SOUTH CAROLINA BUILDING CODES COUNCIL
110 CENTERVIEW DRIVE, ROOM 105
COLUMBIA, SOUTH CAROLINA
February 28, 2007
10:30 AM – 5:15 PM

MEMBERS PRESENT	MEMBERS ABSENT	STAFF PRESENT
Frank Hodge, Chair	William McDowell	Gary Wiggins
Gregory P. Parsons	Lloyd Schumann	Jennie Meade
Chris Cullum		Rick Wilson
Ernest F. Dorsey		Roz Bailey-Glover
Wendell Davis		
Richard Sendler		
Thomas Brock		
Van M. McAlister		
James A. Ham, Jr.		
Gable D. Stubbs		
Frank Hill		

OTHERS PRESENT

Jim Hauser	Tom Malloch	John Sasson
Clay Pendarvis	James Whittaker	Tony Longino
Douglas M. Smits	Roamy Stevenson	Brian Pietras
Mike Smith	John England	John Pruett
Bruce Boulineau	Carmen Floyd	John W. Howard
Steven Jenkins	Michael Lowman	Sigi Valentin
Allen Hutto	Paul LaVene	Lisa Jones
David W. Brown Sr.	Mike Hallasy	Michael Robinson
John Reich	John Plisich	Joe Russell
Jesse S. Burke	Jim Bowie	Ward Braswell
John Knight	Perry Moses	Michael Padgett
Jerry Glover	Robert Yarnall	Gary Ehrlich
Matt Sigler	Tim Rickborn	Jay Crandell
Gene Nelson	Tom Scholtens	Julian Barton
Edward Nelson	Michael Laderour	Earl McLeod
Nanette Lockwood	Jim Beckham	Andy Wessinger
Ron Galloway	Mike Kelly	Cleston Bridges
Craig DeWitt	Amanda K. Loach	Ronald L. Brewer
Vaughn Wicker	Channon Chambers	Herb Yingling
Phil Rhoads	Georgia Toney	Melissa Hopkins
Ruthie Helms	Angela McJunkin	Roland Temple
Donny Phipps	Darbis Briggman	Robert Bolus
Dennis Knight	Wanda Edwards	Sonny DuBose
Ann Robinson	Terri Bryant	John Hogan
Kevin Bartley	James Atwood	Michael Squirewell
Mark Dillard	Andy Whitfield	
Ira Coltharp	Scott H. Richardson	

NOTE: The Notice and Agenda for the February 28, 2007 meeting of the South Carolina Building Codes Council were posted in accordance with Section 30-4-80 of the 1976 amended Code, relating to the Freedom of Information Act.

Call to Order
The February 28, 2007 meeting of the S.C. Building Codes Council was called to order at 10:30 AM by Chairman Hodge.

1. **Approval of Agenda**
   Chairman Hodge asked for approval of the agenda. Mr. Frank Hill moved to acccept the agenda as submitted, Mr. Richard Sendler seconded and the vote was unanimous.

2. **Election of Officers**
   Chairman Hodge turned the meeting over to Mr. Gary Wiggins for the election of officers. Mr. Wiggins called for nominations for Chairman. Mr. Ernie Dorsey nominated Mr. Frank Hodge to serve another term. Mr. Parsons seconded the motion. There were no other nominations. All members voted in favor.

   Mr. Wiggins called for nominations for Vice Chairman. Chairman Hodge nominated Mr. Greg Parsons. Mr. Dorsey seconded the motion. There were no other nominations. All members voted in favor.

3. **Approval / Disapproval of Absent Members**
   Chairman Hodge asked staff for an accounting of absent members. Staff reported that Mr. Lloyd Schumann was sick and Mr. William McDowell had personal business. Mr. Hill motioned that the absent members be excused. The motion was seconded by Mr. James Ham. The vote was unanimous.

4. **Approval of Minutes -** November 15, 2006 Ad Hoc Meeting
   Chairman Hodge asked for any additions or corrections to the November 15, 2006 Ad Hoc meeting minutes as presented. There being none, Mr. Thomas Brock motioned to approve the minutes as presented. Mr. Dorsey seconded. The vote was unanimous.

5. **Approval of Minutes -** November 20, 2006 Conference Call Meeting
   Chairman Hodge asked for any additions or corrections to the November 20, 2006 conference call minutes as presented. Mr. Sendler had an objection to how the adoption of the codes and the modifications were done and expressed that the length of time it took to implement the modifications was too long. Mr. Sendler explained that people out in the field, responsible for implementing the code changes are confused about the timing of the adoptions and have problems with the implementation dates. Mr. Wiggins reminded the members that by statute, the process takes a minimum of eighteen months without modifications, and as much as three years with modifications.

   Mr. Rick Wilson agreed that the adoption process was slow and redundant. Chairman Hodge recognized Mr. Julian Barton of the Home Builders Association of South Carolina (HBASC), who stated that a proposed statutory amendment had been drafted to address the issue. A bill is expected to be introduced today, according to Mr. Barton. Chairman Hodge asked if there were any other questions. There being none, Mr. Parsons motioned to accept the November 20, 2006 meeting minutes as written. Mr. Dorsey seconded the motion. The motion was carried with nine members voting in favor and Mr. Sendler voting

in opposition.

6. Chairman Hodge recognized Mr. Scott Richardson, Director of the South Carolina Department of Insurance. Mr. Richardson commented on proposed legislative amendments that will focus on property insurance availability along the coast. He emphasized that it was critical to improve the construction of buildings, and added that it would be a mistake to decrease the building code requirements. He encouraged the Building Codes Council to adopt stronger, more disaster-resistant building codes so that the citizens of the state will see reduced premiums. Mr. Dorsey thanked Mr. Richardson for coming to the meeting and giving credit to South Carolina for having good Building Codes.

7. **2006 International Code Modifications (Exhibit 1)**
   Chairman Hodge stated that he would read the recommendation of the Code Study Committee for each proposed modification and give all individuals in attendance the opportunity to offer a challenge. He then stated that he would call for a single motion to approve all proposed modifications that were not challenged. Chairman Hodge went on to say the remaining proposed modifications would be addressed individually. Chairman Hodge then read the list of proposed modifications, and the recommendations of the Code Study Committee. The following proposed modifications and recommendations by the Code Study Committee were not challenged.
   IBC 1014.2 Egress through intervening spaces – recommendation to approve
   IBC 1809.2.3.2.2 Design in Seismic D, E or F – recommendation to approve
   IFGC 505.1.1 Commercial cooking appliances – recommendation to approve
   IRC R305.1(4) Minimum height – recommendation to approve
   IRC R311.4.3 Landings at doors – recommendation to approve
   IRC R403.1.6 Foundation anchorage – recommendation to approve
   IRC R408.4 Access – recommendation to approve
   IRC R602.10.5 Wood structural panel sheathing – recommendation to approve
   IRC R613.2 Window sill height – recommendation to approve
   IRC M1411.5 Insulation of refrigerant piping – recommendation to approve
   IRC M1502.2 Duct termination – recommendation to approve
   IRC M1502.6 Duct length – recommendation to approve
   IRC G2439.5 Clothes dryer ducts – recommendation to deny
   IRC P2713.3 Bathtub / whirlpool bathtub valves – recommendation to deny
   IRC E3802.12 Arc-fault protection – recommendation to approve

   Mr. Thomas Brock made a motion to accept the recommendations of the Code Study Committee for all proposed modifications that were unchallenged. Mr. Frank Hill seconded the motion and the vote was unanimous.

   The following proposed modifications were withdrawn by proponent
   IRC R301.2.1.2 Protection of openings
   IRC R310.1 Emergency escape and rescue
   IRC R314.5.3 Attics
   IRC Table R703.7(1) Stone/Masonry Veneer
   IRC P2903.5 Water hammer

   Chairman Hodge asked Mr. Wiggins to clarify the adoption process for appendixes. Mr. Wiggins stated that as of the 2006 code cycle, local jurisdictions no longer adopted

appendixes as needed. He said that responsibility was granted to the Building Codes Council. He went on to say no appendixes were proposed for adoption, therefore, none would be considered.

Chairman Hodge stated that he would open each item for discussion and allow all proponents and opponents the opportunity to be heard. He also asked that the individuals that desired to speak after the proponent, provide new or additional information and not rise to merely say “me too.”

After a ten minute break, Chairman Hodge recognized Ms. Lisa S. Jones, from the SC Department of Natural Resources. Ms. Jones read her letter to Chairman Hodge, dated February 27, 2007, to be entered into the record (attached to and made part of these minutes).

Proposed Commercial Code Modifications

Chairman Hodge recognized Mr. Herb Yingling, Chair of the Commercial Code Study Committee and asked for a report of the committee’s recommendations. Mr. Yingling submitted a committee summary.

IBC 1704.1 General - Chairman Hodge opened the item and recognized the proponent, Mr. Yingling. Mr. Yingling submitted an exception to the initial modification stating that code 1704.1 was restrictive and requested to add an exception (4) to page 1. Mr. Parsons expressed concern about how the criteria for the modification came about and noted that the study committee initially denied the modification. After some discussion, Mr. Parsons motioned that the Council accept the study committee’s recommendation to deny the modification. The motion was seconded by Mr. Dorsey and all members voted in favor.

IFC 906.1 Fire equipment - Chairman Hodge turned the chair over to Vice Chairman Parsons and expressed his support for the modification as the Building Official for Hilton Head. Vice Chairman Parsons recognized Mr. John Reich, Deputy Director of Fire and Life Safety, who spoke in support of the modification on behalf of the National Association of State Fire Marshals. Mr. Chris Cullum motioned to accept the modification as written. Mr. Dorsey seconded the motion and all members voted in favor. Vice Chairman Parsons turned the chair back over to Chairman Hodge.

Proposed Residential Code Modifications

Chairman Hodge recognized Ms. Georgia Toney, Chair of the Residential Code Study Committee and asked for a report of the committee’s recommendations. Ms. Toney submitted a committee summary.

IRC 301.1.1 Alternative provisions - Chairman Hodge recognized Ms. Toney who spoke in favor of the proposed modification. Mr. Gary Ehrlich, National Association of Home Builders also spoke in favor of the modification. Mr. Brian Pietras challenged the modification on behalf of the Structural Engineers Association of SC (SEASC). He stated that the modification was redundant, adds confusion and places unnecessary liability on the engineer. Ms. Wanda Edwards, Institute for Home Safety also objected stating that the use of sealed plans over and over again would be in violation of the code. Also opposed to the modification were Jim Hauser, Charleston Building Association and Cleston Bridges,

Deputy Building Official for Sumter County. Mr. Parsons motioned to deny the modification. Mr. Gable Stubbs seconded the motion. All were in favor and the motion passed.

