

AGENDA

Joint Meeting
NFPA Standards Council
&
NFPA High-Rise Building Safety Advisory Committee
(HRB-SAC)

March 22-23, 2006
Grand Hyatt Tampa Bay
Tampa, FL

1. Call to Order by Standards Council Chair – 8:30 AM, March 22, 2006.
2. Introduction of Standards Council and HRB-SAC Members and Guests.
3. HRB-SAC Annual Report to Standards Council – **See page 27 of agenda (SC Item 06-3-20-a).**
4. Leadership in Life Safety Design (LLSD) Concept – **See page 17 of agenda (SC Item 06-3-20-b).**
5. Review HRB-SAC purpose and objectives.
 - a. Charter – **Agenda Attachment A (page 3).**
6. Adjourn joint meeting.

(HRB-SAC meeting continues)

7. Call to order by HRB-SAC Chair.
8. Agenda overview.
9. Approval of October 20-21, 2005 HRB-SAC meeting minutes – **Agenda Attachment B (page 11).**
10. Review meeting schedules of NFPA Technical Committee's and other key dates – **Agenda Attachment C (page 30).**
11. Review results of HRB-SAC ballot on recommendations priorities and agenda items for NFPA Technical Committees – **Agenda Attachment D (page 33).**
12. Request from Building Code Development Committee – **Agenda Attachment E (page 57).**

13. Request regarding high rise ready rooms – **Agenda Attachment F (page 61)**.
14. Availability of Fire Protection Research Foundation resources – **Agenda Attachment G (page 64)**.
15. Recommendations for NFPA 1, NFPA 101 and NFPA 5000 and other documents.
16. Update on NIBS activity.
17. Other business.
18. Scheduling of next meeting.
19. Adjournment – 3:00 PM, Thursday, March 23, 2006.

Agenda Attachment

A



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High Rise Building Safety Advisory Committee (HRBSAC)

CHARTER

Purpose

The High Rise Building Safety Advisory Committee (HRBSAC) shall be a standing advisory group, reporting directly to the NFPA Standards Council. The HRBSAC shall be charged with:

- Identifying existing needs and emerging issues within the high rise building environment.
- Providing recommendations to the Standards Council as to how NFPA can provide leadership on such issues.
- Working to ensure that NFPA's code and standard development process includes proposals and comments that reflect the latest thinking on high rise building safety issues, high rise emerging technology provisions and other matters which impact those who work, live or have to operate high rise buildings.

Composition

The committee shall be composed of up to 12 members, with regularly scheduled meetings at least once in each calendar year. The committee also may arrange to have non-scheduled conference calls and/or establish task groups, as necessary, from its membership base to further study specific issues and provide recommendations. Regularly scheduled meetings shall be open to the public. The HRBSAC may also arrange conference calls or meetings to review and address specific code-related reviews, proposals, or comments.

The HRBSAC's inaugural members shall be nominated by the NFPA Standards Council and appointed by the Secretary of the NFPA Standards Council. All members are subject to annual review and reappointment. Absence from more than two regularly scheduled meetings during a two-year period without a medical excuse may result in a committee member being ineligible for re-appointment.

Criteria for Selection

The HRBSAC shall have an international focus and a membership base that is, to the extent possible, representative and knowledgeable of the practices of many geographic regions of the world.

All members should be nominated using the criteria below:

- Members will demonstrate a knowledge of and commitment to high rise safety issues.

- Members must demonstrate a commitment to the mission and purpose of the HRBSAC, as well as to the mission of NFPA.
- Members should represent a balance of interests including members of the first responder community, consumers, engineering, research and public safety interests as they relate to high rise buildings.

Nominations for new members will be reviewed and committee members officially appointed or re-appointed by the NFPA Standards Council before January 1 of each calendar year.

Staffing

One NFPA staff member will be assigned to the committee as a staff liaison. The staff liaison shall facilitate the committee's work; arrange agendas, keep minutes, process proposals and comments, organize meeting logistics, and provide supporting information.

Committee Responsibilities

- Issue an annual report each October to advise the Standards Council on leadership opportunities for NFPA on issues of importance to the high rise community.
- Provide ongoing suggestions for improving the relevance and quality of NFPA's codes and standards, as well as the association's support services, research, training, and public education initiatives.
- Review NFPA codes and standards, focusing primarily on NFPA 101, *Life Safety Code*[™] and NFPA 5000®, *Building Construction and Safety Code*®, to provide input regarding the high rise community.
- Review and evaluate high rise-related suggestions submitted by other individuals and groups.
- Task groups may be formed, based on the vote of the HRBSAC, to take up any specific, time-intensive efforts. Task groups may hold bi-monthly meetings via conference call, and may call upon the assistance of the NFPA staff liaison when needed.
- Task groups' recommendations and/or proposals will be submitted to the chairperson of the HRBSAC in written form for discussion by the full committee. The committee may then discuss, amend, and vote on the task groups' findings before they are published as official HRBSAC findings or recommendations.
- Potential items for consideration may be placed on the next HRBSAC's meeting agenda by a majority vote of any duly designated task group, or by majority vote of HRBSAC members in attendance at the most recent HRBSAC meeting or conference call. Any individual HRBSAC member may propose items for consideration, and any individual HRBSAC member may propose to table consideration of such items. If those proposals receive a second, they may be voted on by the HRBSAC members in attendance.
- Review, evaluate and be prepared to introduce recommendations from the NIST *Federal Building and Fire Investigation of the WTC* disaster into the NFPA codes and standards process or other NFPA program areas as appropriate.
- Subjects for consideration by the HRBSAC, include but are not limited to the items shown in Charter Attachment A.

Operating Procedures

- The chairperson will recommend meeting locations and dates, with input from all committee members. NFPA's staff liaison shall make the final determination on a meeting location and a hotel selection.
- The chairperson may attend NFPA Technical Committee meetings as needed, should they wish to lend their voice to a proposal or comment generated by the HRBSAC.
- The chairperson shall appoint members of the task groups from the members of the HRBSAC.
- The HRBSAC shall operate under parliamentary procedure as set forth in Robert's Rules of Order.
- A quorum of the full HRBSAC shall consist of a majority of members. If a quorum does not exist when the committee is fully constituted, then no final actions shall take place and any recommendation shall not be considered formal unless confirmed by a letter ballot.
- Voting at the meeting shall be by a majority vote of the voting members present.
- All formal recommendations and actions of the committee are to be confirmed by letter ballot.
- Actions and recommendations to be confirmed by a letter ballot require a 2/3-majority vote.
- The staff liaison shall maintain a record of all activities conducted by the committee, along with a roster of committee members.
- On 30 September of each year, the chairperson shall file a report to the NFPA Standards Council highlighting the major activities of the committee including:
 - Issues engaged, resolved or unresolved.
 - Code-related proposals and comments and their status.
 - Recommendations for NFPA action and next steps.

Reimbursement

NFPA will reimburse committee members for expenses incurred in modest business travel, including airfare or mileage (at a rate determined by NFPA), meals, and hotel accommodations. In order to be reimbursed, such arrangements must be made through Colpitts Travel, NFPA's official travel agent. Incidental expenses, such as movies, laundry, and rental cars are not reimbursable.

In certain cases, an extra night's stay will be reimbursed if a Saturday stay-over airfare rate is less expensive. However, all of those reservations must be coordinated in advance through Colpitts Travel and receive the approval of the staff liaison.

All receipts and a written report of travel expenses shall be submitted to the staff liaison on the appropriate reimbursement form within 30 days of the completion of travel.

CHARTER ATTACHMENT A HRBSAC TOPICAL AREAS

Subjects of Interest to the Advisory Committee: The advisory committee intends to consider the following subjects. The list is presented alphabetically and not otherwise rank ordered.

1. At-risk Populations
 - a. Disabled occupants
 - b. Very young occupants
 - c. Elderly occupants
 - d. Accessibility issues
 - e. Design features
 - f. Procedures

2. Building Categories
 - a. Height
 - b. Number of Stories
 - c. Super/mega high-rise concept
 - d. Existing buildings

3. Egress devices
 - a. Secondary egress and escape devices (chutes, controlled descent devices)
 - b. Smoke masks / self-contained breathing apparatus and kits
 - c. Stair descent devices

4. Elevators
 - a. Protection and use of lobbies
 - b. Elevator use by emergency responders

 - c. Elevator use for egress by building occupants

5. Fire-resistance
 - a. Reductions for sprinkler protection
 - b. Fire test standards and ratings
 - c. Traditional time-temperature curve (NFPA 251 / ASTM E 119)
 - d. Ultra-fast fire curve (as used in petroleum industry – ASTM E 1529)
 - e. Consideration of design fires

6. Evacuation /Relocation strategies and procedures
 - a. Role of fire safety directors
 - b. Training for occupants
 - c. Evacuation drills
 - d. Egress process/management under various emergency conditions
 - e. Staged evacuation/relocation
 - f. Total evacuation
 - g. Horizontal exit concept
 - h. Refuge floors (a.k.a. panic floors)

- i. Notification and communication with building occupants
 - j. People movement studies
 - k. Decision making of occupants under emergency conditions
 - l. Relocation to upper floors
 - m. Occupant's situational awareness
7. Security / special security issues
- a. Placement of turnstiles
8. Stairs
- a. Width
 - b. Location / remoteness
 - c. Design / protection against external events / impact resistance
 - d. Photo luminescent exit signage
 - e. Transfer corridors between stairs
 - f. Smokeproof towers
 - g. Discharge onto public ways
 - h. Discharge through lobbies
 - i. Other design features
9. Design Process
- a. Design professional in charge
 - b. Inter-professional relationships (contractors)
 - c. Code jurisdictions
 - d. Incentives to go beyond minimum building code requirements
 - e. Urban and site design context issues
 - f. Ground level considerations
 - g. Impact of adjacent properties
 - h. Multi-building interaction
 - i. Design documentation / information to be documented
 - j. Retention of records
 - k. Information to be documented
 - l. Retrofit schedules/ordinances
 - m. Life safety evaluations (similar to NFPA 101 requirements for Assembly Occupancies)
 - n. Performance-based design
10. Building Construction/Collapse
- a. Blast and fire containment
 - b. Double façade construction
 - c. Collapse detection
 - d. Structural failure warnings
 - e. Progressive collapse
11. Building Systems
- a. Water supplies / redundancy for sprinkler and standpipe systems
 - b. HVAC and smoke management / movement of smoke
 - c. SCBA on site air replenishment systems

