

**MINUTES OF THE NORTH CAROLINA BUILDING CODE COUNCIL  
DECEMBER 11, 2001 MEETING  
WINSTON-SALEM, NORTH CAROLINA**

All Council members were present with the exception of Jack Neel and Gary York.

THESE ARE SUMMARY MINUTES AND THE OFFICIAL MINUTES OF THIS MEETING ARE RECORDED ON TAPE. ANYONE DESIRING VERBATIM OR EXCERPTS FROM THESE TAPES SHOULD CONTACT THE ENGINEERING DIVISION, NC DEPARTMENT OF INSURANCE FOR INFORMATION ON REPRODUCTION COSTS.

Chairman Gardner announced that the June, 2002 Council meeting would be at 9:00am, June 11, 2002 at the Wake County Commons located at 4011 Cary Drive, Raleigh, NC 27610. The work session is scheduled for June 10, 2002 at 1:00pm at the same location.

The following items were considered:

**ITEM 1 - APPROVAL OF MINUTES OF THE JUNE 11, 2001 AND OCTOBER 22, 2001 BUILDING CODE COUNCIL MEETINGS.**

The Council requested the following clarification of Item 7 in the minutes of June 11, 2001 Council meeting, concerning the continued use of the current codes:

At the June, 2001 Council meeting, the Building Code Council adopted the 2002 editions of the North Carolina Building, Administration and Enforcement Requirements, Plumbing, Mechanical, Fuel Gas, Residential, Energy, Electrical and Fire Prevention Codes, effective December 31, 2001. The 1999 editions of the Electrical, Fire Prevention and Administration and Enforcement Requirements Codes expire December 31, 2001. The 1999 editions of the Building, Plumbing, Mechanical, Fuel Gas, Residential and Energy Codes will be effective until December 31, 2002. Therefore, building permits issued prior to December 31, 2002 may be designed utilizing either the 1999 editions of the codes or the 2002 editions of the codes, except for the Electrical and Fire Prevention Codes. The 1999 editions of Building, Plumbing, Mechanical, Fuel Gas, Residential and Energy Codes will prevail when conflicts exist between the 2002 editions of the Electrical and Fire Prevention Codes, and the 1999 editions of the Building, Plumbing, Mechanical, Fuel Gas, Residential and Energy Codes. The 1999 edition of the Accessibility Code remains in effect, with 2002 revisions.

William Bullock made a motion to approve the minutes. Marshall Knight seconded the motion. The motion carried without dissent.

**ITEM 2 - APPEAL BY JOSH GURLITZ, GGA ARCHITECTS, CONCERNING DOI INTERPRETATION OF "CONTINUOUS SUPERVISION" NOTED IN THE EXCEPTION TO SECTION 230-72(C) OF THE NORTH CAROLINA ELECTRICAL CODE, THAT ALLOWS RESTRICTED ACCESS TO THE SERVICE DISCONNECT WHEN THE BUILDING IS UNDER CONTINUOUS SUPERVISION BY THE BUILDING MANAGEMENT.**

This item was withdrawn. The matter was resolved prior to the Building Code Council meeting.

## **COMMITTEE REPORTS**

### **ADMINISTRATION COMMITTEE MEETING**

Barry Gardner, Chairman of the Administration Committee, reported that the committee met on September 21<sup>st</sup>, 28<sup>th</sup> and October 17, 2001, to complete the revisions to the Administration and Enforcement Requirements Code. The Building Code Council met on October 22, 2001 and approved the proposed 2002 Edition of the Administration and Enforcement Requirements Code.

### **RESIDENTIAL COMMITTEE MEETING**

The Residential Committee met on September 11, 2001 to begin studying moisture problems in residential construction. Dan Tingen, Chairman of the Residential Committee, reported that the committee met and listened to concerns of John Montgomery about moisture problems in stucco homes. Mr. Tingen stated Mr. Montgomery's concerns were related mainly to disclosure requirements, and was not something the Building Code Council could address. However, the Committee requested that an ad hoc committee be appointed to study moisture issues. Chairman Gardner stated he would appoint an ad hoc committee to begin studying moisture-related problems in single family dwellings. Chairman Gardner requested that anyone interested in serving on the ad hoc committee contact either Chairman Gardner, or the Council's Secretary.

### **STRUCTURAL COMMITTEE**

The Structural Committee met on September 19, 2001 to review proposals by Barrier Engineering to revise Chapter 16 of the Building Code. Tom Avery, Chairman of the Structural Committee, reported that the committee reviewed each proposal and discussed the proposals with representatives of Barrier Engineering. The committee voted to deny all the proposals, stating the 2002 edition of the Building Code adequately addresses each concern of Barrier Engineering. Barrier Engineering stated they would be happy to serve on any ad hoc committees and will write an article for publication in the COCO newsletter about retaining walls.