IRC 301.2.1.1 Design criteria - Chairman Hodge recognized Mr. Ehrlich who spoke in favor of the proposed modification. Ms. Toney representing the Charleston Home Builders Association agreed with Mr. Ehrlich. Chairman Hodge recognized Mr. Pietras, who objected to the modification. Ms. Edwards expressed concern about the negative effect on insurance rates and Mr. Jim Hauser, was opposed. There was also concern about the proponent for the modification not considering the damage of trees falling on homes during high winds. Mr. Richard Sendler made a motion to approve the proposed modification. Mr. James Hamm seconded the motion.

There was further discussion from the Council members. Mr. Dorsey stated that he was concerned about life safety issues as well as insurance increases. He stated that FEMA was monitoring the issue and asked the Council not to approve the modification. Mr. Wendell Davis reminded the Council to look at safety first and not money. Chairman Hodge asked for a vote. Three members voted in favor of the motion and seven members voted in opposition. The motion was denied.

Chairman Hodge then recognized several members of the audience who questioned the order of speakers. Chairman Hodge stopped the proceedings and clarified that he would hear from the opponents first, the proponents second, opponent rebuttals third and proponents rebuttals fourth. After a short discussion, concerning which viewpoint would be heard first, Mr. Parsons made a motion to allow the proponents to speak first. Mr. Hill seconded the motion and the vote was unanimous.

IRC 301.2.1.1 Design criteria - Chairman Hodge recognized Ms. Toney who stated that adding the text “prescriptive designs and details approved by a structural engineer licensed in the state” is a method accepted and used by other states. Mr. Ehrlich agreed. In opposition were Mr. Pietras, Mr. Jim Hauser, Charleston County and Mr. Bridges. Chairman Hodge asked for additional / new information from the audience and there was none. Mr. Stubbs made a motion to deny the modification. Mr. Davis seconded the motion. Nine members voted in favor and one voted in opposition.

IRC 301.2.2 Seismic provisions - Chairman Hodge recognized Mr. Michael Lowman, Home Builders Association of SC, who emphasized the costly effect the existing code language would have on homeowners, possibly adding two to four thousand dollars in material cost increases to the average home. Mr. Doug Smitts, of the Codes Recourses Committee circulated a letter from FEMA, addressed to Chairman Hodge, dated February 27, 2007. The letter stated that “FEMA believes any amendments to the 2006 International Code that would diminish seismic, wind or flood protection standards could have significant implications for programs of interest to FEMA”. The letter is included and made part of these minutes. Chairman Hodge recognized Mr. John Plisich, from FEMA Region Four in Atlanta who presented opposition to the modification on behalf of FEMA. Also in opposition of the modification was Mr. Pietras, Mr. Bridges and Ms. Amanda Loach, SC Emergency Management Department. Chairman Hodge recognized a rebuttal by Ms. Toney representing the Charleston Home Builders Association. Ms. Toney stated that the codes were over designed for what is actually needed. She went on to say the mere threat of disaster is not enough to ignore the proposed modification. Mr. Perry Moses of the Home Builders Association in Sumter supported the objection stating that prospective

home buyers are not going to be able to buy with all the extra requirements. Chairman Hodge also recognized support from Mr. Ehrlich and Mr. Earl McLeod. Mr. Dorsey made a motion to deny the modification. Mr. Stubbs seconded the motion. The motion passed with a vote of six in favor and four in opposition.

IRC 301.2.2 Seismic provisions - Chairman Hodge recognized Ms. Toney who stated residential homes should not be subject to the commercial building code. Mr. Ehrlich agreed stating; the Building Codes Council seismic map is the only approved map for SC and does not contain an “E” zone. Chairman Hodge recognized Mr. Parsons who stated, if the modification is denied, the Council will have to review and adjust the map for the 2006 Code. Mr. Wiggins stated that the Council determines where the boundaries are drawn based on geographical elements. Chairman Hodge recognized opposition from Mr. Smitts, Mr. Plisich, Ms. Edwards, Mr. Pietras, and Mr. Hauser. Mr. Sendler made a motion to approve the modification. Mr. Ham seconded the motion. The motion failed by a vote of four in favor and six opposed. Mr. Stubbs made a motion to deny the modification. Mr. Dorsey seconded the motion. The motion passed by a vote of six in favor and four in opposition.

IRC Table R302.1 Exterior Wall Location - Chairman Hodge recognized Mr. Matt Sigler, Home Builder and Mr. Julian Barton, Home Builders Association of South Carolina who submitted a modification to the original proposed modification. Chairman Hodge read the modification to the audience. Chairman Hodge recognized opposition from the audience. Mr. Bridges stated that the modification was a zoning issue and should be denied. Mr. Hauser concurred along with Mr. Reich. Mr. McLeod and Ms. Toney offered a rebuttal and spoke in favor of the modification. Mr. Stubbs made a motion to deny the modification. Mr. Brock seconded the motion. The motion passed by a vote of nine in favor and one in opposition.

IRC R308. 4(5) Hazardous Locations - Chairman Hodge recognized Mr. Sigler and Ms. Toney who spoke in favor of the modification. Chairman Hodge recognized opposition from Ms. Nanette Lockwood of Lushia and Mr. Hauser. Mr. Parsons made a motion to approve the modification. Mr. Gable Stubbs seconded the motion. The vote was unanimous.

IRC R308. 4 (Exception 4) Hazardous Locations - Chairman Hodge recognized Mr. Sigler who spoke in favor of the modification. He then recognized Ms. Lockwood and Mr. Bridges who spoke in opposition. There were no rebuttals. Mr. Dorsey made a motion to deny the modification. Mr. Brock seconded the motion. A lengthy discussion followed with additional comments from Mr. Sigler opposing the motion and Mr. Boulineau and Mr. Bridges favoring the motion. Mr. Gable Stubbs made a motion to affirm the denial of the modification. Mr. Frank Hill seconded the motion. The motion passed with a vote of six in favor and four in opposition

IRC R309.2 Separation required – Chairman Hodge recognized Mr. Sigler and Ms. Toney who spoke in favor of the modification. Mr. Sigler provided the Council with an additional handout with further modifications. Chairman Hodge recognized Mr. Bruce Boulineau, Mr. Robbie Stevenson, SC Fire Chiefs Association and Mr. Bridges who spoke in opposition. After some discussion, Mr. Parsons made a motion to deny the modification. Mr. Cullum seconded the motion and the modification was denied.

IRC R311.6.1 Maximum slope – Chairman Hodge recognized Mr. Sigler who spoke in

favor of the modification. Chairman Hodge recognized opposition from Mr. Hauser. Following some discussion, Mr. Hill made a motion to deny the modification. Mr. Parsons seconded the motion and the vote was seven in favor and three opposed.

IRC R318 Moisture Vapor Retarders – Chairman Hodge recognized Mr. Sigler and Mr. McLeod who spoke in favor of the modification. Chairman Hodge recognized opposition from Mr. Hauser. Mr. Hill made a motion to approve the modification. Mr. Ham seconded the motion and the modification was approved.

IRC R319.1.1 Field treatment – Chairman Hodge recognized Mr. Michael Squirewell who spoke in favor of the modification. Chairman Hodge then recognized opposition from Mr. Hauser and Mr. Boulineau. Mr. Parsons made a motion to deny the modification. Mr. Dorsey seconded the motion. The vote was four in favor of the motion and six opposed. Mr. Cullum made a motion to approve the modification. Mr. Sendler seconded the motion. The vote was six in favor of the motion and four opposed.

IRC R319.3 Fasteners – Chairman Hodge recognized Mr. Squirewell who spoke in favor of the modification. Chairman Hodge then recognized opposition from Mr. Jim Hauser. Mr. Hill made a motion to approve the modification. Mr. Sendler seconded the motion. During discussion, Mr. Parsons made a motion to amend the motion by keeping the last sentence in place and adding the words “the minimum requirements of” between “with” and “ASTM.” The last sentence would then read, “The coating weights for zinc coated fasteners shall be in accordance with the minimum requirements of ASTM A153.” The motion was seconded by Mr. Sendler. Mr. Hill agreed to accept the additional language as part of the main motion. Chairman Hodge called for a vote. The vote was unanimous and the modification was approved as amended.

IRC R401.3 Drainage – Chairman Hodge recognized Mr. Ehrlich who spoke in favor of the modification in addition to Mr. Sigler. Chairman Hodge then recognized opposition from Mr. Boulineau, Mr. Hauser and Mr. Craig DeWitt from Clemson. Mr. Sendler made a motion to approve the modification. Mr. Van McAlister seconded the motion. Chairman Hodge called for a vote resulting in two votes in favor and seven in opposition. Mr. Parsons made a motion to deny the modification. The motion was seconded by Mr. Frank Hill and the passed with a vote of seven in favor and two opposed.

IRC R403.1.4.2 Seismic conditions – Chairman Hodge recognized Mr. McLeod who spoke in favor of the modification. Chairman Hodge asked if there was any opposition from the audience. There was none. Mr. Parsons made a motion to approve the modification. Mr. Hill seconded the motion and the vote was unanimous.

IRC R404.1 Concrete and masonry – Chairman Hodge recognized Mr. Ehrlich and Ms. Toney who spoke in favor of the modification. Chairman Hodge recognized Mr. Hauser and Mr. Bridges who spoke in opposition. Mr. Parsons made a motion to deny the modification. Mr. Davis seconded the motion. Chairman Hodge called for a vote resulting in two in favor and eight opposed. Mr. Sendler made a motion to approve the modification. The motion was seconded by Mr. Ham and passed with a unanimous vote.

IRC R408.2 Openings for under-floor ventilation – Chairman Hodge recognized Mr. Craig Dewitt who spoke in support of the modification. Chairman Hodge asked if there was any opposition. There was none. Mr. Parsons made a motion to approve the proposal as

modified by striking item number one. The motion was seconded by Mr. Sendler and the modification was approved as amended.

IRC Table R502.5(1) Girder & Header Spans – Chairman Hodge recognized Mr. Julian Barton who spoke in support of the modification. Chairman Hodge asked for opposition from the audience and heard briefly from Mr. Hauser. Mr. Greg Parsons made a motion to approve the modification. Mr. Sendler seconded the motion and the vote was unanimous.

IRC Table R703.4 Weather-Resistant Siding – Chairman Hodge recognized Mr. Sigler and Ms. Lockwood who spoke in support of the modification. Chairman Hodge recognized Mr. Kevin Bartley, Mr. Hauser and Mr. Doug Smitts who spoke in opposition. Mr. Stubbs made a motion to deny the modification. Mr. Dorsey seconded the motion and the modification was denied.

IRC R703.8 Flashing – Chairman Hodge recognized Mr. Sigler who spoke in support of the modification. Chairman Hodge asked if there was any opposition and heard from Mr. Roland Temple of PGT, Mr. DeWitt, Mr. Hauser and Ms. Lockwood. Mr. Parsons made a motion to deny the modification. Mr. Hill seconded the motion and the modification was denied.