- d. Emergency and stand-by power
 - e. Hard wired fire fighter communication equipment
 - f. Radio equipment for fire fighter use
 - g. Detection/alarm/notification
12. Identification of Risk / Hazard / Threats / Level of Safety
- a. Single points of failure
 - b. Quantification of Risk/Hazard/Threat
 - c. Redundancy versus defend in depth (compartmentation versus sprinkler systems)
 - d. Consideration of extreme events / normal design events
 - e. Identification/quantification of goals / objectives
 - f. Cost effective solutions
 - g. Ensure solutions address the specified hazard
13. First Responder / Fire Fighter Issues
- a. Incident operations / procedures / protocols
 - b. Fire ground accountability
 - c. Resident population
 - d. Communications among fire fighters, first responders, building occupants, general public, 911 operators (radio & hard wired)
 - e. Communication equipment
 - f. Communication protocols
 - g. Command post location and set-ups
 - h. Protection of command centers
 - i. Disaster management at large scale events
 - j. Back-up of command center information
 - k. Portability/mobility of command center equipment
 - l. Building information card
 - m. Pre-incident planning
 - n. Critical / immediate decisions about building evacuation
 - o. Deployment of equipment, i.e. defibrillators
14. On going Building Operations
- a. Building inspections
 - b. Annual reviews
 - c. Emergency action plans (EAP's)
 - d. Assess knowledge base of building occupants re. safety
15. Means to implement recommendations
- a. How high rise proposals are addressed and by what TC
 - b. Identify research topics
 - c. NIST study
 - d. Development of code changes
 - e. Establish better technical basis for building regulations
16. Public awareness
- a. Use of mass media during events

- b. Education
- c. Change public perception of evacuation drills

17. Helicopters

- a. Use as a means of rescue
- b. Use as an observation and information gathering tool
- c. Use as a means of lighting

18. Consideration of accessory building uses

- a. Parking structures
- b. Flammable liquids storage
- c. Loading docks
- d. Transportation centers – rail/subway stations /bus depots

Agenda Attachment B

**NFPA High-Rise Building Safety Advisory Committee
(HRB-SAC)**

October 20-21, 2005
New York LaGuardia Airport Marriott
East Elmhurst, New York

1. **Call to Order.** Chair Quiter called the meeting to order at 8:30 am.
2. **Introduction of Members and Guests.** Members and guests provided self-introductions.

Committee members in attendance were as follows:

Name	Representing
James Quiter (chair)	Arup (day 1 only)
Richard Bukowski	National Institute of Standards and Technology – Building and Fire Research Laboratory
Geoff Craighead	Securitas Security Services USA, Inc.
Jon Magnusson	Magnusson Klemencic Associates / National Council of Structural Engineers
John Miller	Los Angeles City Fire Department / International Association of Fire Fighters
Jack Murphy	JJM & Associates, LLC / Fire Safety Directors Association of Greater New York (day 1 only)
Steven Nilles	Lohan Caprile Goettsch Architects / Council on Tall Buildings & Urban Habitat
Jake Pauls	Jake Pauls Consulting Services on Building Use and Safety / American Public Health Association
Sally Regenhard	The Skyscraper Safety Campaign
Wes Shoemaker	Winnipeg Fire Paramedic Service / Metropolitan Fire Chiefs
Milosh Puchovsky (non-voting staff liaison)	NFPA

The following guests were also in attendance:

Name	Representing
Anthony Apfelbeck	Altamonte Springs Building/Fire Safety Division / NFPA Technical Committee on Uniform Fire Code

Wayne Holmes	HSB Professional Loss Control / NFPA Technical Committee on Industrial, Storage, and Miscellaneous Occupancies
Gary Keith	NFPA (day 1 only)
James Lathrop	Koffel Associates, Inc. / NFPA Technical Committee on Means of Egress
Nancy McNabb	NFPA
Jarrett Murphy	Village Voice (day 2 only) (Press)
Nadine Post	Engineering News Record (Press)
Ed Schultz	Code Consultants, Inc. / NFPA Technical Committee on Mercantile and Business Occupancies
Robert Solomon	NFPA

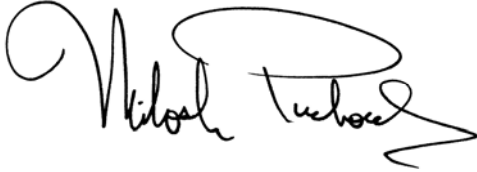
Committee Chair Quiter indicated that due to circumstances not within his control, he would only be available to participate in the meeting on the first day until 4:00 PM. Mr. Quiter appointed committee member Dick Bukowski as interim chair upon his departure.

3. **Approval of July 12-13, 2005 meeting minutes.** The minutes were approved with the following modifications:
 - a. Correct the minutes to correctly indicate that Sally Regenhard was not in attendance at the July meeting
 - b. Correct spelling of Geoff Craighead's name.
4. **Review meeting schedule and key dates.** Mr. Puchovsky reviewed the schedule for future meetings and other key dates as indicated on page 7 of the meeting agenda. The next meeting is scheduled for March 22-23, 2006 in Tampa, Florida. Part of the meeting agenda on March 22 will be to meet with NFPA's Standards Council. A subsequent meeting will be scheduled for August or September 2006.
5. **Review ballot results of HRB-SAC responses to NIST's recommendations on the Federal Building and Fire Safety Investigation of the World Trade Center Disaster.** The ballot results that were distributed to the committee via e-mail on 1 September 2005 were reviewed. NFPA staff indicated that the ballot results were incorporated, in part, into NFPA's response to the NIST Investigation Report. The committee directed staff to distribute a copy of the committee's responses and ballot results to applicable NFPA Technical Committees.
6. **Review subject areas concerning high rise building safety as indicated in the HRB-SAC Charter.** The committee reviewed the subject areas that were established during the December 2004 meeting. The committee incorporated these subject areas into proposed agenda items for the next editions of NFPA 1, 101 and 5000 as indicated in item 7 below.

7. **Set priorities and agenda items for next editions of NFPA 1, 101 and 5000.** The committee established a number of agenda items to be considered by NFPA Technical Committees. The agenda items established at the meeting will be balloted through the committee. See the December 2005 HRB-SAC ballot for a copy of the proposed priorities and agenda items.
8. **Set priorities and agenda items for other applicable NFPA codes and standards.** See item 7 above.
9. **Status Report on incentives to exceed minimum building regulations.** Leadership in Life Safety Design (LLSD) task group chair, Steve Nilles, provided a status report on this activity. Mr. Nilles noted that any values presented in the draft documents are for illustrative purposes and should not be considered as recommendations. The committee expressed their support for the LLSD concept and believes that the concept is an important component of future building safety issues for both high-rise and low-rise buildings. The committee agreed that the concept should be presented to NFPA senior management and the Standards Council for discussion on how best to proceed with its development. Additionally, the committee noted that partnerships with other organizations for implementation, training and certification need to be pursued. In addition to CTBUH, the American Institute of Architects was also mentioned as a potential partner. Task Group member, Wes Shoemaker indicated that he would introduce the concept during the NFPA Board of Directors meeting in November 2005. The committee directed staff to contact the Standards Council in this regard and to place this on the agenda for the meeting with Standards Council in March 2006. See Minutes Attachment A.
10. **Review HRB-SAC Annual Report to the Standards Council.** The committee reviewed the draft report as indicated in Agenda Attachment B. The report to be submitted to the Standards Council is included in Minutes Attachment B.
11. **Other Business.**
 - a. *CTBUH Conference.* NFPA staff member Robert Solomon provided a brief summary of the Conference of the Council on Tall Buildings and Urban Habitat that occurred in New York City on 17-19 October 2005.
 - b. *NIBS project.* Committee member Dick Bukowski provided a brief overview of the National Institute for Building Sciences (NIBS) project to incorporate NIST's recommendation concerning the World Trade Center disaster into building codes. This project is being funded NIST.

12. **Adjournment.** Interim chair Dick Bukowski adjourned the meeting at 1:30 PM, Friday, October 21, 2005

Minutes prepared by

A handwritten signature in black ink, appearing to read "Milosh Puchovsky". The signature is fluid and cursive, with a large loop at the beginning and a long, sweeping tail.

Milosh Puchovsky, P.E.
Staff Liaison

Minutes Attachment A



MEMORANDUM

DATE: January 5, 2006

TO: Casey Grant, Secretary NFPA Standards Council

FROM: Milosh Puchovsky, Staff Liaison – High Rise Building Safety Advisory Committee

CC: James Quiter, Chair – High Rise Building Safety Advisory Committee
Leona Nisbet – NFPA Standards Administration
Robert Solomon – NFPA Building Fire Protection and Life Safety

SUBJECT: **Concept of Leadership in Life Safety Design (LLSD)**

At its October 20-21, 2005 meeting, the High Rise Building Safety Advisory Committee (HRB-SAC) directed me to write to the Standards Council to introduce the concept of Leadership in Life Safety Design (LLSD), and to initiate discussions on developing a plan on how best to proceed with the development of LLSD. As part of HRB-SAC's meeting with the Standards Council in March 2006, the LLSD concept will be presented.

HRB-SAC believes that the concept of the LLSD is an important component of future building safety issues for both high-rise and low-rise buildings. LLSD is envisioned as being modeled after the Leadership in Energy and Environmental Design (LEED) program sponsored by U.S. Green Building Council. The LLSD approach provides a series of building safety enhancements that could be voluntarily applied in the design or evaluation of buildings. Features identified through the LLSD present voluntary additional "code +" safety provisions beyond those mandated by the applicable building code. The LLSD might also be used to better define and address those hazards and risks of concern to the building owner that are not specifically addressed by the building regulations such as extreme events. Buildings could then be identified as LLSD certified. It is expected that a level of certification would be established similar to that for the LEED program. The attached documents provide further detail about the LLSD concept. Any values presented in the draft documents are for illustrative purposes and should not be considered as recommendations.

HRB-SAC believes that a plan for the formal development of the LLSD concept should be prepared and that it should address the following subjects:

- Identify subject matter to be included in the LLSD concept
- Identify a value system and scoring for various safety features to be considered by LLSD.
- Determine format for maximum usability and applicability for new and existing structures
- Identify how NFPA's technical committee should be involved
- Partnering with other organizations both private and governmental such as CTBUH, NIST, AIA etc.
- Development and implementation of a certification program. (The Green Building Council's program on Leadership in Energy and Environmental Design serves as an example)

Additionally, HRB-SAC committee member Wes Shoemaker introduced the LLSD concept to the NFPA Board of Directors during their November 2005 meeting.

