

March 6, 2006

**ICC CODE TECHNOLOGY COMMITTEE
DRAFT MEETING MINUTES**

MEETING # 5

**February 2-3, 2006
Crowne Plaza Orlando Airport
5555 Hazeltine National Drive
Orlando, FL 32812
(407) 856-0100**

Thursday, February 2: 8:00 a.m. – 5:00 p.m.
Friday, February 3: 8:00 a.m. - 3:00 p.m.

1.0 Welcome and introductions - Chair Heilstedt

1.1 Call to order

Chair Heilstedt called the meeting to order at approximately 8:05 am on February 2nd.

1.2 Introduction of committee/attendees

Members present: Shahriar Amiri, Carl Baldassarra (Vice Chair), Dave Collins, Paul Heilstedt (Chair), Steve Jones, Marsha Mazz, Ron Nickson, Robert Salvaggio, Paul Tellez

Members absent: Mike Christoffersen, Marty Conant, Brian Meacham, Jeff Tubbs (alternate to Meacham)

Staff liaison: Mike Pfeiffer

Attendees: A list of attendees is provided at the end of these minutes

1.3 Welcoming remarks

Chair Heilstedt welcomed those in attendance.

2.0 Approve agenda

Motion/second/approved to re-order the agenda as follows:

Item 3.0, 6.0, 5.0, 4.0, 7.0, 8.0, 9.0, 10.0, 11.0

3.0 Approve minutes of December 1-2, 2005 meeting

Motion/second/approved as revised:

Item 1.2: Add Mike Christoffersen and David Collins as members present.

Item 5.1: Change November 31st to November 30th.

4.0 Establishment of Study Groups (Section 3.5 of CP #5)

The CTC reviewed the handout that was posted "Agenda Item 4.0 Establishment of Study Groups (Section 3.5 of CP #5)". It was noted that there are basically three ways in which a study group can be created-all subject to approval of the CTC:

- Responding to request from interested party
- Responding to request from CTC
- CTC determines that one is necessary

The purpose of study groups is provide a forum for the open and free exchange of information. It is not necessarily the goal/objective of the CTC to ensure a balanced group. The minority view of the study group can be advance to the CTC- in fact, the CTC is interested in all views. Reports of study groups need to be posted. It was noted that if consensus can not be achieved, then this somewhat defeats the purpose of the study group as the issue would need to be fully vetted to the full CTC.

CTC member Dave Collins was going to bring back a list of study group checkpoints.

5.0 Day Care/Adult Care/Assisted Living

5.1 Working Meeting

CTC member Steve Jones provided an update report on this area of study. The report included:

- Group classification matrix
- Proposed changes to the occupancy descriptions/definitions in Chapter 3 (A, E, I-1, I-2, I-4)
- Proposed changes to the provisions in Sections 407, 903, 907 and 1107

Key issues:

Evacuation capability as defined in NFPA 101- may not be as clear as needed. 101 commentary notes:

- Prompt- 3 minutes or less
- Slow – over 3 minutes, less than 13 minutes
- Impractical – over 13 minutes

The group spent a considerable amount of time reviewing the current provisions/proposed revisions, noting that a better approach may be one of identifying issues/risks and look towards the development of requirements in response to the issues/risks – a “clean sheet of paper” approach. The issues noted were:

Age:

<2-1/2

>2 ½

Adult

Child

Use/Purpose:

Residential

Educational

Assembly

Care

Restrained

Disabled

Duration:

<24

>24

Hours of operation vs time of care for individual- mom/dad work nights –

Overnight stay

Evacuation Capability:

Self – capable/not capable of self preservation

Assisted

Supervised

Physical/mental disability

None

Number:

<5

>5

>16

<100

No limit

Issues:

Fire safety

SFPE handbook as resource

These issues will be reviewed by the Day Care Study group, formed at the Dec/2005 meeting. The study group is comprised of: Steve Jones, CTC (Chair), Shahriar Amiri, CTC, Dave Collins, CTC, Marsha Mazz, CTC, Paul Tellez, CTC.