IRC R905.2.7.1 Ice barrier – Chairman Hodge recognized Mr. McLeod who spoke in support of the modification. Chairman Hodge asked if there was any opposition and heard from Mr. DeWitt. Mr. Thomas Brock made a motion to deny the modification. Mr. Cullum seconded the motion. The vote was nine in favor and one opposed.

IRC R907.3 Re-covering versus replacement – Chairman Hodge recognized Mr. Ehrlich who spoke in support of the modification. Chairman Hodge asked if there was any opposition and heard from Ms. Lockwood and Mr. Hauser. Mr. Dorsey made a motion to deny the modification. Mr. Davis seconded the motion and the modification was denied.

IRC E3801.11 HVAC outlet– Chairman Hodge recognized Mr. Sigler who spoke in support of the modification. Chairman Hodge recognized Mr. Hauser who spoke in opposition. Mr. Parsons made a motion to approve the modification. Mr. Dorsey seconded the motion and the modification was accepted.

8. **Proposed Amendments to Modular Building Construction Act (Exhibit 2)**
Chairman Hodge recognized Mr. Wiggins. Mr. Wiggins stated that the amendments were being proposed by staff because of a developing problem. He went on to explain that the law requires modular buildings to be sold to consumers by either a licensed manufacturer's representative, a SC licensed general contractor or a SC licensed homebuilder. Mr. Wiggins said that certain manufactured housing dealerships discovered that they could sell modular buildings if they were owned, at least in part, by a general contractor or homebuilder. He went on to say that some manufactured housing dealers got the required license in their own names and offered modular buildings for sale. Mr. Wiggins then said that other dealers, however, obtained the right to sell modular buildings by offering general contractors or home builders that join their businesses as one percent partners. Mr. Wiggins said that the one percent partnership practice allows individuals, whose licenses were revoked by the Manufactured Housing Board or who could not qualify for a license for a variety of reasons, including being convicted felons, to operate freely as modular building

dealers.

Mr. Wiggins said, the developing problem, for the most part, involves the “one percent dealers.” Mr. Wiggins explained that the dealers draw unsuspecting buyers to their lots, use unlicensed individuals that are not associated with the licensed contractor/builder to show onsite models, and then take orders for units. He went on to say that various fraudulent activities occur, including insufficient or completely erroneous down payments; erroneous salary and financial documents prepared by the dealer for loan qualification and outright theft of down payments. Mr. Wiggins stated that the contractors/builders also get into trouble when complaints are lodged against their licenses because of illegal activities of nonlicensed individuals. Mr. Wiggins said the nature of the proposed statutory amendment would be to require licenses for retail dealers and sales persons.

Chairman Hodge turned the floor over to Mr. Mark Dillard, Executive Director of the SC Manufactured Housing Institute. Mr. Dillard agreed that unscrupulous practices in the modular industry were long-standing issues, but felt that the endorsement of the proposed amendments was premature. He went on to say that he believed the existing modular home (factory) sales representative’s license should remain as the only license required for sales persons. Mr. Dillard said homes sold under a commercial or residential builder’s license should be the only other licenses required. Chairman Hodge agreed that the Council needed more information on the subject and tabled the topic for the May 23rd, 2007 meeting. Chairman Hodge asked Mr. Wiggins to provide a copy of the fourteen (14) point document of concerns about the proposal, previously provided by Mr. Dillard, to the Council for review.

Chairman Hodge stated that the Council needed more time to review the subject. He asked the Council members to review the proposed amendments and to be prepared to discuss the topic at the May 23rd, 2007 meeting.

9. **Flood Plain Option (Exhibit 3)**
   Chairman Hodge requested to hold the issue for the May 23rd, 2007 meeting.

10. **Public Comments**
    There were none.

11. **Date of Next Meeting**
    May 23, 2007

12. **Adjournment**
    5:15 p.m.

South Carolina Building Codes Council

PO Box 11329
Columbia, SC 29211-1329

Request for Statewide Code Modification

Jurisdiction or Organization: Home Builders Association of South Carolina

Representative: Julian Barton **Title:** Director of Government Affairs

Address: Home Builders Association of South Carolina in Columbia

Phone: (803) 771-7408 **E-mail:** jbarton@hbaofsc.com

Signature: _____ **Date:** _____

Code: International Residential Code **Edition:** 2006 **Section:** R302 Exterior Wall Location

Check One: [ ] Delete and substitute the following [ ] Delete without substitution [x] Add the following [ ] Modify the following

Type or print proposed modification. Use additional pages if necessary. Underline New language. ~~Line Through Deleted Language.~~

Add the following new section: "**R302.2 Zero Lot Line Separation. Where perpetual, platted, and recorded easements create a non-buildable minimum fire separation distance of at least 10 feet between structures on adjacent properties, the one-hour fire-resistive ratings of Table R302.1 shall not apply.**

Reason: [ ] Unusually Restrictive [ ] Impractical [ ] Threat to Human Injury or Life Safety

Type or print the reason for the proposed modification. Use additional pages if necessary.

If the fire separation distance between two structures is maintained the lot line should be of no consequence. From a performance standpoint, it is the aspect of life safety from the spread of fire between buildings that is the concern of this provision, and not the location of the buildings in relation to the lot line. Adopting this language will provide builders and homeowners alike with a more practical utilization of open space.

This document is made part of the February 28, 2007 Building Codes Council meeting minutes.

South Carolina Building Codes Council

PO Box 11329
Columbia, SC 29211-1329

Request for Statewide Code Modification

Jurisdiction or Organization: Home Builders Association of South Carolina

Representative: Julian Barton **Title:** Director of Government Affairs

Address: Home Builders Association of South Carolina in Columbia

Phone: (803) 771-7408 **E-mail:** jbarton@hbaofsc.com

Signature: _____ **Date:** February 19, 2007

Code: International Residential Code **Edition:** 2006 **Section:** R309.2 Separation required

Check One: [ ] Delete and substitute the following [ ] Delete without substitution [ ] Add the following [x] Modify the following

Type or print proposed modification. Use additional pages if necessary. Underline New language. ~~Line Through Deleted Language.~~

Revise to read as follows: "The garage shall be separated from the residence and its attic area by not less than ½-inch (12.7 mm) gypsum board applied to the garage side. Garages beneath habitable rooms shall be separated from all habitable rooms above by not less than 5/8-inch (15.9 mm) Type X gypsum board or equivalent. ~~**Where the separation is a floor-ceiling assembly, the structure supporting the separation shall also be protected by not less than ½-inch (12.7 mm) gypsum board or equivalent.**~~"

Reason: [ ] Unusually Restrictive [ ] Impractical [ ] Threat to Human Injury or Life Safety

Type or print the reason for the proposed modification. Use additional pages if necessary.

The SC Builders Association would like to withdraw proposal "R309.2 Separation required" that was approved by the SC Study Committee on January 16, 2007, and submit this proposal in its place. This proposal was drafted in a joint effort between the SC Builders Association and SC Building Official Association.

This document is made part of the
February 28, 2007 Building Codes Council
minutes per IRC Section R309.2 Separation required

South Carolina Department of
Natural Resources

John E. Frampton
Director

Alfred H. Vang
Deputy Director for
Land, Water, and Conservation Division

February 27, 2007

Mr. Frank Hodge
Chairman, South Carolina Building Code Council
1 Town Center Court
Hilton Head Island, South Carolina 29928

Dear Mr. Hodge:

Attached is a 2002 letter to you from the Insurance Services office (ISO) that discusses the relationship between the Federal Emergency Management Agency's Community Rating System Classification and the Building Code Effectiveness Grading Schedule (BCEGS). We understand that recent proposals under consideration by the Building Codes Council again bring this relationship to the fore front.

Before the board recommends modifications to the code we feel that it is important for you and other members of the board to understand the impact modifications will have. We have attached this letter as a reminder of the key issue and to avoid duplication, preferring to focus on the impact, if the board approves such modifications.

Fourteen (14) of the thirty-three (33) CRS Communities would be negatively affected by code modifications. These Fourteen communities have 92,138 flood insurance policies in effect or 49% of the State's NFIP policy base. This change would cause NFIP premiums to increase anywhere from $73.00 to $222.00 per policy (annually) with a net annual increase of $4,861,558.

As the State coordinating agency for the Flood Mitigation Programs, which deals with FEMA on this important program, we recommend that no changes be made that would negatively impact CRS communities and make flood insurance less affordable to those who need it.

Sincerely,

Lisa S. Jones, CFM
State Coordinator
Flood Mitigation Programs

This document is made part of the February 28, 2007 Building Codes Council meeting minutes.

South Carolina Building Codes Council

PO Box 11329
Columbia, SC 29211-1329

Request for Statewide Code Modification

Jurisdiction or Organization: Greenville County and with the endorsement of BOASC

Representative: Herb Yingling **Title:** Deputy Building Official/Principal Plan Examiner

Address: 330 Camperdown Ct. Easley, SC 29642

Phone: 864-306-0635 E-mail: hyingling@greenvillecounty.org

Signature: [signature] Date: 11- 28- 2006

Code: International Building Code (IBC) **Edition:** **Section:** 1704.1

Check One: [ ] Delete and substitute the following [ ] Delete without substitution [X] Add the following [ ] Modify the following.

Type or print proposed modification. Use additional pages if necessary. Underline New language. ~~Line Through Deleted~~

(add exception 4 to the 3 existing exceptions)

4. Special inspections are not required for buildings that meet all the following criteria:
   a. 1 story
   b. An eave height of 20' or less
   c. 12,000 square feet or less per floor
   d. Building is not classified as a category III or IV in IBC Table 1604.5
   e. Building is a seismic design category A, B, or C.
   f. Building design requires a 90mph 3 second gust or less per IBC Figure 1609.

Reason: [X]Unusually Restrictive [ ] Impractical [ ] Threat to Human Injury or Life Safety

The IBC code section requiring Special Inspections (IBC 1704.1) actually as written varies from state to state when special are required as it is based on when a Design Professionals involvement is required, which varies from state to state. SC is on the more restrictive side of when a design professional is required, which is not being challenged.

Buildings that meet the 6 criteria above have relatively small occupant loads, relatively small in area and height, are not essential facilities, are not hazardous facilities, are located in areas that have minimal wind loads, and also located in areas that have minimal seismic activity.

This change will not exempt the inspectors from the local jurisdictions from requiring soil reports, specific engineering reports, etc. when the inspection exceeds the department's capabilities.

The change will exempt the owner from hiring a Design Professional in Responsible Charge to manage the special inspections if he/she so chooses for these smaller projects located in areas with minimal seismic and wind requirements.

This document is made part of the February 28, 2007 Building Codes Council meeting minutes.

SECTION 1703
APPROVALS

1703.1 Approved agency. An approved agency shall provide all information as necessary for the building official to determine that the agency meets the applicable requirements.