Encl: LLSD Core & Shell Executive Summary
Draft LLSD Core & Shell Checklist

EXECUTIVE SUMMARY**10 October 2005**

LLSD - High-Rise Core & Shell
 Leadership in Life Safety Design

NFPA
 CTBUH

INTRODUCTION

The Leadership in Life Safety Design checklist is being developed through the collaboration of the National Fire Protection Agency (NFPA) and the Council on Tall Buildings and Urban Habitat (CTBUH). The committee is comprised of various professionals from the architecture, construction, engineering, and life safety fields. The mission of the LLSD is to develop and compose a checklist and reference guide for tall buildings that attempt to achieve a greater level of life safety from fire, natural disaster, and man made disasters than the minimums currently set by the existing building codes. With the adoption of these criteria not only will buildings become safer for their occupants in the event of a disaster; but developers, owners, tenants, municipalities, and governing bodies will view a building with these attributes as an asset to the community. Similar in its framework and structure to the Leadership in Energy and Environmental Design (LEED) program developed by the United States Green Building Council, LLSD strives to increase the safety and survivability of disasters that could occur in high rises through voluntary compliance with the proposed program.

Below is a checklist that can be used to audit the safety design of a tall building. Each of these areas consists of at least one pre-requisite and multiple components that a building could achieve if implemented within its design. Items or criteria perceived as “detrimental” to life safety will receive a negative point while criteria seen as “positive” to life safety will be added to the overall score. All of the credits will then be combined and a final number of points determined. The project will then receive one of four classifications: certified, silver, gold, or platinum, with platinum being the highest level of certification. The outcome will be buildings that contain systems, equipment, and design features making them superior to buildings that just simply meet the existing building code criteria.

CHECKLIST

- 1.0 Building Configuration, General Conditions
- 2.0 Building Enclosure
- 3.0 Fire Resistive Construction
- 4.0 Elevators
- 5.0 Stairs and Enclosure
- 6.0 Area of Refuge, Special Access, Egress
- 7.0 HVAC, Fire Protection, Electrical, Plumbing
- 8.0 Education, Information, Operations
- 9.0 Innovation and Special Design
- 10.0 Structural
- 11.0 Security
- 12.0 Biochemical

Once a final version of the above checklist and criteria has been approved and accepted by the committee, work will begin on the development of a reference guide to support the components of the checklist. The guide is intended to be the user's manual for designers attempting to achieve as many credits as possible listed on the checklist. The guide will assist project teams in their understanding and development of buildings that maximize the principals of the checklist above. It will include examples of design strategies, case studies, and links to other resources concerning Life Safety Design.

WHY MEET THE LLSL DESIGN CRITERIA?

In meeting the criteria to become certified, the developer /owner could receive various financial and development incentives from the municipality in which the building is being constructed. Examples of incentives could be tax credits, "first in line" permit review, lower insurance rates, utility credits, etc. While the upfront costs of some of the criteria may be in excess of the code minimum, these incentives could recoup some of the initial implementation costs. It is also known that in a post 9-11 world people are willing to pay a premium for buildings that are designed with safety that exceeds the minimum code requirements.

Design in which life safety is given a high priority will not only give tenants an advantage if a disaster occurs, but could ultimately result in lower operating costs, smaller clean up costs post disaster, and safer buildings that can offer a higher level of safety for its inhabitants. Through the success of such a program one could predict creating demand in the marketplace for such safe buildings.

Ultimately the LLSL framework and program could be expanded to cover all building types not just high-rise core and shell, creating a program that could result in safer communities throughout the world.

CONCEPT DRAFT CHECKLIST

29 September 2005



LLSD - High-Rise Core & Shell
Leadership in Life Safety Design

NFPA
CTBUH

Points Yes No

1.0 Building Configuration, General Conditions

Prerequisite	Points	Yes	No	Description
	1.1			Meet All Local Building Codes And Standards
	1.2			<u>Building/Site Separation</u>
1				≥ 12'-0" Lot Line
1				≥ 24'-0" Lot Line
1				Maximize building protection in adjacent scenarios
1				Maximize building standoff distance from explosive source
	1.3			<u>Building Height</u>
				0 - 8 Floors
(1)				9 - 40 Floors
(2)				40 - 80 Floors
(3)				80 - 120 Floors
(4)				> 120 Floors
	1.4			<u>Building Use / Function</u>
(1)				Iconic Status
(1)				Critical Function
(1)				At Risk User
	1.5			<u>Vehicular Stand-off</u>
1				No Vehicular Access At Building Footprint
1				12'-0" Vehicular Separation
1				24'-0" or Greater Vehicular Separation

2.0 Building Enclosure

Prerequisite	Points	Yes	No	Description
	2.1			Non-Combustible, Fire Safing & Smoke Seal
1	2.2			3'-0" 1-Hour Rated Spandrel Separation
1	2.3			Laminated, Tempered, or Wire Safety Glazing
1	2.4			Fire-rated (ceramic) Glazing
1	2.5			Blast Resistant Wall Systems
1	2.6			Stronger anchorages, stiffer support structures, 4 sided glazing systems

Points Yes No

3.0 Fire Resistive Construction

Prerequisite				
1			3.1	Superstructure Protection Per Local Code
1			3.2	Columns, Girders, Beams 3-Hour Rated
1			3.3	Increase Slab Construction 1-Hour
1			3.4	Increase at Stair, Elevators, Vertical Shafts, & Corridor 1-Hour
1			3.5	Use of Impact Resistant & Adhesion Enhanced Fireproofing (equal to Cementitious Spray FP)

4.0 Elevators

Prerequisite				
1			4.1	Fire Command Elevator Serve All Floors
1			4.2	All Elevators Provided w/1-hour Vestibules
1			4.3	Enhanced Elevator Enclosure: Hoistway equipped sensors, heat and water resistant electrical components. Elevator lobby contains smoke stop doors and enclosure. For fire brigade use and limited evacuation
1			4.4	Protected Elevator Enclosure: All enhanced components plus pressurized elevator cab(s), two hour fire rated lobby with doors, direct access to pressurized egress stair, all contained with a blast resistant core.

5.0 Stairs & Enclosure

Prerequisite				
1			5.1	Separation 30'-0" Minimum
1			5.2	Increase Exiting Width 12"
1			5.3	Additional Stair Tower Beyond Exiting Requirements (may be sissor)
1			5.4	Stair Pressurization
1			5.5	Stair Pressurization with Smoke proof Vestibules
1			5.6	Structurally Enhanced Impact Resistant Stair & Vestibule Enclosure
1			5.7	Stair Separation $\geq \frac{1}{2}$ Diagonal Floor Plate Distance
1			5.8	Reduce Max Travel Distance to Stair 50%
1			5.9	Direct Rated Egress to Exterior from Stairs
1			5.10	Photo Luminescent Markings & Pathways

6.0 Area of Refuge / Special Access / Egress

Prerequisite				
1			6.1	2'-6" x 4'-0" Clear Space at Each Stair Floor Landing with Communication System
1			6.2	Refuge Area 3-Hour Rated Pressurized with Direct Access to Fire Command Elevator(s) w/Rated Corridor to all Egress Stairs
1			6.3	Refuge Floor 3-Hour Rated. Requirements per 6.2 with Fire Rated Spandrel and Glazing- Number of floors required base on overall building height and occupancy
1			6.4	Roof Top Access (Heliport Requirements Similar to L.A. Municipal Code)

Points Yes No

			6.0	Area of Refuge / Special Access / Egress
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			6.5	Exterior Evacuation System
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			7.0	HVAC / Fire Protection / Electrical
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Prerequisite			7.1	Per Code - Emergency Power Dual Source Fire Command Center Building Management System
1			7.2	Dual Feed Sprinkler with 2-Hour Back-up Water Source (water storage tanks)
1			7.3	Separate electrical feeds (back-up generator) for fire pump(s)
1			7.4	Floor Pressurization / Smoke Evac. System (Purge)
1			7.5	Increase Fire Protection (Sprinkler Design Area) by 100%
1			7.6	Structurally Enhanced Impact Resistant Enclosures for Sprinkler Storage & Emergency Electrical Risers
1			7.7	Reinforce equipment anchorages to prevent failure during event and prevent further destruction of main structure
1			7.8	Fire Brigade Cache Rooms; Direct Access to Egress Stairs or dedicated fire brigade elevator
1			7.9	Redundant water service
1			7.10	Redundant water pumps at remote and protected areas of the building
1			7.11	Connect all HVAC systems to building information system (BIS) and security
1			7.12	Separate public and tenant HVAC Systems
1			7.13	Air intakes not at street or ground level of property
1			7.14	Air filtration systems for all intake air
1			7.15	Air quality detection system connected to BIS

			8.0	Education / Information / Operations
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Prerequisite			8.1	Overall Building Fire Hazard Assessment Emergency Preparedness Plan
1			8.2	LLSD Accredited Design Professional
1			8.3	3 rd Party Building Commissioning
1			8.4	Emergency Procedure Training for tenants and building staff
1			8.5	Yearly Full Floor Evacuation Drills
1			8.6	Full As-Built Document Off-Site
1			8.7	Condensed version of as-built document available on site and with fire jurisdiction
1			8.8	Off-Site or Black Box Recording of Communication Building Management System

			9.0	Innovation & Special Design
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1	4		9.1	Special or Innovative Life Safety Features (Max 4 Points)
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10.0 Structural

Prerequisite	10.1	Wind Tunnel Analysis
1	10.2	Separate explosive force from critical structural components
1	10.3	Supplementary reinforcement to key structural components
1	10.4	Redundant Structural Design Features to Mitigate Progressive Collapse.
1	10.5	Enhancement of connectivity of structural elements
1	10.6	Blast Resistant Design Features
1	10.7	Passive energy dissipation components (seismic enhancements) What is the model code? What are the minimum requirements?

11.0 Security

1	11.1	Security Screening for all Occupants & Visitors
1	11.2	No Public Parking in Structure
1	11.3	Continuous Video Monitoring
1	11.4	Integration of building controls (BIS) with security and fire command center, etc.
1	11.5	Card/ proximity readers at primary entrances or exits

12.0 Bio-chemical

1	12.1	See Section 7.0 for HVAC interrelationships
1	12.2	Additional Criteria??
1	12.3	Are there any code minimums??