Items 3 through 6 on the agenda were denied in committee, the items was not appealed; therefore, no action was required.

### **MECHANICAL COMMITTEE MEETING**

The Mechanical Committee met on September 18, 2001 and considered the following proposal from Feedom Plastic.

#### **ITEM 7 - PROPOSAL BY FREEDOM PLASTIC, INC. TO ADD NEW SECTION TO THE PLUMBING CODE AS FOLLOWS:**

Al Bass, Chairman of the Mechanical Committee, reported that the Committee reviewed the proposal and revised the proposal to add this section to Table 702.4, as follows:

Polyvinylchloride (PVC) Plastic	ASTM F 1866 (10" Diameter and larger)
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Al Bass stated currently there is no standard for the larger fittings; this proposal would provide a standard for fabricated fittings. Al Bass made a motion to approve the proposal as revised by

the Mechanical Committee. Greg Mulholland seconded the motion. The motion carried without dissent.

#### **ELECTRICAL COMMITTEE MEETING**

The Electrical Committee met on September 20, 2001, to review the proposal made by Ms. Diane Miller, and to review approval of a third party accredited lab.

#### **ITEM 8 - PROPOSAL BY MS. DIANE MILLER TO ADOPT A RULE THAT WOULD INCORPORATE BY REFERENCE ALL SUBSEQUENT EDITIONS OF THE NATIONAL ELECTRICAL CODE (NEC).**

Diane Miller addressed the Council and stated the Building Code Council has in the past approved and adopted the National Electrical Code for the past 50 years without major revisions. Under the North Carolina rule making process, each subsequent edition of the National Electrical Code could be brought forward as North Carolina's Electrical Code. The effective date of the Code will be on January of the year appearing on the code book.

Greg Mulholland made a motion to approve the proposal. Aubrey Smith seconded the motion. The motion carried.

#### **ITEM 9 - REQUEST BY JOHN WIGGINS, TO ADOPT A RULE THAT WOULD INCORPORATE BY REFERENCE ALL SUBSEQUENT EDITIONS OF THE INTERNATIONAL FIRE PREVENTION CODE, INTERNATIONAL FUEL GAS CODE, INTERNATIONAL BUILDING CODE, INTERNATIONAL MECHANICAL CODE, INTERNATIONAL PLUMBING CODE, INTERNATIONAL ENERGY CONSERVATION CODE, AND THE INTERNATIONAL RESIDENTIAL CODE. (PLEASE CONSIDER EACH VOLUME SEPARATELY.)**

Mr. Wiggins stated that the APA rule making process would be far more complicated if his proposal were not approved. Mr. Wiggins stated that anything that changes from the 2000 edition of the International Codes to the 2003 International Codes will have to be submitted as a code change to the Rules Review Commission.

Alan Perdue spoke in support of the proposed item. Grover Sawyer stated the current amendments to the code go forward with the 2005 edition of our codes. Committees will review the items in the International supplements as soon as the supplements are available, and the current North Carolina amendments are edited to coordinate with the 2003 International Code. The 2003 edition of the International Codes and the NC amendments will be put together to make the 2005 edition of the North Carolina Codes.

Diane Miller stated she is working with the staff to ensure that the 2005 NC codes will go to the Rules Review Commission and the Legislature and be ready for implementation on January 1, 2005. Dan Tingen asks if a fiscal note will be prepared for subsequent editions if this rule is adopted. Mr. Tingen expressed concern that changes could be made to the NEC and other volumes of the code and the Council would not know the cost impact of the changes. Tim Bradley stated that he assumes that the subsequent volumes of the International Codes will be reviewed extensively and amendments will be made as necessary. Mr. Bradley stated the proposed rule is saying that things the Council does not want to change, do not have to be published, and do not have to be sent to the Rules Review Commission. This does not change the Council's capability to make changes to the code.

Grover Sawyer stated there are many forces, such as ISO, insurance and fire prevention that will push for the state to continue to adopt the latest edition of a model code.

Aubrey Smith made motion that the Council adopt subsequent editions of the International Fire Prevention, Fuel Gas, Building, Mechanical, Plumbing, Energy Conservation, and Residential Codes to be incorporated by reference into the North Carolina State Building Codes. In addition, the current North Carolina amendments will be incorporated into future editions of the North Carolina Building Code. The North Carolina amendments (blue pages) will prevail when there are conflicts between subsequent editions of the International Codes (white pages) and the North Carolina amendments (blue pages). Dennis Norris seconded the motion. The motion carried.