1703.1.1 Independent. An approved agency shall be objective and competent. The agency shall also disclose possible conflicts of interest so that objectivity can be confirmed.

1703.1.2 Equipment. An approved agency shall have adequate equipment to perform required tests. The equipment shall be periodically calibrated.

1703.1.3 Personnel. An approved agency shall employ experienced personnel educated in conducting, supervising and evaluating tests and/or inspections.

1703.2 Written approval. Any material, appliance, equipment, system or method of construction meeting the requirements of this code shall be approved in writing after satisfactory completion of the required tests and submission of required test reports.

1703.3 Approved record. For any material, appliance, equipment, system or method of construction that has been approved, a record of such approval, including the conditions and limitations of the approval, shall be kept on file in the building official's office and shall be open to public inspection at appropriate times.

1703.4 Performance. Specific information consisting of test reports conducted by an approved testing agency in accordance with standards referenced in Chapter 35, or other such information as necessary, shall be provided for the building official to determine that the material meets the applicable code requirements.

1703.4.1 Research and investigation. Sufficient technical data shall be submitted to the building official to substantiate the proposed use of any material or assembly. If it is determined that the evidence submitted is satisfactory proof of performance for the use intended, the building official shall approve the use of the material or assembly subject to the requirements of this code. The costs, reports and investigations required under these provisions shall be paid by the permit applicant.

1703.4.2 Research reports. Supporting data, where necessary to assist in the approval of materials or assemblies not specifically provided for in this code, shall consist of valid research reports from approved sources.

1703.5 Labeling. Where materials or assemblies are required by this code to be labeled, such materials and assemblies shall be labeled by an approved agency in accordance with Section 1703. Products and materials required to be labeled shall be labeled in accordance with the procedures set forth in Sections 1703.5.1 through 1703.5.3.

1703.5.1 Testing. An approved agency shall test a representative sample of the product or material being labeled to the relevant standard or standards. The approved agency shall maintain a record of the tests performed. The record shall provide sufficient detail to verify compliance with the test standard.

1703.5.2 Inspection and identification. The approved agency shall periodically perform an inspection, which shall be in-plant if necessary, of the product or material that is to be labeled. The inspection shall verify that the labeled product or material is representative of the product or material tested.

1703.5.3 Label information. The label shall contain the manufacturer's or distributor's identification, model number, serial number or definitive information describing the product or material's performance characteristics and approved agency's identification.

1703.6 Heretofore approved materials. The use of any material already fabricated or of any construction already erected, which conformed to requirements or approvals heretofore in effect, shall be permitted to continue, if not detrimental to life, health or safety to the public.

1703.7 Evaluation and follow-up inspection services. Where structural components or other items regulated by this code are not visible for inspection after completion of a prefabricated assembly, the permit applicant shall submit a report of each prefabricated assembly. The report shall indicate the complete details of the assembly, including a description of the assembly and its components, the basis upon which the assembly is being evaluated, test results and similar information and other data as necessary for the building official to determine conformance to this code. Such a report shall be approved by the building official.

1703.7.1 Follow-up inspection. The permit applicant shall provide for special inspections of fabricated items in accordance with Section 1704.2.

1703.7.2 Test and inspection records. Copies of necessary test and inspection records shall be filed with the building official.

SECTION 1704
SPECIAL INSPECTIONS

1704.1 General. Where application is made for construction as described in this section, the owner or the registered design professional in responsible charge acting as the owner's agent shall employ one or more special inspectors to provide inspections during construction on the types of work listed under Section 1704. The special inspector shall be a qualified person who shall demonstrate competence, to the satisfaction of the building official, for inspection of the particular type of construction or operation requiring special inspection. These inspections are in addition to the inspections specified in Section 109.

Exceptions:

1. Special inspections are not required for work of a minor nature or as warranted by conditions in the jurisdiction as approved by the building official.
2. Special inspections are not required for building components unless the design involves the practice of professional engineering or architecture as defined by applicable state statutes and regulations governing the professional registration and certification of engineers or architects.

3. Unless otherwise required by the building official, special inspections are not required for occupancies in Group R-3 as applicable in Section 101.2 and occupancies in Group U that are accessory to a residential occupancy including, but not limited to, those listed in Section 312.1.

1704.1.1 Statement of special inspections. The permit applicant shall submit a statement of special inspections prepared by the registered design professional in responsible charge in accordance with Section 106.1 as a condition for permit issuance. This statement shall be in accordance with Section 1705.

Exceptions:

1. A statement of special inspections is not required for structures designed and constructed in accordance with the conventional construction provisions of Section 2308.
2. The statement of special inspections is permitted to be prepared by a qualified person approved by the building official for construction not designed by a registered design professional.

1704.1.2 Report requirement. Special inspectors shall keep records of inspections. The special inspector shall furnish inspection reports to the building official, and to the registered design professional in responsible charge. Reports shall indicate that work inspected was done in conformance to approved construction documents. Discrepancies shall be brought to the immediate attention of the contractor for correction. If the discrepancies are not corrected, the discrepancies shall be brought to the attention of the building official and to the registered design professional in responsible charge prior to the completion of that phase of the work. A final report documenting required special inspections and correction of any discrepancies noted in the inspections shall be submitted at a point in time agreed upon by the permit applicant and the building official prior to the start of work.

1704.2 Inspection of fabricators. Where fabrication of structural load-bearing members and assemblies is being performed on the premises of a fabricator's shop, special inspection of the fabricated items shall be required by this section and as required elsewhere in this code.

1704.2.1 Fabrication and implementation procedures. The special inspector shall verify that the fabricator maintains detailed fabrication and quality control procedures that provide a basis for inspection control of the workmanship and the fabricator's ability to conform to approved construction documents and referenced standards. The special inspector shall review the procedures for completeness and adequacy relative to the code requirements for the fabricator's scope of work.

Exception: Special inspections as required by Section 1704.2 shall not be required where the fabricator is approved in accordance with Section 1704.2.2.

1704.2.2 Fabricator approval. Special inspections required by this code are not required where the work is done on the premises of a fabricator registered and approved to perform such work without special inspection. Approval shall be based upon review of the fabricator's written procedural and quality control manuals and periodic auditing of fabrication practices by an approved special inspection agency. At completion of fabrication, the approved fabricator shall submit a certificate of compliance to the building official stating that the work was performed in accordance with the approved construction documents.

1704.3 Steel construction. The special inspections for steel elements of buildings and structures shall be as required by Section 1704.3 and Table 1704.3.

Exceptions:

1. Special inspection of the steel fabrication process shall not be required where the fabricator does not perform any welding, thermal cutting or heating operation of any kind as part of the fabrication process. In such cases, the fabricator shall be required to submit a detailed procedure for material control that demonstrates the fabricator's ability to maintain suitable records and procedures such that, at any time during the fabrication process, the material specification, grade and mill test reports for the main stress-carrying elements are capable of being determined.
2. The special inspector need not be continuously present during welding of the following items, provided the materials, welding procedures and qualifications of welders are verified prior to the start of the work; periodic inspections are made of the work in progress; and a visual inspection of all welds is made prior to completion or prior to shipment of shop welding.
   2.1. Single-pass fillet welds not exceeding $^5/_{16}$ inch (7.9 mm) in size.
   2.2. Floor and roof deck welding.
   2.3. Welded studs when used for structural diaphragm.
   2.4. Welded sheet steel for cold-formed steel framing members such as studs and joists.
   2.5. Welding of stairs and railing systems.

1704.3.1 Welding. Welding inspection shall be in compliance with AWS D1.1. The basis for welding inspector qualification shall be AWS D1.1.

1704.3.2 Details. The special inspector shall perform an inspection of the steel frame to verify compliance with the details shown on the approved construction documents, such as bracing, stiffening, member locations and proper application of joint details at each connection.

1704.3.3 High-strength bolts. Installation of high-strength bolts shall be periodically inspected in accordance with AISC specifications.

sembly is being evaluated, test results and similar information, and other data as necessary for the building official to determine conformance to this code. Such a report shall be approved by the building official.

❖ As an alternative to physical inspection by the building official in the plant or location where prefabricated components are manufactured, such as modular homes, trusses, etc., the building official has the option of accepting an evaluation report from an approved agency detailing such inspections.

1703.7.1 Follow-up inspection. The permit applicant shall provide for special inspections of fabricated items in accordance with Section 1704.2.

❖ The owner is required to provide special inspections of fabricated assemblies at the fabrication plant in accordance with Section 1704.2.

1703.7.2 Test and inspection records. Copies of necessary test and inspection records shall be filed with the building official.

❖ All testing and inspection records related to a fabricated assembly must be filed with the building official so as to maintain a complete and legal record of the assembly and erection of the building.

SECTION 1704
SPECIAL INSPECTIONS

1704.1 General. Where application is made for construction as described in this section, the owner or the registered design professional in responsible charge acting as the owner's agent shall employ one or more special inspectors to provide inspections during construction on the types of work listed under Section 1704. The special inspector shall be a qualified person who shall demonstrate competence, to the satisfaction of the building official, for inspection of the particular type of construction or operation requiring special inspection. These inspections are in addition to the inspections specified in Section 109.

Exceptions:

1. Special inspections are not required for work of a minor nature or as warranted by conditions in the jurisdiction as approved by the building official.
2. Special inspections are not required for building components unless the design involves the practice of professional engineering or architecture as defined by applicable state statutes and regulations governing the professional registration and certification of engineers or architects.
3. Unless otherwise required by the building official, special inspections are not required for occupancies in Group R-3 as applicable in Section 101.2 and occupancies in Group U that are accessory to a residential occupancy including, but not limited to, those listed in Section 312.1.

❖ The permit applicant is responsible for hiring the special inspector and must incur all associated costs. According to Section 105.1, the permit applicant may be the owner or authorized agent in connection with the project (see Section 105.1 for further details).

Exceptions to the requirement for special inspections are minor work and work not required to be designed or sealed by a registered design professional, as regulated by the jurisdiction in which the project is located. Occupancies in Group R-3 or U that are accessory to an R-3 occupancy are typically not required to be designed by a registered design professional; however, this is not true in all cases, with Group R-3 and accessory Group U occupancies being specifically excluded.

It should be noted that Exception 1 does not mean that the inspections listed are not required. It only means that they are not required to be made by a special inspector. Additionally, Exception 1 refers to "conditions in the jurisdiction" as a possible exception. The primary "condition" envisioned is one in which the jurisdiction has the resources and skills to perform the inspection tasks, instead of a special inspector. This exception should not be interpreted as one that can be invoked by the permit applicant. A local jurisdiction should not be obligated to invoke this exception. The purpose of this exception is merely to allow jurisdictions to continue doing inspections if they so desire.

Exception 2 eliminates the special inspection requirement for projects where a design professional is not required. The type of projects that do not require a design professional varies from state to state.