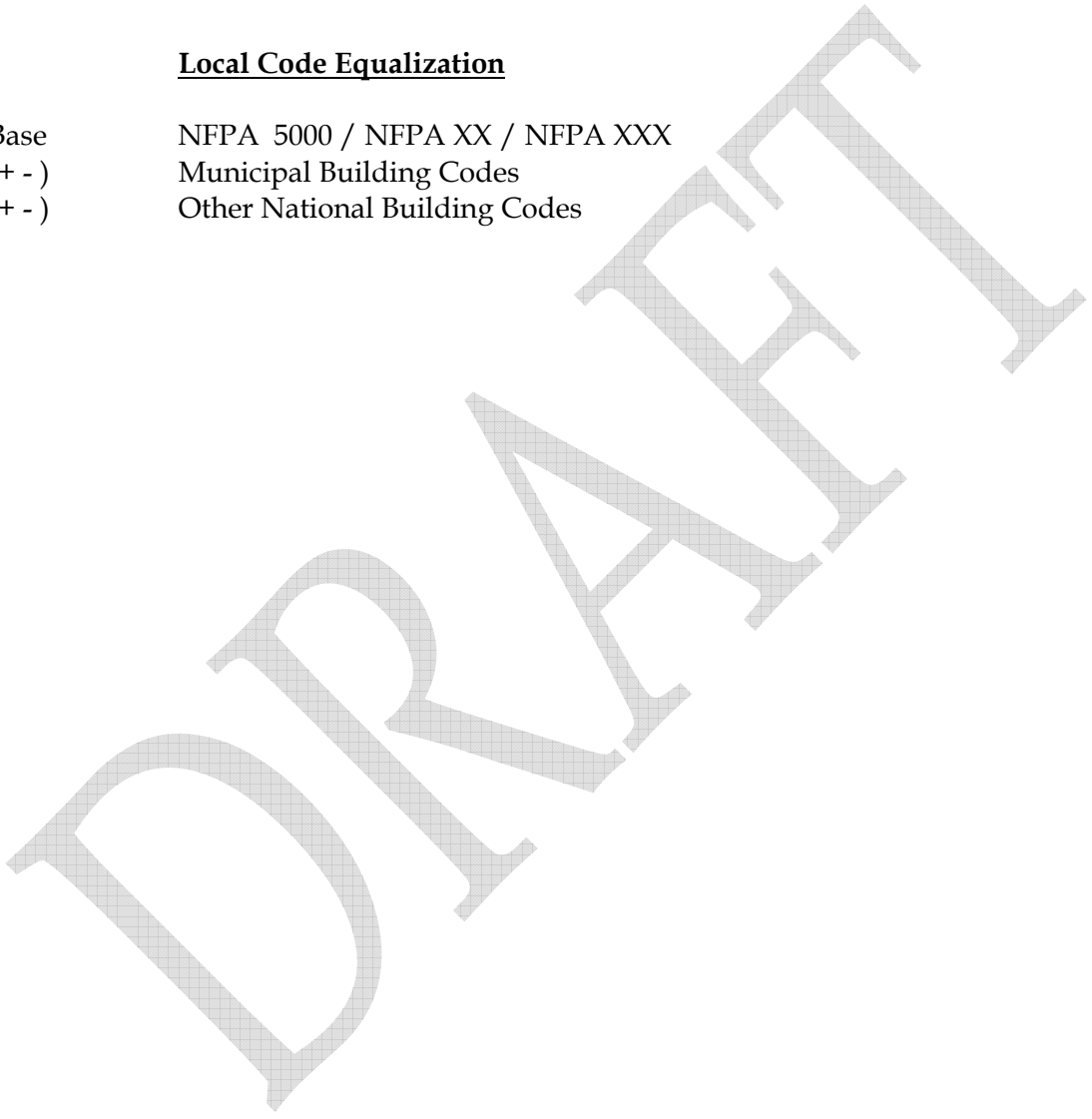
Points Yes No

Project Totals

			Points	LLSD Certified
			+5	LLSD Silver
			+10	LLSD Gold
			+15	LLSD Platinum

Local Code Equalization

- Base NFPA 5000 / NFPA XX / NFPA XXX
- (+ -) Municipal Building Codes
- (+ -) Other National Building Codes



Minutes Attachment B



TO: Casey C. Grant
FROM: Milosh Puchovsky
SUBJ: High Rise Building Safety Advisory Committee (HRB-SAC) Annual Report
DATE: 21 October 2005

As noted in the operating procedures adopted by the HRBSAC, this will serve as the Annual Report to the NFPA Standards Council.

The basic representation, parameters and subjects to be considered by the HRBSAC were approved by the Standards Council at their July, 2004 meeting. Following this meeting, the start up roster of potential participants was identified and the initial roster was approved in October 2004. Additional members were identified, and ultimately appointed in February and June of 2005. The current make up of the HRBSAC includes:

<u>NAME</u>	<u>COMPANY/ORGANIZATION</u>
James R. Quiter - Chair	Arup
Richard W. Bukowski	US National Institute of Standards & Technology
Geoff Craighead	Securitas Security Services USA, Inc.
Jon D. Magnusson	Magnusson Klemencic Associates
John P. Miller	Los Angeles City Fire Department
Jack J. Murphy	Fire Safety Directors of Greater New York
Steven M. Nilles	Lohan Caprile Goettsch Architects (Rep. CTBUH)
Jake Pauls	Jake Pauls Consulting Services in Building Use & Safety (Rep. American Public Health Association)
Sally Regenhard	The Skyscraper Safety Campaign
Wes H. Shoemaker	Winnipeg Fire Paramedic Service (Rep. Metro Chiefs)
Milosh Puchovsky	NFPA – Staff Liaison

Three meetings of the HRBSAC have been held thus far: December 2004, July 2005, and October 2005. The December 2004 meeting (Boston, MA) consisted of an overview of NFPA, discussion of the committee’s procedural and operating features, identification of a

comprehensive list of subjects to be considered, and the introduction of the Leadership in Life Safety Design (LLSD) concept that would provide a measured level of safety for building occupants and emergency responders beyond that required by the applicable building code. Members of the Council on Tall Buildings and Urban Habitat (CTBUH) are also in support of this type of concept.

The July 2005 meeting (Gaithersburg, MD) was held at NIST and focused primarily on the development and preparation of responses to the NIST World Trade Center Study. The committee was briefed by Dr. Shyam Sunder from NIST on the main points of the study. Following the briefing, and a discussion period, the HRBSAC members worked to provide initial responses and reactions to most of the 30 recommendations found in the NIST study. A committee ballot was processed to secure the committee's position. Where appropriate, the HRBSAC responses were incorporated into NFPA's formal response to NIST as a part of NFPA's internal review.

The committee also extended discussion on the LLSD concept identified at the December 2004 meeting. LLSD is envisioned as being modeled after the Leadership in Energy and Environmental Design (LEED) program sponsored by U.S. Green Building Council. The LLSD approach provides a series of building safety enhancements that could be voluntarily applied in the design or evaluation of high rise buildings. Features identified through the LLSD present voluntary additional "code +" safety provisions beyond those mandated by the applicable building code. The LLSD might also be used to better define and address those risks of concern to the building owner. Buildings could then be identified as LLSD certified. It is expected that a level of certification would be established similar to that for the LEED program. HRB-SAC hopes to formally present the LLSD concept to the Standards Council in March of 2006.

The October 2005 meeting (New York, NY) consisted of a number of follow up and new initiatives. The committee briefly discussed NFPA's comments on the NIST WTC study and received a briefing on the September 2005 NIST technical conference on the WTC study. In addition, the LLSD task group provided a status report. NIST and CTBUH expressed an interest in collaborating with the HRBSAC on this concept. A major portion of the meeting was held in conjunction with the chairs of certain NFPA Technical Committees. This portion of the meeting served to help identify and prioritize subjects that should be considered in the development of the next editions of key documents such as NFPA 1, NFPA 101 and NFPA 5000. Draft agenda items for the technical committee consideration were drafted and will be balloted through HRB-SAC.

At present, two meetings are scheduled for 2006. The first is scheduled for March of 2006 in Tampa, FL in conjunction with the Standards Council meeting. The second meeting is not yet scheduled but will likely occur in the fourth quarter of 2006.

In summary, HRBSAC continues to pursue an ambitious agenda and is performing as expected. HRB-SAC is providing key input to NFPA staff and technical committees for consideration in the revision of NFPA documents. The diverse views, backgrounds and critical issues discussed by the committee is providing a tremendous advantage as NFPA looks to move forward with changes and safety improvements that encompass the high rise environment. NFPA is fortunate to have a talented and outspoken group of advisory committee members.

C: G. Keith
R. Solomon

Agenda Attachment C

**High-Rise Building Safety Advisory Committee
(HRB-SAC)**

**Key Dates
(March 2006)**

Mar 22-23, 2006	High Rise Safety Advisory Committee meeting (w/ NFPA's Standards Council) - Tampa
Mar 2006 – Sept 2006	Meeting(s) with 101/5000 and other technical committees as needed to address code-related recommendations
May 26, 2006	Public proposal closing date for documents in Fall 2007 cycle (NFPA 1561)
Aug 25, 2006	Public proposal closing date for NFPA 101 and NFPA 5000
Sept 15, 2006	Public proposal closing date for NFPA 1
Fall 2006	HRB-SAC meeting
Nov 22, 2006	Public proposal closing date for documents in Annual 2008 cycle (NFPA 90A, NFPA 92A, NFPA 92B)
Spring 2007	HRB-SAC meeting

NFPA HRB-SAC RELATED DOCUMENT CYCLES

NFPA DOCUMENT	CYCLE	PROPOSAL CLOSING DATE
NFPA 1	A 2008	9-15-06
NFPA 101	A 2008	8-25-06
NFPA 5000	A 2008	8-25-06
NFPA 13	A 2009 (Projected)	No schedule
NFPA 72	A 2009 (Projected)	No schedule
NFPA 90A	A2008	*11-22-06
NFPA 92A	A2008	11-22-06
NFPA 92B	A2008	11-22-06
NFPA 1500	A 2011 (Projected)	No schedule
NFPA 1561	F2007	5-26-06
NFPA 1710	A 2009 (Projected)	No schedule
NFPA 1720	A 2009 (Projected)	No schedule

***Proposal closing dates may vary according to document. Check the NFPA Web site (www.nfpa.org) for proposal closing date of a particular document.**

Agenda Attachment D

**Summary of
Ballot Results
February 22, 2006
NFPA High Rise Technical Advisory Committee
(HRB-TAC)**

**Priorities and Agenda Items for
NFPA Technical Committees**

(1) Thresholds for high rise buildings

Documents: NFPA 1, NFPA 101, NFPA 5000, NFPA 13, NFPA 72, NFPA 90A, NFPA 92A, NFPA 92B

Consider subcategorizing high rise buildings as follows:

- 8-39 stories
- 40-79 stories
- 80-119 stories
- 120 – and greater

HRB-SAC believes that high rise buildings should be further classified but is unsure of the specific thresholds and is requesting further input in this regard. The thresholds indicated above were derived in part from existing requirements for some building systems. HRB-SAC recognizes that the thresholds might not be an appropriate for all systems but is asking Technical Committee to provide more specific detail in this regard.)

In addressing these thresholds, HRB-SAC requests that specific recommendations on enhancing the performance of building systems to decrease the risk associated with high rise buildings be provided. Specific input on structural requirements, fire compartments, egress, sprinkler systems, fire alarm and detection systems, emergency power, emergency lighting, smoke management systems, communication systems, elevators, fire fighter capabilities, etc. is being sought.