The CTC determined that there are some aspects of the report that could form the basis for an interim report on this area of study. Revisions to the following descriptions/definitions were considered with a motion/second/approval to create an interim report and subject the report to a public hearing:

303.1 Assembly group A....revision based on the exception to current section 308.5.1

305.2 Day care.....change title to Child Care Facility and revise based on the exception to current Section 308.5.2

Propose coordination terms of “residential care/assisted living facility” and “personal care services” to the IRC based on the reference to the IRC in the descriptions to R-3 and R-4 for adult /day care facilities and assisted living facilities within a single family home

6.0 Climbable Guards

6.1 Status Report on the Climbable Guards Study Group

Tony Leto presented a Powerpoint presentation entitled "Climbable Guards Study Group". This presentation identified the status of the activities since the last CTC meeting:

- 2 conference calls
- Developing a plan to have an independent 3rd party review and possible testing
- Continuing with the development of changes for possible consideration in the 2006/2007 cycle – see working meeting

6.2 Working Meeting

The working meeting centered around the two proposed changes to Section 1013 and R312 of the IBC and IRC, respectively. Issues:

- How do you measure guard height when the guard is adjacent to a seat board?
- The IRC guard height is 36", 42 inches in the IBC. Is there justification for the difference?
- Identification of the preferred term - "walking surface" vs "floor surface"-is needed

The proposals included revisions to:

- Reduce the minimum opening size of 8" to 5" for heights above 36"
- Create consistency in the language between the IBC and IRC. This included a fair amount of discussion on the phrase "passage of a sphere of xx inches or more in diameter"- and whether or not the phrase "or more" was necessary or could be mis-interpreted. The CTC kept the phrase in the proposals.
- Simplify the language dealing with the ornamental patterns, balusters, etc.

Motion/second/approval to direct staff to revise the language for consistency between the codes, subject to review and approval by the CTC prior to posting as an interim report and subject to a public hearing.

7.0 Review of NIST WTC Recommendations (Start no earlier than 1:00 pm, Thursday, Feb 2)

7.1 Working Meeting (including participation from ICC Ad Hoc Committee on Terrorism Resistant Buildings - TRB)

Members of the TRB joined the CTC meeting. The CTC presented their findings published in the report "ICC Code Technology Committee Draft Review of Findings on the NIST World Trade Center Report" dated January 30, 2006. The chairman of the TRB, Bill Connolly, reported on the results and revisions to their report entitled "ICC Ad Hoc Committee on Terrorism Resistant Buildings Committee Draft Review of Findings on the NIST World Trade Center Report" dated January 20, 2006. The following are the key points, ordered based on the NIST recommendations:

#1: Progressive collapse – TRB draft

TRB is developing proposed language to the IBC to address the issue of progressive collapse based on regulations from the United Kingdom. This includes 4 classes of buildings, with tie force requirements based on the class of building. The proposal includes both prescriptive requirements as well as an alternative for load path analysis.

Issues:

- Is tying the structure together advisable or will this lead to "pulling portions down"?
- Height is addressed but not area
- Is there a record of failures?
- The proposal requires review and input from the structural engineering community

Outcome:

CTC: CTC is not prepared to support this proposal at this time. CTC is interested in the response from the structural engineering community prior to moving forward. Hold for further consideration at the next working meeting.

TRB: TRB is planning on splitting this proposal into 3-4 proposals based on its constituent parts. This proposal will be under going further revision.

#2: Wind tunnel testing- CTC draft

CTC notes that ASCE is currently developing a standard and it is believed to be either out for public comment or will be issued for public comment in the near future.

Issues:

- If wind tunnel testing is to be performed, either mandated by ASCE 7 or otherwise chosen to determine wind loads, the testing should be standardized.