1704.1.1 Building permit requirement. The permit applicant shall submit a statement of special inspections prepared by the registered design professional in responsible charge in accordance with Section 106.1 as a condition for permit issuance. This statement shall include a complete list of materials and work requiring special inspections by this section, the inspections to be performed and a list of the individuals, approved agencies or firms intended to be retained for conducting such inspections.

❖ The applicant must submit for approval a detailed outline of the special inspection program, including the building plans and specifications, before issuance of the building permit. This section places the burden of identifying which materials, components and work require special inspections on the permit applicant. This detailed outline, or statement of special inspections, is required to be prepared by the registered design professional responsible for the building or structure. This is because the special inspections statement relates directly to the construction and design documents, which are the responsibility of the registered design professional.

This section also details the areas to be addressed in the statement. A complete list of materials and work requiring special inspections, the types of inspections and inspection agencies or firms must be provided to the building official. The qualifications and credentials of such individuals, agencies or firms should be submitted for review by the building official.

TABLE 1604.5
OCCUPANCY CATEGORY OF BUILDINGS AND OTHER STRUCTURES

OCCUPANCY CATEGORY	NATURE OF OCCUPANCY
I	Buildings and other structures that represent a low hazard to human life in the event of failure, including but not limited to: • Agricultural facilities. • Certain temporary facilities. • Minor storage facilities.
II	Buildings and other structures except those listed in Occupancy Categories I, III and IV
III	Buildings and other structures that represent a substantial hazard to human life in the event of failure, including but not limited to: • Covered structures whose primary occupancy is public assembly with an occupant load greater than 300. • Buildings and other structures with elementary school, secondary school or day care facilities with an occupant load greater than 250. • Buildings and other structures with an occupant load greater than 500 for colleges or adult education facilities. • Health care facilities with an occupant load of 50 or more resident patients, but not having surgery or emergency treatment facilities. • Jails and detention facilities. • Any other occupancy with an occupant load greater than 5,000. • Power-generating stations, water treatment for potable water, waste water treatment facilities and other public utility facilities not included in Occupancy Category IV. • Buildings and other structures not included in Occupancy Category IV containing sufficient quantities of toxic or explosive substances to be dangerous to the public if released.
IV	Buildings and other structures designated as essential facilities, including but not limited to: • Hospitals and other health care facilities having surgery or emergency treatment facilities. • Fire, rescue and police stations and emergency vehicle garages. • Designated earthquake, hurricane or other emergency shelters. • Designated emergency preparedness, communication, and operation centers and other facilities required for emergency response. • Power-generating stations and other public utility facilities required as emergency backup facilities for Occupancy Category IV structures. • Structures containing highly toxic materials as defined by Section 307 where the quantity of the material exceeds the maximum allowable quantities of Table 307.1.(2). • Aviation control towers, air traffic control centers and emergency aircraft hangars. • Buildings and other structures having critical national defense functions. • Water treatment facilities required to maintain water pressure for fire suppression.

3.1. $\overline{v_s}$ for the top 100 feet (30 480 mm) ($\overline{v_s}$ method).

3.2. $\overline{N}_{ch}$ for the top 100 feet (30 480 mm) ($\overline{N}$ method).

3.3. $\overline{N}$ for cohesionless soil layers ($PI < 20$) in the top 100 feet (30 480 mm) and average, s_u for cohesive soil layers ($PI > 20$) in the top 100 feet (30 480 mm) ($\overline{s_u}$ method).

1613.5.6 Determination of seismic design category. Occupancy Category I, II or III structures located where the mapped spectral response acceleration parameter at 1-second period, S_1, is greater than or equal to 0.75 shall be assigned to Seismic Design Category E. Occupancy Category IV structures located where the mapped spectral response acceleration parameter at 1-second period, S_1, is greater than or equal to 0.75 shall be assigned to Seismic Design Category F. All other structures shall be assigned to a seismic design category based on their occupancy category and the design spectral response acceleration coefficients, S_{DS} and S_{D1}, determined in accordance with Section 1613.5.4 or the site-specific procedures of ASCE 7. Each building and structure shall be assigned to the more severe seismic design category in accordance with Table 1613.5.6(1) or 1613.5.6(2), irrespective of the fundamental period of vibration of the structure, T.

TABLE 1613.5.6(1)
SEISMIC DESIGN CATEGORY BASED ON SHORT-PERIOD RESPONSE ACCELERATIONS

VALUE OF S_{DS}	OCCUPANCY CATEGORY		
	I or II	III	IV
$S_{DS} < 0.167g$	A	A	A
$0.167g \le S_{DS} < 0.33g$	B	B	C
$0.33g \le S_{DS} < 0.50g$	C	C	D
$0.50g \le S_{DS}$	D	D	D

TABLE 1613.5.6(2)
SEISMIC DESIGN CATEGORY BASED ON 1-SECOND PERIOD RESPONSE ACCELERATION

VALUE OF S_{D1}	OCCUPANCY CATEGORY		
	I or II	III	IV
$S_{D1} < 0.067g$	A	A	A
$0.067g \le S_{D1} < 0.133g$	B	B	C
$0.133g \le S_{D1} < 0.20g$	C	C	D
$0.20g \le S_{D1}$	D	D	D

1613.5.6.1 Alternative seismic design category determination. Where S_1 is less than 0.75, the seismic design category is permitted to be determined from Table 1613.5.6(1) alone when all of the following apply:

1. In each of the two orthogonal directions, the approximate fundamental period of the structure, T_a, in each of the two orthogonal directions determined in accordance with Section 12.8.2.1 of ASCE 7, is less than 0.8 T_s determined in accordance with Section 11.4.5 of ASCE 7.
2. In each of the two orthogonal directions, the fundamental period of the structure used to calculate the story drift is less than T_s.
3. Equation 12.8-2 of ASCE 7 is used to determine the seismic response coefficient, C_s.
4. The diaphragms are rigid as defined in Section 12.3.1 in ASCE 7 or for diaphragms that are flexible, the distance between vertical elements of the seismic-force-resisting system does not exceed 40 feet (12 192 mm).

1613.5.6.2 Simplified design procedure. Where the alternate simplified design procedure of ASCE 7 is used, the seismic design category shall be determined in accordance with ASCE 7.

1613.6 Alternatives to ASCE 7. The provisions of Section 1613.6 shall be permitted as alternatives to the relevant provisions of ASCE 7.

1613.6.1 Assumption of flexible diaphragm. Add the following text at the end of Section 12.3.1.1 of ASCE 7:

Diaphragms constructed of wood structural panels or untopped steel decking shall also be permitted to be idealized as flexible, provided all of the following conditions are met:

1. Toppings of concrete or similar materials are not placed over wood structural panel diaphragms except for nonstructural toppings no greater than 1½ inches (38 mm) thick.
2. Each line of vertical elements of the lateral-force-resisting system complies with the allowable story drift of Table 12.12-1.
3. Vertical elements of the lateral-force-resisting system are light-framed walls sheathed with wood structural panels rated for shear resistance or steel sheets.
4. Portions of wood structural panel diaphragms that cantilever beyond the vertical elements of the lateral-force-resisting system are designed in accordance with Section 2305.2.5 of the *International Building Code*.

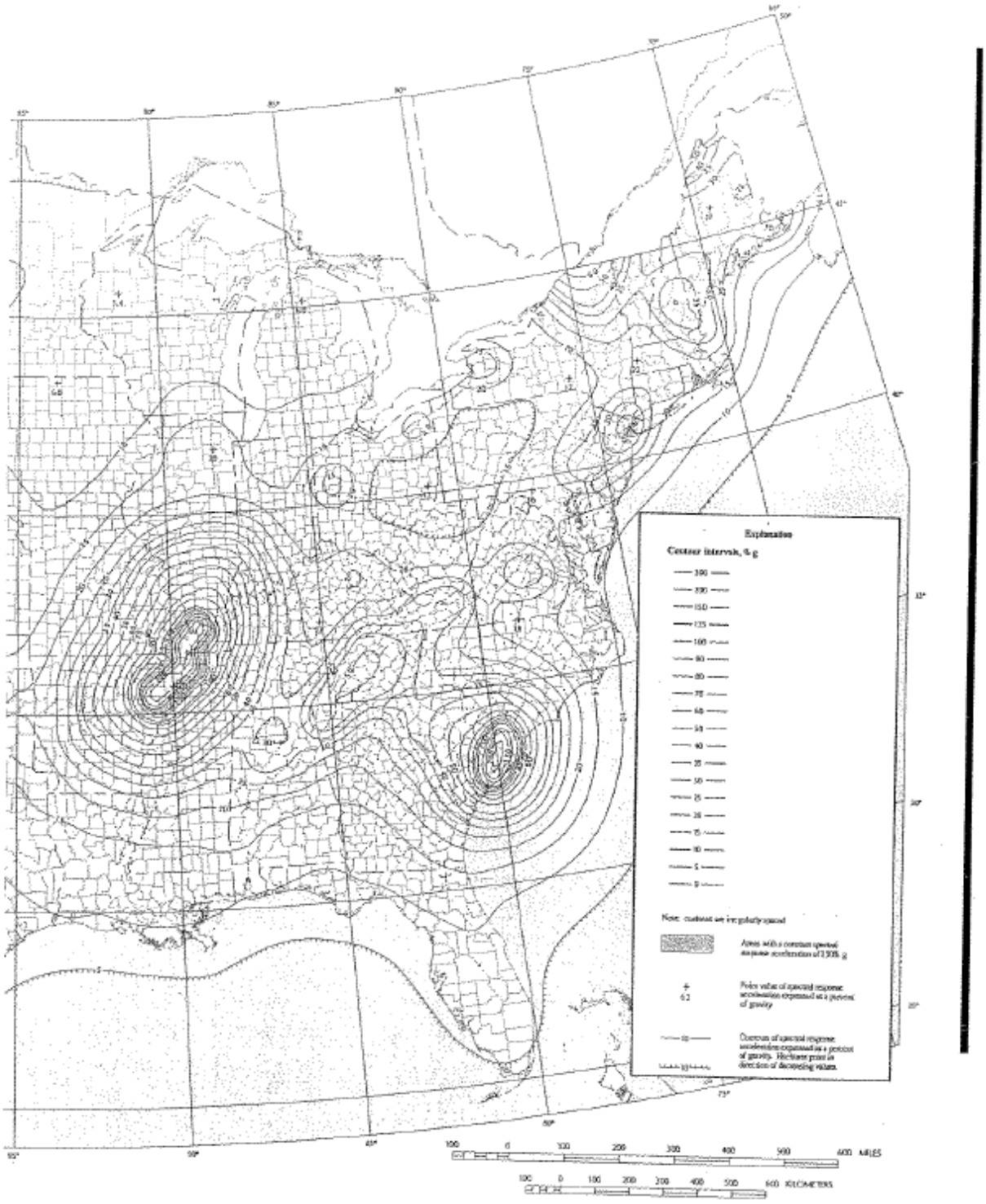


FIGURE 1613.5(1)—continued
MAXIMUM CONSIDERED EARTHQUAKE GROUND MOTION FOR THE CONTERMINOUS UNITED STATES OF 0.2 SEC SPECTRAL RESPONSE ACCELERATION (5% OF CRITICAL DAMPING), SITE CLASS B