This proposal is partially in response to recommendations #4 of NIST's World Trade Center Disaster study and subject 2 of the HRB-SAC Charter.

Ballot Results for (1) Thresholds for high rise buildings.

Agree	6	(G. Craighead, J. Murphy, J. Miller, S. Nilles, J. Pauls and S. Regenhard)
Agree with Comment	2	(J. Quiter and W. Shoemaker)
Disagree	1	(J. Magnusson)
Abstain	1	(R. Bukowski)

Agree with Comment

J. Quiter Suggest re-writing #1 as follows:
Thresholds for high-rise buildings

Documents: NFPA 1, NFPA 101, NFPA 5000, NFPA 13,
NFPA 72, NFPA 90A, NFPA 92A, NFPA 92B

Consider subcategorizing high rise buildings as follows:

- 8-39 stories
- 40-79 stories
- 80-119 stories
- 120 and greater

There is a significant difference in the technical challenges and risks posed between a medium rise building and a very tall building. High-rise provisions were originally written around the maximum reach of fire department apparatus and external rescue. However, buildings of 75 feet in height do not pose significant issues with respect to full evacuation, stack effect, or huge occupant loads. Therefore, there is clearly a need to have different categories of high-rise buildings. While the thresholds described above are subject to debate, the concept of needing different protection for medium vs. tall vs. very tall buildings makes sense. Further input regarding the specific thresholds is requested.

The thresholds indicated above were derived in part from existing requirements for some building systems. HRB-SAC recognizes that the thresholds might not be appropriate for all systems but is asking Technical Committees to provide more specific detail in this regard.

In addressing these thresholds, HRB-SAC requests that specific recommendations on enhancing the performance of building systems to decrease the risk associated with high rise buildings be provided. Specific input on structural requirements, fire compartments, egress, sprinkler systems, fire alarm and detection systems, emergency power, emergency lighting, smoke management systems, communication systems, elevators, fire fighter capabilities, etc. is being sought.

This proposal is partially in response to recommendations #4 of NIST's World Trade Center Disaster study and subject 2 of the HRB-SAC Charter.

W. Shoemaker Comments to Follow

Disagree

J. Magnusson Why are we "requesting further input" from others when we are the group that is supposed to be giving input? There is absolutely no technical basis for these proposed categories. The approach of determining categories before determining what building system (i.e. -sprinklers, fireproofing, structure, etc.) you are considering is backwards and illogical. The comment "The thresholds indicated above were derived in part from existing requirements for some building systems" is not true. These categories were simply made-up with no rational basis for their determination.

Abstain

R. Bukowski Since the ballot items deal with the position of the advisory committee on the NIST recommendations I would like to be shown as abstaining on all such items.

(2) Engineered life safety system alternative for existing high rise business occupancies.

Document: NFPA 101, section 39.4.2.1(2)

Delete the engineered life safety system alternative for existing high rise business occupancies.

It is highly doubtful that the design of any engineered life safety system will be able to provide equivalent levels of life safety to occupants of a high-rise building that would be provided by complete automatic fire sprinkler protection. The effectiveness of fire sprinklers is well documented and is the most effective method of preventing life loss and property damage due to fire. The history of serious fires in high-rise structures has one common thread: the lack of complete automatic fire sprinkler protection.

This proposal is partially in response to recommendation #26 of NIST's World Trade Center disaster study.

Ballot Results for (2) Engineered life safety system alternative for existing high rise business occupancies.

Agree	6	(G. Craighead, J. Murphy, J. Miller, S. Nilles, J. Pauls and S. Regenhard)
Agree with Comment	2	(J. Quiter and W. Shoemaker)
Disagree	1	(J. Magnusson)
Abstain	1	(R. Bukowski)

Agree with Comment

J. Quiter While I am agreeing with these items, there are several others where I am disagreeing or proposing changes. Unfortunately, I

J. Quiter
(Continued) missed the deliberations of the second day of the meeting. However, I believe we need to be making proposals that we can back up with support, cost-benefit, or need, rather than things that seem like good ideas. The proposals I have supported may not all fit that description, but I think, would be broadly supported. The others are not supported, or in some cases defensible or technically feasible. I have commented individually on those.

We have several items that are inter-related, but we have not tied them together. As stand-alone suggestions, they look like knee-jerk reactions. If, instead, we look at making a building safe, and helping emergency responders, we can group items and approach this like a system. These things all need to work together, and the combination of features will be what does, or does not, provide the safety we need.

It seems to me that we are throwing a lot of systems and redundancies at the building without considering what is in it. Even our #13 does not talk about special hazards in a building, or require special consideration for those hazards. Simply codifying more protection for the generic high-rise will not, in my opinion, buy much additional safety. It will simply cost a lot of money.

W. Shoemaker Comments to Follow

Disagree

J. Magnusson No historical data, test results, any facts, or other research has been presented to say that an engineered life safety system is unacceptable. The proposed change may be a good one, but we have a responsibility as a committee to act based on rational thought derived from facts.

Abstain

R. Bukowski Since the ballot items deal with the position of the advisory committee on the NIST recommendations I would like to be shown as abstaining on all such items.

(3) Closed circuit television

Documents: NFPA 1, NFPA 101, NFPA 5000, NFPA 72, new documents?

Consider the use of closed circuit television in exit stairs and elevator lobbies to provide real time situational awareness for emergency responders, for immediate assessment during and after

the incident and for further research regarding occupant behavior. The system should provide for back-up data off site during emergency incidents and have information available for emergency responders in real time. HRB-SAC is requesting input on this subject from NFPA’s Technical Committees. HRB-SAC specifically requests that threshold conditions under which such systems are to be used be established, and that design, installation, operational and maintenance criteria be developed.

This proposal is partially in response to recommendations #13, #14 and #15 of NIST’s World Trade Center Disaster study.

Ballot Results for (3) Closed circuit television

Agree	7	(G. Craighead, J. Magnusson, J. Miller, J. Murphy, S. Nilles, J. Pauls and S. Regenhard)
Agree with Comment	1	(W. Shoemaker)
Disagree	1	(J. Quiter)
Abstain	1	(R. Bukowski)

Agree with Comment

W. Shoemaker Comments to Follow

Disagree

J. Quiter Items for consolidation/input

Improved fire ground communication/awareness

Items 3, 8, 9, 10, 11, and 12 all relate to equipment provided for increased efficiency of the fire service. While I have voted in favor of numbers 8 and 10, it would make sense to group them together in a single suggestion to the NFPA 1500 and 1700 series committees, to have them look at various alternatives and feed back those items they consider useful and feasible. NFPA 72 may also be involved to determine technical feasibility. However, these are all a package, and should not be considered separately.

To address some of the specific items:

#3—While this sounds okay on the surface, it provides many more questions than answers. Where are these cameras? If they are part of a fire system do they need to be listed? What percentage coverage do they need? Who is monitoring them? Is there a system easy enough to be useful in an emergency, or will they only help in after-the-fact analysis? What is the cost? What is the real benefit? Other than the fire in Chicago, are there incidents where they would have helped? If we require

J. Quiter
(Continued) them in stairs and elevator lobbies, why not throughout the building to aid in rescue? What about personal security?

If this makes any sense, it should be part of a list of questions presented to emergency responders about what would help them do their jobs better, and where they would place their priorities, rather than as a stand-alone recommendation. If a priority, we could begin to work out the technical issues.

Abstain

R. Bukowski Since the ballot items deal with the position of the advisory committee o the NIST recommendations I would like to be shown as abstaining on all such items.

(4) Use of elevators for egress.

Documents: NFPA 1, NFPA 101 (section 7.2.13), NFPA 5000 (section 11.2.13), NFPA 1710

Consider the feasibility of using elevators during emergency situations for egress by building occupants and use by building staff, and establish conditions under which the elevators can be used such as would they be operated exclusively under authority of fire service personnel and trained building staff. Consideration should be given for operation during adverse conditions and environments. HRB-SAC requests that effected Technical Committees work with other groups such as ASME in developing appropriate design, installation, operational and maintenance criteria as appropriate. HRB-SAC is also requesting input on public education efforts that will be needed if elevators will be used for egress.

This proposal is partially in response to recommendations #16, #17, #20 and #21 of NIST’s World Trade Center Disaster study, and subject 4c of the HRB-SAC Charter.

Ballot Results for (4) Use of elevators for egress.

Agree	5	(G. Craighead, J. Murphy, S. Nilles, J. Pauls and S. Regenhard)
Agree with Comment	3	(J. Miller, J. Quiter and W. Shoemaker)
Disagree	1	(J. Magnusson)
Abstain	1	(R. Bukowski)

Agree with Comment

J. Miller In regards to Priorities 4, 5, & 6 – specifically the use of elevators for egress by occupants use by emergency responders consideration for use should be only if technology can assure that heat, smoke and water will not negatively affect operational effectiveness.

J. Quiter While I am agreeing with these items, there are several others where I am disagreeing or proposing changes. Unfortunately, I missed the deliberations of the second day of the meeting. However, I believe we need to be making proposals that we can back up with support, cost-benefit, or need, rather than things that seem like good ideas. The proposals I have supported may not all fit that description, but I think, would be broadly supported. The others are not supported, or in some cases defensible or technically feasible. I have commented individually on those.

We have several items that are inter-related, but we have not tied them together. As stand-alone suggestions, they look like knee-jerk reactions. If, instead, we look at making a building safe, and helping emergency responders, we can group items and approach this like a system. These things all need to work together, and the combination of features will be what does, or does not, provide the safety we need.

It seems to me that we are throwing a lot of systems and redundancies at the building without considering what is in it. Even our #13 does not talk about special hazards in a building, or require special consideration for those hazards. Simply codifying more protection for the generic high-rise will not, in my opinion, buy much additional safety. It will simply cost a lot of money.

W. Shoemaker Comments to Follow

Disagree

J. Magnusson The use of elevators by building occupants may ultimately become a part of an overall evacuation system, but it must be considered as a part of the overall system. Currently in most jurisdictions elevators are used by firefighters. If the proposal is to abandon this, then concepts need to be developed for how to transport firefighters. Before we recommend that elevators should be used by building occupants, it is essential to develop our recommended overall evacuation strategy (i.e. - phased evacuation, full-building evacuation, building occupant training and behavior issues, desired firefighter deployment systems). We have not even discussed overall evacuation strategies; therefore, it is inappropriate at this time to recommend the use of elevators by building occupants.

Abstain

R. Bukowski Since the ballot items deal with the position of the advisory committee o the NIST recommendations I would like to be shown as abstaining on all such items.

(5) Enhanced fire resistance of elevator lobbies and shafts.