**ITEM 10 - PROPOSAL BY NTS TO BECOME A THIRD PARTY ACCREDITED TESTING LAB.**

Jim Carpenter addressed the Council and stated the staff and the Electrical Committee had reviewed the proposal from NTS. A letter of recommendation from Mr. Carpenter was included in the Council's package. Jim noted that his letter to the Council stated NCDOI had reviewed, inspected and recommended approval of NTS to perform the testing as an accredited third party testing agency.

Greg Mulholland made a motion to approve NTS as a third party accredited testing lab. Marshall Knight seconded the motion. The motion carried.

Greg Mulholland, Electrical Committee Chairman, stated the Electrical Committee would like the Council Chairman to appoint an ad hoc committee to review and update the rules for third party accreditation. Chairman Gardner stated he would appoint an ad hoc committee to review the rules and make recommendations for changes to the rules.

**FIRE PREVENTION COMMITTEE MEETING**

The Fire Prevention Committee met on September 18, 2001 to consider the following proposal from Ronnie Hahn.

**ITEM 11 - PROPOSAL BY RONNIE HAHN, ASSOCIATED FIRE PROTECTION TO REVISE SECTION 905.2 AS FOLLOWS:**

The committee reviewed Mr. Hahn's proposal and revised the language of the proposal as follows:

**Section 905.2 Installation standards.** Standpipe systems shall be installed in accordance with this section and NFPA 14.

Exception: In other than high-rise buildings, where buildings are sprinklered in accordance with 903.3.1.1, the water supply is not required to meet the higher pressures required for a standpipe system.

Fire Prevention Committee Chairman Strickland stated this proposal, if approved, will make changes to the Fire Prevention Code and the Building Code. Mr. Strickland stated this change is about the requirements for standpipe systems in high rise buildings. This change has been submitted to the International Code Congress for approval.

Mr. Strickland made a motion to approve the proposal. Al Bass seconded the motion. The motion carried. This amendment becomes effective 12/31/01.

**ITEM 12 - REQUESTS FROM CABARRUS COUNTY, NEW HANOVER COUNTY, CITY OF KINSTON, CITY OF WINSTON-SALEM AND THE CITY OF GASTONIA TO PERFORM LOCAL PLAN REVIEW.**

Aubrey Smith abstained from voting on this item. Dan Tingen made a motion to approve the requests from Cabarrus County, New Hanover County, the City of Kinston, the City of Winston-Salem and the City of Gastonia to perform local plan review. Marshall Knight seconded the motion. The motion carried unanimously.

**ITEM 13 - REQUEST BY IBHS TO FORM AN AD-HOC COMMITTEE TO STUDY THE ISSUE OF WIND-BORNE DEBRIS PROTECTION IN NORTH CAROLINA.**

Nanette McElman with the Institute for Business and Home Safety stated the Building Code Council voted to delete the requirements for wind-borne debris from the 2002 Edition of the North Carolina Building and Residential Codes at the June 2001 meeting. Ms. McElman stated the rationale for this decision was based on the implied costs and availability of products to protect these openings. The costs have not been studied for North Carolina exposures and risks for hurricanes. IBHS has contracted with Larry Twisdale to do research about cost effectiveness of opening protection and designing for internal pressures. This study will be specific for NC, and will show the appropriate level of protection required. The IBHS would like the research findings to be presented to an ad hoc committee.

Peter Billing, a representative of window and door manufacturer, spoke in support of the formation of ad hoc committee.

Larry Twisdale with Applied Research Associates, addressed the Building Code Council. Mr. Twisdale stated this research project is specific to structures in North Carolina. Applied Research has contacted builders and has lined up builders to work with them. Applied Research will gather cost information and have the builders review it with him. Structures will be analyzed and see how well it performed. Mr. Twisdale stated, the report would be published, and hoped that the ad hoc committee will provide feedback to the research team.

Tom Avery made a motion to deny the request for ad hoc committee, but to bring the research results to the Residential and Structural committees. Dan Tingen seconded the motion. The motion carried unanimously.

**ITEM 14 - EVALUATION OF STATEMENT OF ECONOMIC INTEREST FILED BY AL BASS, BARRY GARDNER, DAN TINGEN, AUBREY SMITH, AND RICHARD STRICKLAND.**

Wanda Edwards read into the record the evaluation of the statements of economic interest from the Board of Ethics. Statements were read for Al Bass, Barry Gardner, Dan Tingen, Aubrey Smith and Richard Strickland.

**ITEM 15 – REQUEST BY MODULAR CODE CONSULTANTS FOR APPROVAL AS A THIRD PARTY CERTIFYING AGENCY.**

Barry Gupton addressed the Council representing Pat Walker, Deputy Commissioner of the Manufactured Housing Division. The Manufactured Housing Division recommends and reviews applications for third party inspection agencies. Gupton stated that the DOI staff had reviewed the request, and recommended approval by the Council for Modular Code Consultants to be approved as a third party certifying agency.