SHORT

S_S

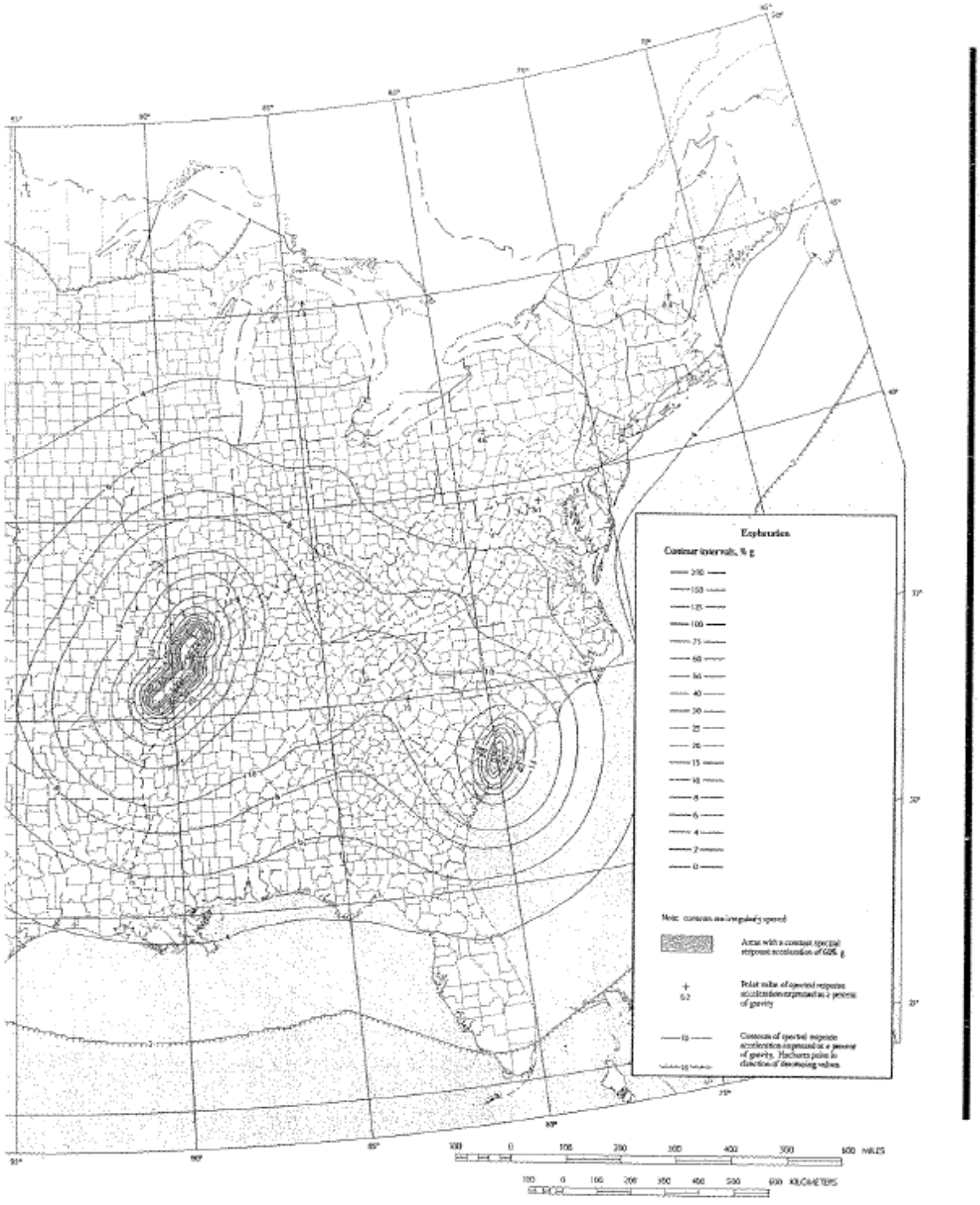
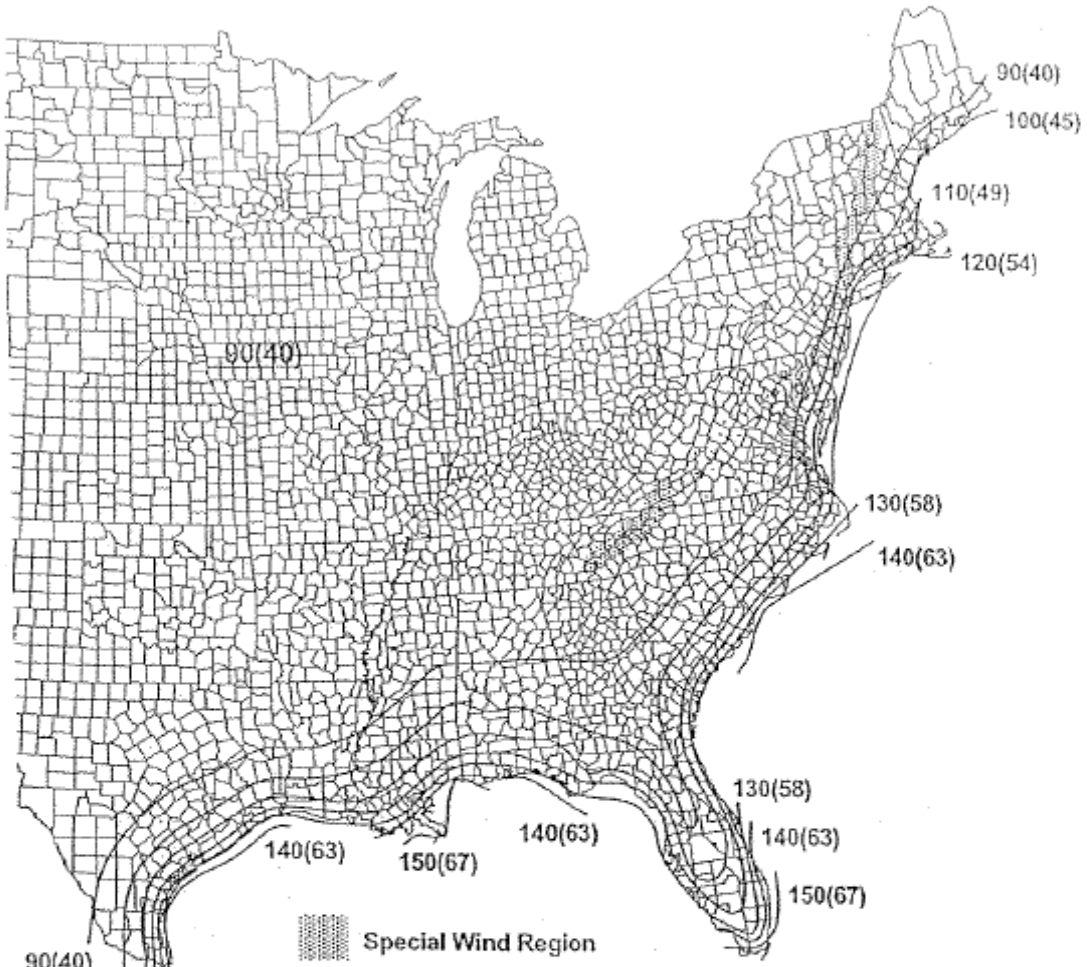


FIGURE 1613.5(2)—continued
MAXIMUM CONSIDERED EARTHQUAKE GROUND MOTION FOR THE CONTERMINOUS UNITED STATES
OF 1.0 SEC SPECTRAL RESPONSE ACCELERATION (5% OF CRITICAL DAMPING), SITE CLASS B

S_1



Location	V mph	(m/s)
Hawaii	105	(47)
Puerto Rico	145	(65)
Guam	170	(76)
Virgin Islands	145	(65)
American Samoa	125	(56)

Notes:

1. Values are nominal design 3-second gust wind speeds in miles per hour (m/s) at 33 ft (10 m) above ground for Exposure C category.
2. Linear interpolation between wind contours is permitted.
3. Islands and coastal areas outside the last contour shall use the last wind speed contour of the coastal area.
4. Mountainous terrain, gorges, ocean promontories, and special wind regions shall be examined for unusual wind conditions.

FIGURE 1609—continued
BASIC WIND SPEED (3-SECOND GUST)

This document is made part of the February 28, 2007 Building Codes Council meeting minutes.

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Principal Plan Examiner/ Deputy Building Official
Codes Enforcement
301 University Ridge, Greenville, SC 29601
(864)467-7070

PROPONENTS OF SC AMENDMENT 1704.1 AND SC AMENDMENT 1704.1 VERSION 2, DRAFTED AND SUBMITTED BY HERB YINGLING, REPRESENTING THE BUILDING OFFICALS ASSOCIATION OF SOUTH CAROLINA

January 10, 2007

NAME	COMPANY	TITLE	AMENDMENT 1 ✓	AMENDMENT VERSION 2 ✓
GIL STEWART, AIA	THE ELLIS GROUP, P.A.	ARCHITECT	✓	✓
John Beystehner AAIA	The Ellis Group, P.A.	Project Manage-	✓	✓
JONATHAN FRANK, AIA	THE ELLIS GROUP, P.A.	INTERN	✓	✓
Jeff Gilstrop	S/S Constructors	CBO	✓	✓
Rick Connor, Assoc AIA	Craig Gaulden Davis	Proj. manager	✓	✓
MIKE SAGEDY	CAMNESS LAMBERT ENGR	Marketing Director	Y ✓	Y ✓
CLAY GANDY	GREEN ARCH DESIGN	ARCHITECT	✓	✓
JEFF CASTOR	THE ELLIS GROUP, P.A.	INTERN	✓	✓
BRADY CAUTHEN	S/S Constructors	Asst. Pre-Construct Mgr	✓	✓
FRANCESCO CANDELA	S/S CONSTRUCTORS	PRE-CONSTRUCTION ENG.	✓	✓

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January 10, 2007

NAME	COMPANY	TITLE	AMENDMENT 1 ✓	AMENDMENT VERSION 2 ✓
Michael Hallasy AIA	O'Neal, Inc	Senior Architect	✓	Do not include seismic "D" in the exception
Yuji Kishimoto AIA	Clemson University	Professor	✓	✓
Michael Armor	SYS Constructors	Contractor	✓	✓
DJ Doherty	SYS Constructors	Contractor	✓	✓
Bob Peterson	SYS Const.	Contractor	✓	✓
Dan Shields	RBC Centura Bank	Banker	—	—
Meg Jeffrt	DPB Architects	Architect	✓	✓