Documents: NFPA 101 (Chapter 8) and NFPA 5000 (chapter 8)

Consider the protection (fire resistance) of elevator lobbies and shafts to provide/establish and or provide an alternative means to assist with the rapid evacuation of building occupants where required, rapid ingress of emergency personnel in a timely manner and staging of fire department operations. Features to consider include but are not limited to the isolation of elevator lobbies with appropriate fire doors, automated closing devices, smoke detectors.

This proposal is partially in response to recommendations #17, #18, #20 and #21of NIST’s World Trade Center Disaster study and subject 4a of the HRB-SAC Charter.

Ballot Results for (5) Enhanced fire resistance of elevator lobbies and shafts.

Agree	5	(G. Craighead, J. Murphy, S. Nilles, J. Pauls and S. Regenhard)
Agree with Comment	2	(J. Miller and W. Shoemaker)
Disagree	2	(J. Magnusson, and J. Quiter)
Abstain	1	(R. Bukowski)

Agree with Comment

J. Miller In regards to Priorities 4, 5, & 6 – specifically the use of elevators for egress by occupants use by emergency responders consideration for use should be only if technology can assure that heat, smoke and water will not negatively affect operational effectiveness.

W. Shoemaker Comments to Follow

Disagree

J. Magnusson Enhancing fire resistance of elevator lobbies and shafts may ultimately become a part of an overall evacuation system, but it must be considered as a part of the overall system. Before we recommend that that more fire resistance is needed in lobbies and shafts, it is essential to develop our recommended overall evacuation strategy (i.e. - phased evacuation, full-building evacuation, building occupant training and behavior issues, desired firefighter deployment systems, etc.). We have not even discussed overall evacuation strategies; therefore, it is

J. Magnusson (Continued) inappropriate to recommend the increased fire resistance when we haven't even determined the most basic performance objective for the lobbies and shafts.

J. Quiter The title of item 5 refers to enhanced fire resistance, but the language implies we mean to require elevator lobbies, not enhance them. Nothing in the language describes how enhanced fire resistance of shafts will help. If we build 3-hour shafts in a 1-hour building, we have a 1-hour shaft. If we mean to require "hardened" shafts, we should say so, understanding that this concept will also lead to more questions than answers. In most incidents, the weak point in shafts (including stairs and elevators) is the openings. Impact resistance is different than fire resistance. If we are going to design for impact resistance, there is much more thought and justification needed. If instead we meant to require elevator lobbies, we should tie it back into item #1 on thresholds.

Abstain

R. Bukowski Since the ballot items deal with the position of the advisory committee o the NIST recommendations I would like to be shown as abstaining on all such items.

(6) Elevators for emergency responders.

Documents: NFPA 1, NFPA 101 and NFPA 5000

Consider the study and evaluation of reliable technologies available to improve the use of identified elevators for emergency responders during adverse conditions. The evaluation should include the operational effectiveness during conditions where elevator components are subjected to heat, smoke, excessive exposure to water.

This proposal is partially in response to recommendations #18, #20 and #21of NIST's World Trade Center Disaster study and subject 4b of the HRB-SAC Charter.

Ballot Results for (6) Elevators for emergency responders.

Agree	5	(G. Craighead, J. Murphy, S. Nilles, J. Pauls and S. Regenhard)
Agree with Comment	4	(J. Magnusson, J. Miller, J. Quiter and W. Shoemaker)
Disagree	0	
Abstain	1	(R. Bukowski)

Agree with Comment

- J. Magnusson Elevators are already used by emergency responders in most jurisdictions. It is always good to look at reliability of building systems. However, it is not useful to recommend that someone investigate effectiveness when subjected to heat, smoke, and water without saying how much heat, how much smoke, and how much water.
- J. Miller In regards to Priorities 4, 5, & 6 – specifically the use of elevators for egress by occupants use by emergency responders consideration for use should be only if technology can assure that heat, smoke and water will not negatively affect operational effectiveness.
- J. Quiter While I am agreeing with these items, there are several others where I am disagreeing or proposing changes. Unfortunately, I missed the deliberations of the second day of the meeting. However, I believe we need to be making proposals that we can back up with support, cost-benefit, or need, rather than things that seem like good ideas. The proposals I have supported may not all fit that description, but I think, would be broadly supported. The others are not supported, or in some cases defensible or technically feasible. I have commented individually on those.
- We have several items that are inter-related, but we have not tied them together. As stand-alone suggestions, they look like knee-jerk reactions. If, instead, we look at making a building safe, and helping emergency responders, we can group items and approach this like a system. These things all need to work together, and the combination of features will be what does, or does not, provide the safety we need.
- It seems to me that we are throwing a lot of systems and redundancies at the building without considering what is in it. Even our #13 does not talk about special hazards in a building, or require special consideration for those hazards. Simply codifying more protection for the generic high-rise will not, in my opinion, buy much additional safety. It will simply cost a lot of money.
- W. Shoemaker Comments to Follow

Abstain

R. Bukowski Since the ballot items deal with the position of the advisory committee o the NIST recommendations I would like to be shown as abstaining on all such items.

(7) National Incident Management Systems (NIMS)

Documents: NFPA 1, NFPA 1720

Consider the use of the NIMS in coordination and conjunction with written department/jurisdictional standard operating procedures (SOPs) for emergency operations. Operations should include annual training review of department SOPs. Also consider the use of NIMS for unified command and requests for mutual aid.

This proposal is partially in response to recommendation #24 of NIST’s World Trade Center disaster study and subjects 13a and 13i of the HRB-SAC Charter.

Ballot Results for (7) National Incident Management Systems (NIMS)

Agree	7	(G. Craighead, J. Magnusson, J. Murphy, J. Miller, S. Nilles, J. Pauls and S. Regenhard)
Agree with Comment	2	(J. Quiter and W. Shoemaker)
Disagree	0	
Abstain	1	(R. Bukowski)

Agree with Comment

J. Quiter While I am agreeing with these items, there are several others where I am disagreeing or proposing changes. Unfortunately, I missed the deliberations of the second day of the meeting. However, I believe we need to be making proposals that we can back up with support, cost-benefit, or need, rather than things that seem like good ideas. The proposals I have supported may not all fit that description, but I think, would be broadly supported. The others are not supported, or in some cases defensible or technically feasible. I have commented individually on those.

We have several items that are inter-related, but we have not tied them together. As stand-alone suggestions, they look like knee-jerk reactions. If, instead, we look at making a building safe, and helping emergency responders, we can group items and approach this like a system. These things all need to work together, and the combination of features will be what does, or does not, provide the safety we need.

It seems to me that we are throwing a lot of systems and

J. Quiter
(Continued) redundancies at the building without considering what is in it. Even our #13 does not talk about special hazards in a building, or require special consideration for those hazards. Simply codifying more protection for the generic high-rise will not, in my opinion, buy much additional safety. It will simply cost a lot of money.

W. Shoemaker Comments to Follow

Abstain

R. Bukowski Since the ballot items deal with the position of the advisory committee o the NIST recommendations I would like to be shown as abstaining on all such items.

(8) Common radio communication equipment and frequencies

Documents: NFPA 1, NFPA 72, NFPA 1500, NFPA 1561, NFPA 1710, NFPA 1720

Consider the use and availability of common radio communication equipment frequencies for all fire responders involved in abatement of emergency incidents. Furthermore, consider the feasibility of all (new/existing) high rise occupancies of being equipped/retrofitted with a communication system to communicate from a fire control room/command center to all areas (both inclusive/exclusive) to provide building occupants with direction and or information relative to emergency operations or evacuation.

This proposal is partially in response to recommendation #22 and #24 of NIST’s World Trade Center disaster study and subject 13d of the HRB-SAC Charter.

Ballot Results for (8) Common radio communication equipment and frequencies.

Agree	7	(G. Craighead, J. Magnusson, J. Murphy, J. Miller, S. Nilles, J. Pauls and S. Regenhard)
Agree with Comment	2	(J. Quiter and W. Shoemaker)
Disagree	0	
Abstain	1	(R. Bukowski)

Agree with Comment

J. Quiter While I am agreeing with these items, there are several others where I am disagreeing or proposing changes. Unfortunately, I missed the deliberations of the second day of the meeting. However, I believe we need to be making proposals that we can back up with support, cost-benefit, or need, rather than things that seem like good ideas. The proposals I have supported may not all fit that description, but I think, would be broadly supported. The others are not supported, or in some cases defensible or technically feasible. I have commented

J. Quiter
(Continued) individually on those.

We have several items that are inter-related, but we have not tied them together. As stand-alone suggestions, they look like knee-jerk reactions. If, instead, we look at making a building safe, and helping emergency responders, we can group items and approach this like a system. These things all need to work together, and the combination of features will be what does, or does not, provide the safety we need.

It seems to me that we are throwing a lot of systems and redundancies at the building without considering what is in it. Even our #13 does not talk about special hazards in a building, or require special consideration for those hazards. Simply codifying more protection for the generic high-rise will not, in my opinion, buy much additional safety. It will simply cost a lot of money.

W. Shoemaker Comments to Follow

Abstain

R. Bukowski Since the ballot items deal with the position of the advisory committee o the NIST recommendations I would like to be shown as abstaining on all such items.

(9) Operational effectiveness of radio communication systems

Documents: NFPA 1, NFPA 101, NFPA 5000, NFPA 72, NFPA 1500, NFPA 1561, NFPA 1710, NFPA 1720

Consider the evaluation of the operational effectiveness of the capability of the radio system of the responsible first responders to ensure communication ability on-site and to the respective dispatch center. Where determined to be ineffective, consider the need to install remote antennae/repeaters to ensure reliable communication inside any building environment.

This proposal is partially in response to recommendation #22, #23 and #24 of NIST’s World Trade Center disaster study and subject 13e of the HRB-SAC Charter.

Ballot Results for (9) Operational effectiveness of radio communication systems.

Agree	7	(G. Craighead, J. Magnusson, J. Murphy, J. Miller, S. Nilles, J. Pauls and S. Regenhard)
Agree with Comment	2	(J. Quiter and W. Shoemaker)
Disagree	0	
Abstain	1	(R. Bukowski)

Agree with Comment

J. Quiter See general comment on my “disagree” votes on 3, 11, and 12.

Also, what is written makes sense in concept, and is indecipherable in the words chosen. Suggest the following:

Consider evaluating fire department or first responder communication effectiveness. Is our current code language adequate, and is it consistent with equipment available on the market? Should it be mandatory in existing buildings? Would remote antennae or repeaters accomplish the purpose?

W. Shoemaker Comments to Follow

Abstain

R. Bukowski Since the ballot items deal with the position of the advisory committee o the NIST recommendations I would like to be shown as abstaining on all such items.