Outcome:

CTC to develop proposed change to be included on the interim report and subject the report to a public hearing.

#3 Tall building sway- CTC draft

No action by CTC. The need needs to be addressed by the standards community.

#4 Fire ratings- TRB draft

See #8

#6: Spray applied fire resistive materials- TRB draft

TRB is developing a two part proposal to address:

- Materials: Bond strength as a function of building height
- Testing/Inspection procedures

Issues:

- The current standard is 150 psf bond strength. Bond is defined as both adhesion to steel and cohesion of material to itself
- Proposed increase in bond strength would apply to entire building, based on height
- 2400 psf material costs approximately twice as much as 150 psf material
- Sampling is based on AWCA Technical Manual 12 A
- NASFM reports that random inspections have noted a problem of incomplete coverage

Outcome:

CTC: Include the proposed revisions to the testing/inspection provisions of Chapter 17 in the interim report and subject the report to a public hearing. Bond strength requires further study.

TRB: This proposal will be under going further revision and the bond strength provisions will be a code change for the upcoming cycle.

#7: Fire rating of structural frame-CTC draft

CTC developed proposed language to reinforce what is currently in the IBC.

Issues:

-The proposed definition for “primary structural frame” is not needed as the specific parameters are addressed in the proposed revisions to Section 714

Outcome:

CTC: Include the proposed revisions contained in parts 2 and 3 of the proposal in the interim report and subject the report to a public hearing.

#8 Burnout w/o collapse- TRB draft

TRB proposal is identified in the draft report under “NIST Recs #4 & #8”. This proposal is intended to require both compliance with Table 602 for fire ratings as well as an analysis of fuel load impact on the building. The more restrictive of the two shall apply.

Issues:

- The term “fuel load” requires clarification
- Defer to CTC for definition of “primary structural members” in Rec #7
- The NIST report indicated that a main consideration in the collapse was that the fire proofing was knocked off. If this was a significant contributor to collapse, is a burn-out analysis warranted?
- Scaling effects of fire tests are important when determining fire ratings

Outcome:

CTC feels that this type of analysis should not be mandated for all tall buildings (over 420’). The basis for the proposal seems to be a singular extreme event. Shouldn’t a minor collapse be permitted? CTC is not prepared to support this proposal at this time. Hold for further consideration at the next working meeting.
 TRB: This proposal will be under going further revision and will be a code change for the upcoming cycle.

#12 Performance and reliability of active fire protection- TRB draft

The TRB proposal is intended to achieve an appropriate level of redundancy for active fire protection systems.

Issues:

- Risers will be in the stair enclosures but the riser separations proposed are not coordinated with the separation requirements for stair enclosures
- Too many valves may increase the probability that a valve may become closed
- Is there a need for manual valves in a 420’ tall building
- Proposal lacks a separate hydraulic analysis requirement

Outcome:

CTC: Hold for further study.
 TRB: This proposal will be under going further revision and will be a code change for the upcoming cycle.

#12 Performance and reliability of active fire protection- CTC draft

#13 Fire alarm and communication systems-CTC draft

#14 Control panel information – CTC draft

#15 Off site emergency responder information – CTC draft

CTC: Hold these 4 issues for further study

#17 Tall building egress/evacuation- TRC draft

#18 Exits – remoteness, robustness, signage – TRB draft

The TRB proposal includes an extra stair for the fire department to take control of when staging a fire. This is viewed as current practice but the stair is normally comprised when used by the fire department. Horizontal transfers are considered objectionable due to need for additional evacuation time. This additional stair not only addresses fire but also addresses other issues such as terror threats, power outages and law enforcement concerns.