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January 10, 2007

NAME	COMPANY	TITLE	AMENDMENT 1 ✓	AMENDMENT VERSION 2 ✓
MATT PARKER	DESIGN- ELITE	ARCHITECT	✓	✓
MIKE WITTEN	DAVIS & FLOYD	ARCH	✓	✓
KEVIN GILHAM	ALLORA, LLC	PRESIDENT	✓	✓
Dee Ann Lack	Craig Gaulden Davis	Intern	✓	✓
John Hansen	Craig, Gaulden, & Davis.	Intern Architect	✓	✓
[illegible] LOLLEN	CRAIG, GAULDEN, DAVIS	PROJECT MANAGER	✓	✓
CHARLES GUNNING	CRAIG, GAULDEN DAVIS	INTERN	✓	✓

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PROPONENTS OF SC AMENDMENT 1704.1 AND SC AMENDMENT 1704.1 VERSION 2, DRAFTED AND SUBMITTED BY HERB YINGLING, REPRESENTING THE BUILDING OFFICALS ASSOCIATION OF SOUTH CAROLINA

January 10, 2007

NAME	COMPANY	TITLE	AMENDMENT 1 ✓	AMENDMENT VERSION 2 ✓
SAM DIXON	SYS CONSTRUCTORS, INC	PROJ. MGR	✓	
Brian Miller	SYS Constructors, Inc.	Precon. MGR	✓	
GARRY PRICE	DESIGN ELITE	ARCHITECT	✓	
Judith Powell	Judith Powell, Architect	Owner	✓	
CHARLIE SWIT	EATON ARCHITECT	PRINCIPAL	✓	
Todd Reichard	Earl Architects	Principal	✓	

U.S. Department of Homeland Security
500 C Street, SW
Washington, DC 20472

FEMA

February 27, 2007

Frank P. Hodge
Chairman
South Carolina Building Codes Council
One Town Center Court
Hilton Head Island, South Carolina 29928

This document is made part of the February 28, 2007 Building Codes Council meeting minutes.

Dear Mr. Hodge:

Thank you for your electronic mail (email) dated February 6, 2007. In your email inquiry, you conveyed your concerns with proposed amendments to the South Carolina Building Code that are less stringent than the 2006 International Code.

FEMA believes any amendments to the 2006 International Code that would diminish seismic, wind or flood protection standards could have significant implications for programs of interest to FEMA. These include the implementation of Federal Executive Orders relating to the National Earthquake Hazards Reduction Program (NEHRP) and the insurance industry Building Code Effectiveness Grading Schedule (BCEGS) rating of South Carolina communities. The effects of a modified BCEGS rating will result in a retrograde of South Carolina communities participating in the National Flood Insurance Program (NFIP) Community Rating System (CRS), resulting in higher flood insurance costs in certain communities. This letter clarifies the importance of adoption of the 2006 International Code without amendments that would weaken the seismic, wind or flood resistant provisions.

In regard to weakening the seismic requirements of the South Carolina Building Codes, this issue was discussed in a letter dated February 21, 2001, sent to Mr. Gary Wiggins, former Director of the South Carolina Building Code Council. The letter described the very real and significant risk from earthquakes in South Carolina. I am enclosing a copy of the letter for your reference. To illustrate this problem, FEMA's *Estimated Annualized Earthquake Losses for the United States* (FEMA-366), which was developed using the FEMA HAZUS loss estimation program, shows the City of Charleston ranked in the top ten urban areas most vulnerable to earthquake damage. The letter also emphasized FEMA's concern that a State building code without adequate seismic provisions would not meet the intent of Federal Executive Order 12699, "Seismic Safety of Federal and Federally Assisted or Regulated New Building Construction." The deletion or weakening of any of the seismic provisions from a State building code could potentially impact the construction of new buildings owned, leased, constructed, assisted (through loans, grants, or guarantees of loans), or regulated by the Federal Government.

The February 21, 2001, letter also included information describing the impact and

consequences of the South Carolina Building Code Council taking action to enact a moratorium on the enforcement of wind-borne debris provisions then being considered. Your inquiry made reference to a proposal by the South Carolina Home Builders association to "re-instate the section that will allow partially enclosed structures as an option for protection of openings." The concerns expressed in the February 21, 2001, letter regarding the wind-borne debris provisions are equally as important for re-instating partially enclosed design as an option. FEMA supports the International Residential Code requirement eliminating the option to design residential structures as partially enclosed buildings. Allowing partially enclosed design of residential structures without wind-borne debris protection completely invalidates the protection of the building envelope and leaves both the occupants and contents of that building defenseless against the worst affects of the storm. In addition, a study conducted by the Institute for Business and Home Safety stated that for an additional cost of from 0.5% to 4.0% of the initial construction cost, losses can be reduced from between 8% to 54%. This study was based on five representative residential coastal buildings studied at four different sites located in wind exposure classification C. Similarly, the proposal to raise the wind speed threshold for which high-wind design requirements apply from 100 mph to 110 mph is not advised. Raising the threshold to 110 mph will result in structures being built without high-wind design features in locations having winds between 100 and 110 mph. This change in threshold will significantly increase the risk to those structures that would otherwise be protected.

The CRS plays an important role in FEMA's integration of flood insurance and flood loss mitigation, with the implementation of the NFIP. The CRS is a unique incentive program that uses flood insurance premium discounts to encourage communities to go beyond the minimum Federal NFIP standards for reducing potential losses to lives and property. CRS has become a model for local government, public and private involvement in all-hazard community preparedness and mitigation. Nowhere is its success better exemplified than in the CRS encouragement of all-hazard building codes.

Many communities join the NFIP without having a building code. However, it is FEMA's experience that communities with strong all-hazards building codes have more effective programs and are more disaster resistant. Accordingly, FEMA supports adoption of the International Codes Series (I-Codes) or equivalent, which takes into account multiple-hazards in order to support disaster-resistant communities' ability to withstand all hazards. FEMA's ultimate goal is to save lives and protect property by encouraging community adoption of these codes. Considerable taxpayer funded disaster assistance can be avoided through community adoption of the I-Codes.

FEMA supports the adoption and enforcement of "disaster-resistant" building codes, which form a cornerstone of effective mitigation. "Disaster resistant" means the provisions are consistent with the minimum requirements of the NFIP, are substantially equivalent to the 2000 or 2003 editions of the National Earthquake Hazards Reduction

Program Recommended Provisions for Seismic Regulations for New Buildings and Other Structures (FEMA 3681369 or FEMA 450), and reflect the current state-of-the-art engineering requirements for wind, such as those requirements in the ASCE 7 standard. Currently, the I-Codes and the NFPA 5000 Building Code without amendments, meet these criteria.

The direct benefit of FEMA's support for all hazards mitigation is the avoidance of future increased costs to the National Flood Insurance Fund and taxpayer disaster assistance, for preventable damages. When a building "envelope" is punctured, causing severe damage by windborne debris or improper construction techniques, disaster costs are borne by our citizens, government agencies and private insurers. Therefore, while the CRS is primarily flood focused, it is interwoven and linked to FEMA's all-hazard mitigation emphasis. To highlight this emphasis, the CRS added credits for building codes and enforcement, as determined by the insurance industry Building Code Effectiveness Grading Schedule developed and managed by Insurance Services Offices, Inc. (ISO). Moreover, in 1999 at the recommendation of experts, CRS added the requirement that a CRS Class 7 or better community must demonstrate that it has a program to reduce risk through the adoption and enforcement of an all-hazards building code as demonstrated by receiving an ISO BCEGS rating of at least Class 6.

FEMA understands there are many CRS communities in South Carolina that are within areas identified as having windborne debris risk. Twelve of the 32 South Carolina communities participating in the CRS have a CRS Class 7 rating or better, and currently receive a premium discount of up to 25%. I am enclosing a list of the 12 communities for your reference. When these communities are visited on their normal 3 or 5 year cycle visit, CRS procedure requires that the latest BCEGS classification will be applied to their grading. However, due to the CRS prerequisite, FEMA cannot provide communities with increased CRS discounts for adoption of less than the full I-Codes, specifically for dropping critical parts such as the windborne provisions of I-Codes. Removing these provisions, will result in an increased risk to South Carolina citizens and their property. Therefore, these 12 CRS communities will eventually regress to the BCEGS classes that reflect the non-adoption of the windborne debris and seismic standards. Like other grading systems, it is also within current CRS policy to revise the score of any community should it become clear that they are not implementing any activity for which they receive credit. The case could be made to process these 12 communities at one time, as the revised BCEGS scores are final. The lack of adoption of the full I-Codes will mean increased risk to coastal properties and the loss of certain premium discounts to NFIP policyholders.

Please keep FEMA advised of any actions taken by the South Carolina Building Code Council which would necessitate a modification of the current CRS classes for South Carolina communities.

If you need additional information or assistance, please contact Bill Lesser of my staff by telephone at (202) 646-2807.

Sincerely,

David I. Maurstad
Director
Mitigation Division

Enclosures (2)

cc: Major Phillip May, Regional Director, FEMA Region IV
Brad Loar, Chief, Community Mitigation Programs Branch, FEMA Region IV
Lisa Jones, NFIP State Coordinator, South Carolina Department of Natural Resources
Tammie Dreher, Earthquake Program Manager, South Carolina Emergency Management Division

INSURANCE SERVICES OFFICE, INC.
545 Washington Boulevard, Jersey City, NJ 07310-1686

August 2, 2002

Mr. Frank Hodge
Hilton Head Island - Building Department
One Town Center Court
Hilton Head Island, SC 29928

Dear Mr. Hodge;

This is in response to questions raised about the relationship between a community's Building Code Effectiveness Grading Schedule (BCEGS) classification and their Community Rating System (CRS) classification.

ISO participates in numerous information services for property and casualty insurers, two of which are ISO's BCEGS program and the Federal Emergency Management's (FEMA) Community Rating System (CRS) used by the National Flood Insurance Program (NFIP). The BCEGS program is an insurance rating and underwriting tool. The basic concept is that structures in jurisdictions, which adopts and rigorously enforces the latest unmodified building codes; utilizing trained and certified personnel, should demonstrate more resilience to natural disasters.

The ISO BCEGS classifications in the CRS analysis of a community reflect the quality of the adopted building codes and their enforcement. The CRS rule is that before a community can be a class 7 or better, it must have received a BCEGS class 6 or better for both commercial and residential property. Further, to obtain a class 4 or better in the CRS a community must have obtained a BCEGS class 5 or better. The CRS procedure also credits a community up to 60 points for having a BCEGS classification of6 or better.

ISO has filed premium discounts with state insurance regulators for both residential and commercial property for the various BCEGS classifications. Each insurer has the opportunity to use these advisory discounts in a manner that best fits its marketing and underwriting strategies for non-flood insurance coverage. FEMA has developed premium credits that apply to flood insurance purchased through the NFIP for each improved class achieved in the CRS.