(10) Interoperability of communication equipment.

Documents: NFPA 1, NFPA 101, NFPA 5000, NFPA 72, NFPA 1500, NFPA 1561, NFPA 1710, NFPA 1720

Consider use and availability of common radio communications equipment frequencies or the interoperability of communication for all first responders involved in abatement (command/control) of emergency incident. This should also include training and testing frequency of all personnel and equipment to ensure reliability.

This proposal is partially in response to recommendation #22, #23 and #24 of NIST’s World Trade Center disaster study and subject 13d and 13f of the HRB-SAC Charter.

Ballot Results for (10) Interoperability of communication equipment.

Agree	7	(G. Craighead, J. Magnusson, J. Murphy, J. Miller, S. Nilles, J. Pauls and S. Regenhard)
Agree with Comment	2	(J. Quiter and W. Shoemaker)
Disagree	0	
Abstain	1	(R. Bukowski)

Agree with Comment

J. Quiter While I am agreeing with these items, there are several others where I am disagreeing or proposing changes. Unfortunately, I missed the deliberations of the second day of the meeting. However, I believe we need to be making proposals that we can back up with support, cost-benefit, or need, rather than things that seem like good ideas. The proposals I have supported may not all fit that description, but I think, would be broadly supported. The others are not supported, or in some cases defensible or technically feasible. I have commented individually on those.

We have several items that are inter-related, but we have not tied them together. As stand-alone suggestions, they look like knee-jerk reactions. If, instead, we look at making a building safe, and helping emergency responders, we can group items and approach this like a system. These things all need to work together, and the combination of features will be what does, or does not, provide the safety we need.

It seems to me that we are throwing a lot of systems and redundancies at the building without considering what is in it. Even our #13 does not talk about special hazards in a building, or require special consideration for those hazards. Simply codifying more protection for the generic high-rise will not, in my opinion, buy much additional safety. It will simply cost a lot of money.

W. Shoemaker Comments to Follow

Abstain

R. Bukowski Since the ballot items deal with the position of the advisory committee o the NIST recommendations I would like to be shown as abstaining on all such items.

(11) Remote incident command posts

Documents: NFPA 1, NFPA 101, NFPA 5000, NFPA 1720

Consider the establishment of an incident command post location in an area/location determined to be outside of a potential collapse zone (200 ft – 1000 ft) from affected building. Command post would serve as a means for coordinating personnel/resource accountability of all personnel assigned to incident.

This proposal is partially in response to recommendation #24 of NIST’s World Trade Center disaster study and subject 13g of the HRB-SAC Charter.

Ballot Results for (11) Remote incident command posts.

Agree	6	(G. Craighead, J. Murphy, J. Miller, S. Nilles, J. Pauls and S. Regenhard)
Agree with Comment	1	(W. Shoemaker)
Disagree	2	(J. Magnusson and J. Quiter)
Abstain	1	(R. Bukowski)

Agree with Comment

W. Shoemaker Comments to Follow

Disagree

J. Magnusson “Potential collapse zone” is not defined. Collapse due to what? No data on historical building collapses has been provided to justify the need for this requirement. Is this provision to account for code events or military attacks? Is this a predetermined spot in some neighboring building or is this the designation of a parking spot for a mobile command center? Do fire department commanders lose anything from their ability to do their job being 1,000’ away from a “normal” fire incident?

J. Quiter Improved fire ground communication/awareness

Items 3, 8, 9, 10, 11, and 12 all relate to equipment provided for increased efficiency of the fire service. While I have voted in favor of numbers 8 and 10, it would make sense to group them together in a single suggestion to the NFPA 1500 and 1700 series committees, to have them look at various alternatives and feed back those items they consider useful and feasible. NFPA 72 may also be involved to determine technical feasibility. However, these are all a package, and should not be considered separately.

To address some of the specific items:
 #11—The intent of this recommendation is unclear. If we mean that responding fire personnel should set up a temporary command post remote from a building, it would be part of #16. If we mean a permanent post, the suggestion is rife with issues, such as:

- Who owns the space?
- Who is responsible for maintaining it?
- Where is the right location? Will it depend on the wind?

J. Quiter
(Continued)

The event? The presence of new or revised buildings in the neighborhood?

How is the communication done? Radio? Hard-wired beneath the streets?

If this makes any sense, it should be part of a list of questions presented to emergency responders about what would help them do their jobs better, and where they would place their priorities, rather than as a stand-alone recommendation. If a priority, we could begin to work out the technical issues.

Abstain

R. Bukowski

Since the ballot items deal with the position of the advisory committee o the NIST recommendations I would like to be shown as abstaining on all such items.

(12) Redundant fire alarm and fire control information

Documents: NFPA 1, NFPA 72, NFPA 101, NFPA 5000

Consider the use of redundant fire alarm and fire control system information to be simulcast to a remote location to ensure and provide continuous status of the life safety protection equipment in case of damage or inaccessibility to on-site fire control room/fire command center.

This proposal is partially in response to recommendation #12, #13, #15 and #19 of NIST’s World Trade Center disaster study and subject 13j of the HRB-SAC Charter.

Ballot Results for (12) Redundant fire alarm and fire control information.

Agree	6	(G. Craighead, J. Murphy, J. Miller, S. Nilles, J. Pauls and S. Regenhard)
Agree with Comment	1	(W. Shoemaker)
Disagree	2	(J. Magnusson and J. Quiter)
Abstain	1	(R. Bukowski)

Agree with Comment

W. Shoemaker Comments to Follow

Disagree

J. Magnusson

Simulcast to what remote location? Are there any records of incidents where the on-site fire control room fire command center was not available and what were the reasons?

J. Quiter Improved fire ground communication/awareness
 Items 3, 8, 9, 10, 11, and 12 all relate to equipment provided for increased efficiency of the fire service. While I have voted in favor of numbers 8 and 10, it would make sense to group them together in a single suggestion to the NFPA 1500 and 1700 series committees, to have them look at various alternatives and feed back those items they consider useful and feasible. NFPA 72 may also be involved to determine technical feasibility. However, these are all a package, and should not be considered separately.

To address some of the specific items:

#12—Very similar to #11. Another big question with this one is whether we intend to relay information, or whether we also mean remote controls. Transfer of information without control may not accomplish much. All the other questions from #11 also apply.

Abstain

R. Bukowski Since the ballot items deal with the position of the advisory committee o the NIST recommendations I would like to be shown as abstaining on all such items.

(13) Building site and inventory documentation.

Documents: NFPA1, NFPA 101

Consider the feasibility of requiring building inventory plans/site plans that include an overview of building systems (fire protection, utilities, elevators, evacuation, access, etc.) to be provided or immediately available to emergency responders to assist in various operational components for the abatement of emergency situations. Building inventory plans or site plans should be maintained and updated on an annual basis. The plans should be available in both hard (paper) and electronic form.

This proposal is partially in response to recommendation #13, #14, #15, #19 and #23 of NIST’s World Trade Center disaster study and subject 131 of the HRB-SAC Charter.

Ballot Results for (13) Building site and inventory documentation.

Agree	7	(G. Craighead, J. Magnusson, J. Murphy, J. Miller, S. Nilles, J. Pauls and S. Regenhard)
Agree with Comment	2	(J. Quiter and W. Shoemaker)
Disagree	0	
Abstain	1	(R. Bukowski)

Agree with Comment

J. Quiter While I am agreeing with these items, there are several others where I am disagreeing or proposing changes. Unfortunately, I missed the deliberations of the second day of the meeting. However, I believe we need to be making proposals that we can back up with support, cost-benefit, or need, rather than things that seem like good ideas. The proposals I have supported may not all fit that description, but I think, would be broadly supported. The others are not supported, or in some cases defensible or technically feasible. I have commented individually on those.

We have several items that are inter-related, but we have not tied them together. As stand-alone suggestions, they look like knee-jerk reactions. If, instead, we look at making a building safe, and helping emergency responders, we can group items and approach this like a system. These things all need to work together, and the combination of features will be what does, or does not, provide the safety we need.

It seems to me that we are throwing a lot of systems and redundancies at the building without considering what is in it. Even our #13 does not talk about special hazards in a building, or require special consideration for those hazards. Simply codifying more protection for the generic high-rise will not, in my opinion, buy much additional safety. It will simply cost a lot of money.

W. Shoemaker Comments to Follow

Abstain

R. Bukowski Since the ballot items deal with the position of the advisory committee on the NIST recommendations I would like to be shown as abstaining on all such items.

(14) On-site storage of emergency responder equipment

Documents: NFPA 1, NFPA 101

Consider the deployment/storage of various fire fighting equipment, particularly in buildings over 20/40/60 stories to allow readily accessible stockpile of equipment to fire fighter personnel and emergency responders. Equipment should include spare/additional SCBA components or the means to replenish SCBA bottles at various locations identified within the building.

This proposal is partially in response to subject 13o of the HRB-SAC Charter.

Ballot Results for (14) On-site storage of emergency responder equipment.

Agree	6	(G. Craighead, J. Murphy, J. Miller, S. Nilles, J. Pauls and S. Regenhard)
Agree with Comment	1	(W. Shoemaker)
Disagree	2	(J. Magnusson and J. Quiter)
Abstain	1	(R. Bukowski)

Agree with Comment

W. Shoemaker Comments to Follow

Disagree

J. Magnusson The overall strategy of firefighter deployment and fire fighting strategies should be determined before a provision like this is required for all high rise buildings. There may be better, more reliable strategies.

J. Quiter This item should not be a stand-alone item. I suggest it be tied into the emergency responder list, and to determine if it is a priority. Maintenance and ownership are huge issues here.

With respect to replenishment systems for SCBA, it should probably be related to the threshold discussion.

Using this as a stand-alone recommendation is not consistent with an overall fire systems approach.

Abstain

R. Bukowski Since the ballot items deal with the position of the advisory committee o the NIST recommendations I would like to be shown as abstaining on all such items.

(15) Minimum egress widths

Documents: NFPA 101(section 7.2.2.2.1.2) and NFPA 5000 (section 11.2.2.2.1.1)

Consider changing the minimum width of egress stairs to 56 inches for all new high rise buildings regardless of the number of occupants using the stairs.

This proposal is based upon flow performance data of building occupants and subject 8a of the HRB-SAC Charter.

Ballot Results for (15) Minimum egress widths.