Issues:

- More detail is needed in 403.18
- Why not just increase the minimum required width?
- Extra stairs have a cost impact on available space
- Is this warranted in sprinklered buildings?
- The normal initial response of the occupants is to use all stairs in an emergency
- Fire department plan may not be coordinated with the evacuation plan established by building owner
- This will impact travel distance/remoteness requirements
- This does not take into account defend in place philosophies
- Requires justification for the 2psi robustness criteria in 403.18
- Requires justification for lower level exit markings

Outcome:

CTC: Hold for further consideration at the next working meeting.
 TRB: This proposal will be under going further revision and will be a code change for the upcoming cycle

#22 Emergency communication systems – CTC draft

CTC report is based on a review of code amendments of approx 12 jurisdictions.

Issues:

-A repeater system is viewed as more reliable/efficient than 2-way telephones.

Outcome:

CTC study group to further explore option 2 in the report. Input from organizations such as NASFM and IAFC should be secured. Hold for further consideration at the next working meeting.

#24 Command and control systems for large scale emergencies – TRB draft

TRB has not had time to further study this issue.

Outcome:

CTC anticipates further consideration at the next working meeting.

#26 Egress and fire protection in existing buildings- CTC draft

CTC has not established a position on this item. It was noted that fire protection in existing buildings often results in a political solution when considering retrospective requirements such as fire sprinklers in existing high rises. It was noted that the IEBC would not be the code governing such requirements – they are regulated in the IFC.

Outcome:

TRB: The TRB may be looking into this issue further.

CTC: Hold for further study, pending TRB development.

8.0 Old business

It was noted that the BFP study group, established at the December 1-2, 2005 CTC meeting would be holding a teleconference call on Friday, February 17th. This will be followed by a meeting of the study group on Wednesday, March 8th at the same hotel as the CTC meeting which is slated for March 9th.

9.0 New business

None

10.0 Future Meetings/Update CTC Work Plan

10.1 CTC Meeting #6: March 9 – 10, 2006, Chicago, IL

CTC Meeting #7: July 27 – 28, 2006 Washington D.C.

Conflicts were noted with meeting #7 dates. The date was revised to September 7-8, 2006, Washington DC.

CTC Meeting #8: October/2006: Dates/Location TBD

October 19-20, 2006. Location to be determined by staff.

CTC Meeting #9: December/2006: Dates/Location TBD

December 13-14, 2006. Location to be determined by staff.

10.2 Meeting #6 agenda

Public hearings: Climbable Guards, Day Care, NIST WTC

Working meeting: Balanced Fire Protection, Climbable Guards, Day Care, NIST WTC

Other: Establishment of study groups

11.0 Adjourn

Chair Heilstedt adjourned the meeting at approximately 12:10 on February 3rd.

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List of Attendees

A.J. Cheponis, SMA
Allison Crowley, NASFM
Anthony Affelbeck, IAFC
Augie Sisco, NAATMM
Bill McHugh, Firestop Contractors International Assoc.
Dan Smits, Calumet City Fire Dept. (TRB)
Dave Fable, GSA
David Cooper, Stairway Manufacturers Assoc.
David Dratnol, Isolatek
Derek Horn, City of Phoenix (TRB)
Diana Hanson, NADRA
Jake Pauls, Consulting Services in Building Use and Safety
Jeff Inks, NAHB
Jerry Heppes, Door and Hardware Institute
Jim Messersmith, PCA
Jimbo Schifiliti, Fire Safety Consultants, Inc. (TRB)
John Battles, ICC (TRB)
Kevin Kelly, NFSA
Lanny McMahill, City of Phoenix (TRB)
Larry Perry, BOMA
Michael Gardner, Gypsum Association
Michael Pokorny, Montgomery County, MD
Rich Bukowski, NIST
Rich Walke, UL
Richard Licht, RRL Consulting Solutions
Richard Merck, Montgomery County, MD
Robert Polk, NASFM
Richard Schulte, Schulte & Assoc.
Rick Thornberry, The Code Consortium, Inc.
Robert Wills, AISI
Sam Francis, AF&PA
Tim Moss, NOMMA
Tony Leto, Wagner Companies
Vickie Lovell, Intercode, Inc.