Different issues and groups may combine to cause a community to delay in adopting or cause modifications to the latest model codes. Additionally, a community may need time to review the impact of code changes prior to adopting them as law. The BCEGS program recognizes delays in code adoption as a necessary component of the approval process. However, where those delays cause the building code in use to be over 5-years old, or the latest code is modified to weaken the intent for structural mitigation of natural hazards, the BCEGS classification begins to be adversely impacted.

The modifications being made to the to 2000 edition of the IRC have been determined to significantly weaken the intent for structural mitigation of natural hazards for which South Carolina has a known history. The natural hazard mitigation modifications to the IRC have reduced it to the equivalent of the 1997 edition of the building code. Therefore all BCEGS classification evaluations made in impacted jurisdictions of South Carolina this year will be less favorable due to modifications to the most current code edition

The process of creating Country wide relative classifications that are valid in every individual jurisdiction requires the use of national recognized standards as benchmarks. In evaluating

building codes ISO uses the latest edition of the International Family of Codes as that benchmark. The BCEGS program develops its relative classifications by comparing the existing condition to benchmarks; developing a snap shot in time of the code enforcement activity and the support the community gives to that activity. When code adoptions are delayed or modifications reducing hazard mitigation provisions are adopted the code will not score as well when compared to the benchmark and that will be reflected in the classification.

ISO will continue to develop accurate classifications reflecting the unmodified adoption of the most modern building codes and the aggressive enforcement of those codes. Less favorable classification will highlight the situation building officials face and hopefully encourage more timely building code review and adoption.

The direct impact of a lower BCEGS Classification on a community's CRS Classification will usually be recognized either at the time of the next cycle verification visit or if a community wishes to make a modification to improve it's CRS Classification. In either case, the evaluation under the CRS will take into account the current BCEGS Classification when verifying the final credit points applicable for that community. It should be noted that the CRS also provides schedule verification visits at anytime when it learns of problems in a community that shed doubt on whether it is fully implementing its activities applicable to it's current CRS Classification. Given the change in the BCEGS classification; ISO would be requested to verify a community's current program without waiting for either the community to make a modification or the next scheduled cycle verification visit. All effected communities adopting the building code including the moratoriums should expect that their CRS classification would be no more favorable then a class 8. CRS classifications adjustments will be made in accordance with the rules in the current CRS Coordinators Manual.

We thank you for your support of the BCEGS and the CRS programs. We hope you have a better understanding of the issues surrounding classifications, and we look forward to working together to enhance building code adoption and enforcement throughout the country.

If we can be of any further assistance in this matter, please do not hesitate to contact me at #317-848-2898.

Sincerely,

William L. Trakimas, CFM

Flood Technical Coordinator

Cc: ISO, Inc.

FEMA/FIMA HQ

FEMA Region IV

SC State NFIP Coordinator

FEDERAL EMERGENCY MANAGEMENT AGENCY
Region IV
3003 Chamblee Tucker Road Atlanta, GA 30341

October 1, 2002

This document is made part of the February 28, 2007 Building Codes Council meeting minutes.

Mr. Frank Hodge
Chairman, South Carolina Building Code Council 1 Town Center Court
Hilton Head Island, South Carolina 29928

Reference: Federal Emergency Management Agency's (FEMA) Position On Current IRC Moratoria

Dear Mr. Hodge:

On July 23,2002, Mr. Tim Baker of the South Carolina Department of Insurance requested in writing, that FEMA attend the August 28, 2002, meeting of the South Carolina Building Code Council. The intent was for FEMA to clarify the potential consequences of the South Carolina Residential Building Code moratoria on the enforcement of seismic and wind-borne debris provisions that went into effect on July 1.2002. At that meeting, we verbally presented the various ramifications to the council. Below, these points are summarized in writing; certain detailed information is new.

1. Executive Order (EO) 12699 requires that all new, federally owned, leased, regulated, or assisted buildings must be designed and constructed using a building code that meets specific criteria.. Federal agencies are only permitted to use model building codes that have been determined to be substantially equivalent to a recognized seismic standard, which at this time are the 1997 and 2000 editions of FEMA's National Earthquake Hazards Reduction Program *(NEHRP) Recommended Provisions*.. At this time, the 2000 I Codes meet these criteria.. However, when the South Carolina Residential Code went into effect on July 1,2002, with the moratorium in place, that code was no longer substantially equivalent to the 1997 or 2000 editions of the *NEHRP Recommended Provisions*. Therefore, it does not meet the requirements of the Executive Order with which federal agencies must comply. This issue was already addressed in a letter from FEMA to Mr. Gary Wiggins of the South Carolina Building Code Council, dated February 21, 2001.

2. Housing loans received through various federal agencies may be impacted by the moratoria due to the requirements of EO 12699. Enforcement is up to each individual federal agency.

3. The National Flood Insurance Program (NFIP's) Community Rating System (CRS) and ISO's (Insurance Services Office) Building Code Effectiveness Grading Schedule (BCEGS) programs will be negatively affected by these moratoria. This was addressed in an August 7, 2002, letter from ISO to you, as the Director of the Department of Building and Fire Codes for the Town of Hilton Head Island. South Carolina. ISO describes the impact of the current moratoria on the CRS and BCEGS programs and how they inter-relate. Ultimately, increased NFIP flood insurance premiums can be expected in certain communities, while several specific CRS credits will either not be available or will be significantly reduced as a result of the moratoria. Currently ten South Carolina communities will experience increased flood insurance rates due to these moratoria that will result in policyholders paying an estimated $1.6 million in increased premiums per annum.

4. FEMA is clearly on record as supporting the adoption and enforcement without amendments, of 'Disaster-Resistant' building codes which we regard as a cornerstone of effective mitigation. "Disaster Resistant" means, the provisions meet the minimum requirements of the NFIP, are substantially equivalent to the 1997 or 2000 editions of the *NEHRP Recommended Provisions* published by FEMA, and reflect the current state-of-the-art engineering requirements for wind, such as those found in the ASCE 7 standard. Currently, the International Code Series (I Codes) and the new NFP A 5000 Building Code (National Fire Protection Association), without amendments, meet these criteria.

5. FEMA strongly supports the use of wind-borne debris protection in high wind areas, as defined in the 2000 I Codes. A recent study published by the Institute for Business and Home Safety shows that for an additional cost of from 0.5% to 4.0% of the initial construction cost, losses can be reduced from between 8% to 54%. This study was based on five representative residential coastal buildings studied at four different sites located in wind exposure classification C. The moratoria will reduce protection to both citizens, and their property, in the state of South Carolina.

6. In terms of the affect on post-disaster funding, while there would be no affect on any immediate response funding, there could be an impact on recovery funding. FEMA regulations require that a community use whatever code was in place at the time of the disaster to regulate post-disaster repairs and reconstruction. Should the community have any additional requirement or desire to rebuild a structure to new code level, FEMA would only provide funding to the level of the code in place at the time of the disaster. This could result in a differential that would be the responsibility of the community or the owner. For example, if an earthquake struck South Carolina today, FEMA would only provide resources based on the code in place at the time of the disaster. However, under EO12699, the grant recipients would be required to rebuild to a code that met the intent of the Executive Order, which would be the 2000 I Codes or the National Fire Protection Association 5000 Building Code. Thus, the recipients would be responsible for all differential costs between the two 'editions' of the I Codes.

Thirteen years ago Hurricane Hugo hit South Carolina resulting in 21 deaths and catastrophic damage and losses that exceeded $7 Billion in the US. The State of South Carolina has a golden opportunity to better protect its communities, citizens and guests by committing to "Disaster Resistant" residential construction. This can be done through lifting the moratoria on enforcement of the wind and seismic sections in question, in the International Residential Code.

If you need further help or guidance, please contact me at (770) 220-5416 or brad.loar@fema.gov.

Sincerely,

Brad Loar, Chief
Community Mitigation Programs Branch
Federal Insurance and Mitigation Division

This document is made part of the February 28, 2007 Building Codes Council meeting minutes.

American Insurance Association

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February 27, 2007

Mr. Gary Wiggins, CBO
SC Building Codes Council
PO Box 11329
Columbia, SC 29211-1329

Re: The South Carolina Building Codes Council

Dear Mr. Wiggins:

South Carolina is among very few states in the U.S. that have ***both*** a major hurricane risk and a significant seismic risk to homes and businesses. Therefore, the American Insurance Association (AIA) is concerned that the South Carolina Building Codes Council is considering steps to amend the 2006 edition of the International Residential Code (IRC) in a way that would weaken provisions that are designed to provide full protection against hurricane force winds in South Carolina's coastal counties and seismic requirements in areas of the state subject to moderate earthquakes. AIA represents home and commercial property insurers in South Carolina that write more than $567 million in premiums, or 30.4% of the total property insurance market.

Provisions of the International Building Code (IBC) and its counterpart for homes (International Residential Code) represent the best and most current technical knowledge on how to best build homes that will withstand hurricane force winds and seismic activity. The provisions enacted also reflect analysis and debate among all the various interest groups impacted by building codes. Code provisions therefore should not be adjusted or weakened without strong compelling evidence, especially in areas subject to catastrophic hurricanes and seismic activity.

Since hurricanes are South Carolina's most frequent and obvious risk, we are most concerned about provisions that would allow builders to choose whether or not to include wind borne debris requirements such as storm shutters and wind resistant glass in South Carolina's highest wind zones. While the attempt to include or substitute strong engineering design provisions as an alternative to keep the basic frame and roof structure intact when doors or windows fail is laudable, such a strategy still falls short of necessary hurricane protection for consumers. When doors or windows fail, extensive amount of rain and subsequent moisture will certainly breach the home causing extensive damage to contents, insulation, electrical

systems and walls coverings. Such damage will likely make a home unlivable for an extensive amount of time until repairs can be made and cause substantial insurance losses. In contrast, strong wind borne debris protections make it far more likely that damage is minimized and the homeowners can remain living in the family home, reducing displacement and impacts on the larger community.

Because of the ever increasing numbers of Americans and South Carolinians that want to retire, live, and build along the coast coupled with a 20-year period of intense and frequent hurricane activity, insurance availability and affordability are key concerns of many states in the Southeast and Gulf regions of the United States. As such, this is not a good time to enact provisions which weaken building codes. Adhering to and embracing the 2006 IRC provisions requiring wind borne debris protections for South Carolina's high wind regions is proactive step the Building Codes Council can take to help foster insurance availability, safer homes communities, and coastal areas that recover faster after hurricanes. We therefore urge the Council to keep intact wind borne debris protections in the 2006 South Carolina adoption of the IRC.

Sincerely,

Raymond G. Farmer
Assistant Vice President

cc: Ann Roberson
Frank Hodge