Agree	6	(G. Craighead, J. Murphy, J. Miller, S. Nilles, J. Pauls and S. Regenhard)
Agree with Comment	1	(W. Shoemaker)
Disagree	2	(J. Magnusson and J. Quiter)
Abstain	1	(R. Bukowski)

Agree with Comment

W. Shoemaker Comments to Follow

Disagree

J. Magnusson Not a single actual fire incident was cited as justification that stairways are too narrow for occupants to evacuate. All fires incidents have provided sufficient width to allow occupants to exit. Before we recommend that stairs be widened, it is essential to develop our recommended overall evacuation strategy (i.e. - phased evacuation, full-building evacuation building occupant training and behavior issues, desired firefighter deployment systems). Only then can we determine the performance objective for the stairways. We have not even discussed overall evacuation strategies and no real world data has been produced to demonstrate that stairs are too narrow; therefore, it is inappropriate to recommend the widening of stairs at this time.

J. Quiter After much deliberation, stair sizes were increased in the last round of code changes for stairs that carry more than 2000 people. To make such an increase required significant technical support and discussion. For a recommendation to come from HRB-SAC that arbitrarily suggest further increases in all stairs is not appropriate. To make such a suggestion should require significant debate and justification. In my opinion, issuance of this recommendation as written will remove all credibility from our process.

Abstain

R. Bukowski Since the ballot items deal with the position of the advisory committee o the NIST recommendations I would like to be shown as abstaining on all such items.

(16) Emergency procedures.

Documents: NFPA 1, NFPA 101

Consider providing more specific detail on establishing emergency procedures and training for building occupants.

This proposal is partially in response to subject 6b, 6c and 14c of the HRB-SAC Charter.

Ballot Results for (16) Emergency procedures.

Agree	7	(G. Craighead, J. Magnusson, J. Murphy, J. Miller, S. Nilles, J. Pauls and S. Regenhard)
Agree with Comment	2	(J. Quiter and W. Shoemaker)
Disagree	0	
Abstain	1	(R. Bukowski)

Agree with Comment

J. Quiter

While I am agreeing with these items, there are several others where I am disagreeing or proposing changes. Unfortunately, I missed the deliberations of the second day of the meeting. However, I believe we need to be making proposals that we can back up with support, cost-benefit, or need, rather than things that seem like good ideas. The proposals I have supported may not all fit that description, but I think, would be broadly supported. The others are not supported, or in some cases defensible or technically feasible. I have commented individually on those.

We have several items that are inter-related, but we have not tied them together. As stand-alone suggestions, they look like knee-jerk reactions. If, instead, we look at making a building safe, and helping emergency responders, we can group items and approach this like a system. These things all need to work together, and the combination of features will be what does, or does not, provide the safety we need.

It seems to me that we are throwing a lot of systems and redundancies at the building without considering what is in it. Even our #13 does not talk about special hazards in a building, or require special consideration for those hazards. Simply codifying more protection for the generic high-rise will not, in my opinion, buy much additional safety. It will simply cost a lot of money.

W. Shoemaker

Comments to Follow

Abstain

R. Bukowski Since the ballot items deal with the position of the advisory committee on the NIST recommendations I would like to be shown as abstaining on all such items.

Agenda Attachment E



NFPA Memorandum

To: Milosh Puchovsky

From: Raymond B. Bizal, P.E.
Western Regional Manager (562) 497-1706 phone
6285 East Spring Street, #363 (562) 497-1716 fax
Long Beach, California 90808 rbizal@nfpa.org

Date: February 21, 2006

Milosh,

The Building Code Development Committee (BCDC) (an NFPA committee of building officials from across the country) met recently with the task of reviewing the recommendations in the NIST WTC report and the NFPA comments to those recommendations. Their goal is to evaluate the recommendations/comments and develop proposed revisions to appropriate NFPA codes and standards based on their merit.

In evaluating the recommendations, the BCDC feels that the High-Rise Building Safety Advisory Committee (HRBSAC) has fire service expertise for the subject matter of noted recommendations and asks them to review and comment. The BCDC is interested in co-sponsoring proposals with the HRBSAC, or if desired, would encourage the HRBSAC to submit their own proposals. Those specific recommendations the BCDC would like the HRBSAC to review center on first responder issues and are listed below.

I will attach the NIST report and the NFPA comments to the NIST report. The recommendations begin in Chapter 9, page 201 of the report.

Recommendation 6: The BCDC has drafted a proposal to NFPA 1 as follows and would like input from the HRBSAC to be submitted as a joint proposal.

Add a new section 12.3.2.3 to NFPA 1 as follows:

12.3.2.3. Fire resistant assemblies in high-rise buildings shall be inspected for integrity by an approved independent third party at least once every five years. A written report shall be submitted to the AHJ indicating the inspection result findings.

Justification: NIST WTC recommendation 6 address the importance of fire resistant assemblies in maintaining building structural integrity as a primary and redundant fire protection system. Loss of a small portion of the fire protection coatings or compromising of a rated assembly can dramatically impact the structural integrity of a building and the redundant fire protection features. Once installed, these assemblies must be maintained or the intended level of protection is lost.

Consideration could be given to tie the frequency of the inspection to a frequency in NFPA 25. The choice of a five year frequency seemed appropriate.

Recommendation 14: This recommendation centers on the fire/emergency control command stations. Since some of the HRBSAC representatives are from the fire service, the BCDC requests they review this important recommendation for potential action.

Recommendation 15: This recommendation involves providing information to the first responders. Again, the BCDC requests they review the recommendation for possible action.

Recommendation 19: This recommendation also involves information for the first responders, and the BCDC requests the HRBSAC review the recommendation for possible action.

Recommendation 22: This recommendation addresses emergency communication systems for first responders in tall buildings. The BCDC requests that the HRBSAC review the recommendation/comments for possible action.

Recommendation 23: Similar to recommendations 14, 15 and 19, this recommendation deals with procedures for gathering information for the first responders and the BCDC requests that the HRBSAC review the recommendation for possible action.

Recommendation 24: This recommendation addresses operation of the command and control system and the BCDC requests that the HRBSAC review the recommendation for potential action.

Recommendation 26: This recommendation addresses enforcement of egress and sprinkler provisions. The BCDC requests that the HRBSAC review the recommendation/comments for any possible action to the NFPA codes and standards.

Thank you very much for your attention to this matter. The BCDC realizes that the HRBSAC may have already met. The deadline for proposals to the NFPA 1, 101 and 5000 documents is August 25, so the BCDC will be meeting to finalize proposals the first few days of August. Please provide any feedback to me prior to July 1.

-Ray

Agenda Attachment F



FEMA

DEC 2 2005

Dr. Richard McDonald, Ph.D.
22963 California Street
St. Clair Shores, Michigan 48080

Dear Dr. McDonald,

Thank you for your letter dated October 27, 2005 to the Department of Homeland Security Secretary Michael Chertoff concerning your suggestion regarding Fire Fighting Ready Rooms for high rise buildings. Your letter was referred to the United States Fire Administration for response.

Fires in these structures provide unique challenges that tax fire fighters physically and emotionally as they confront this hostile environment. Any ideas like these that make their jobs easier are worthy of additional thought. In fact, a number of jurisdictions already are studying a similar concept in their building codes that would require high rise building owners to provide rooms where the fire department can cache equipment and supplies for use in an emergency.

I recommend you forward your idea to those organizations that promulgate America's building codes: the International Code Council (www.iccsafe.org) and the National Fire Protection Association (www.nfpa.org). These organizations employ a consensus-based process that develops building and fire codes for adoption by state and local governments. They are your best opportunity to fulfill this idea. To the extent possible, the US Fire Administration would support an appropriately crafted proposal.

Thank you for your thoughtfulness, and we wish you luck in your effort.

Sincerely,

A handwritten signature in cursive script, appearing to read "Charlie Dickinson".

Charlie Dickinson
Deputy Administrator
United States Fire Administration

27 October 2005

Secretary Michael Chertoff
U.S. Department of Homeland Security
Washington, D.C. 20528

FE: Fighting fires in skyscrapers with Fire Fighting Ready Rooms

Secretary Chertoff,

I am passing along an idea that solves one of the problems facing firefighters in skyscrapers.

Problems inherent with fighting fires in skyscrapers are many, but one problem that can be solved is the issue of the amount of time it takes any firefighter to climb many floors with the necessary heavy equipment. Why not have--after a certain floor--the appropriate heavy fire fighting equipment already positioned in an appropriately sized room/closet **every** 10 or 20 floors [whatever floor levels are deemed appropriate]? For example, if it is determined that it would be efficient to have **Fire Fighting Ready Rooms** every 20 floors after the 20th floor, also a Ready Room, then the Ready Rooms would be located at the 40th, 60th, and 80th floors. This creates a situation where the fire fighters would climb the stairs with only their personal safety equipment to that appropriate **Fire Fighting Ready Room** to fight the fire or other fire-fighting related activities saving time and lives.

With respect,

Richard McDonald, Ph.D.
22963 California St.
St. Clair Shores, MI 48080

voice mail/fax: 586.776.4616
mcdonald@scientist.com
www.McDonaldPhD.com
*Improving Life By Strengthening Science*TM

cc: file
M. Anderson

Agenda Attachment G

MEMORANDUM

HRB-SAC Agenda - March 2006

TO: Staff Liaisons

FROM: Casey Grant, Secretary NFPA Standards Council

DATE: 13 February 2006

SUBJECT: Research Projects in Support of NFPA Codes and Standards Process

As you may be aware, NFPA has recently provided a \$100,000 contribution to the Fire Protection Research Foundation (FPRF) to support research projects that would benefit the Technical Committees that administer NFPA Codes and Standards.

The Foundation's Board has approved a process for selection of these projects which seeks broad input from the Technical Committees themselves. It's anticipated that the funds will be used to support two or three projects in the 2006 calendar year. Selection criteria have also been approved which are:

- relevance to mission;
- cost/benefit; and
- no other obvious funders, or NFPA seed funds would start a project otherwise not possible.

We need your help with this initiative. For your assigned NFPA projects, please take a moment to reflect on how a relatively small research or data project might assist your Technical Committee with a relevant and perhaps contentious issue they are currently attempting to address. Please seek input from your Technical Committee Chairs, members or others as you feel appropriate.

Once your ideas come in, we have formed a review and selection committee consisting of two members of NFPA staff and two members of the Foundation Board of Trustees. The selections will be vetted by the Standards Council and the Foundation Board.

Once the projects have been selected, the Foundation will treat them as other projects: a project technical panel will be formed consisting primarily of Technical Committee members and an RFP will be issued. Dialogue with the Technical Committee will continue during the project.

Please provide your ideas for projects on the attached form **NO LATER THAN FRIDAY 3 MARCH 2006**. Submittals do not need to be lengthy, preferably only a single page.

The goal is to demonstrate the value of this support to the Committees and the NFPA Board so that we may have an opportunity to repeat this initiative next year.

Let me know if you have questions.

c: TC Chairs, Standards Council, K. Almand, M. Brodoff, G. Keith, L. Nisbet,
R. Vondrasek