	Atrium window	Bar door	Unk door	Front Door	Kitchn	Main bar window	Windw or door (right)	Windw or door (left)	Stage	Unk windw	Unk	
Unclear				6						1	1	8
Stage									4			4
Near stage door	1		1	3	1	1			10			17
Near stage or on dance floor	12	4	1	16	1	28	1		7	5		75
Back wall platform		4		3	1	7						15
Sunroom	6	1		4					2	3		16
Behind dance floor	3	15	1	40	1	11				3		74
Back hallway	2	3		3	3	1				1	1	14
Between bars		9	1	15		2		1			1	29
Rear bar/Dart room		10		4	10	3				1		28
Entryway				17								17
Main bar		24	2	8		2				1		37
Center stage-side		1		4	1	1						7
Unknown/not rptd	2			4	1	1				1	5	14
Total	26	71	6	127	19	57	1	1	23	16	8	355

Post-evacuation

- 6 re-entered the building and 3 others attempted re-entry
- 41 helped or tried to help people from front door or windows
- 25 assisted injured people outside
- 96 were not injured
- 5 were injured during rescue attempts

Post-incident

Code changes

- fire sprinklers in clubs accommodating 100 or more
- inspection of exits
- trained crowd managers at venues
- exit capacity of main exits of assembly occupancies increased from one-half to two-thirds of total occupant load
- interior finish requirements for all occupancies also addressed

Gracias por su atención
Thanks for your attention



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Organizadores / Organizers



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