Marshall Knight made a motion to approve Modular Code Consultants as a third party certifying agency. Al Bass seconded the motion. The motion carried without dissent.

**OTHER ITEMS**

**ITEM 16 – REQUEST BY STAFF TO APPOINT AN AD-HOC COMMITTEE TO DEVELOP THE NORTH CAROLINA BUILDING CODE COMMENTARY.**

Chairman Gardner stated he would appoint an ad-hoc committee to begin working on the Building Code commentary. Chairman Gardner stated that ad hoc committees to work on the commentaries for the other codes will be established and begin meeting as soon as the commentaries are available.

**ITEM 17 – SECTION 210.71(a)5 - SMOKE DETECTORS**

John Hitch addressed the Council about the smoke detector code language in the Section 210.71(a)5 of the Electrical Code. Mr. Hitch made a motion that DOI staff issues a memo that cites the International Building Code commentary and gives an appropriate interpretation to that for minor alterations, repairs and appliance replacements. Dan Tingen seconded the motion.

Richard Strickland amended the motion that DOI staff will issue a memo for distribution to inspection departments and the general public, stating the requirements of Section 210.71(a)5 of the 2002 NC Electrical Code are enforceable only when a building permit is required. Mr. Hitch withdrew his motion. Greg Mulholland seconded the motion. The motion carried without dissent.

**ITEM 18 – PUBLIC IMMUNITY FOR BUILDING INSPECTORS**

Tom Turner made a motion that the Administration Committee follow the case of Thompson vs Waterhouse, and determine if the Council should make any recommendations to the General Assembly concerning statutory changes to GS 143-142, GS 153A-97, and GS 160A-167. Grover Sawyer noted that a bill had been introduced in the Legislature to give building inspectors public duty immunity. Mr. Sawyer stated the bill went to committee and was still in committee. Al Bass amended the motion to direct the Chairman of the Building Code Council to send a letter to the bill sponsor to add the Building Code Council to the list of supporters. Dan Tingen seconded the motion. The motion carried.

**ITEM 19 – BUILDING CODE REQUIREMENT FOR SPRINKLERS IN CHURCHES WITH OCCUPANCIES OF 300 OR GREATER**

Grover Sawyer stated he has received letters and phone calls about the requirement in Section 903.2.1.3 of the 2002 Building Code for churches with occupancies of 300 or greater to be

sprinklered. Mr. Sawyer stated he wants an ad hoc committee to look at this issue and make recommendations to the Council. Chairman Gardner stated that the joint Fire and Building committee would study this issue and report to the full Council at the June meeting.

**ITEM 20 - ACCESSIBILITY SKETCHES, 2002 NC ACCESSIBILITY CODE, PAGES 187 AND 188**

Laurel Wright addressed the Council concerning the revisions of the NC Accessibility Code Section 11.8 adopted by the Council at the June 2001 meeting. The revised sketches showing the new dimensions were subsequently sent to the US Department of Justice. Since June, Ms. Wright stated comments had been received from DOJ, code officials, designers and contractors requesting the minimum room dimensions. The DOI staff redrew the sketches to show the overall minimum dimensions of the restroom. Ms. Wright passed out copies of the drawings and explained her presentation was for informational purposes, as the requirements of the Code have not changed. Chairman Gardner stated this item does not require any action by the Council.

There being no further business, the meeting was adjourned.

Sincerely,

Wanda D. Edwards, PE  
Secretary

**NORTH CAROLINA BUILDING CODE**  
**AMENDMENTS ADOPTED DECEMBER 11, 2001**  
**EFFECTIVE DECEMBER 31, 2001**

1. Add Exception to Section 905.2 as follows:

**Section 905.2 Installation standards.** Standpipe systems shall be installed in accordance with this section and NFPA 14.

**Exception:** In other than high-rise buildings, where buildings are sprinklered in accordance with 903.3.1.1, the water supply is not required to meet the higher pressures required for a standpipe system.

**NORTH CAROLINA PLUMBING CODE**  
**AMENDMENTS ADOPTED DECEMBER 11, 2001**  
**EFFECTIVE DECEMBER 31, 2001**

1. Add to Table 702.4 as follows:

Polyvinylchloride (PVC) Plastic	ASTM F 1866 (10" Diameter and larger)
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**NORTH CAROLINA FIRE PREVENTION CODE**  
**AMENDMENTS ADOPTED DECEMBER 11, 2001**  
**EFFECTIVE DECEMBER 31, 2001**

1. Add Exception to Section 905.2 as follows:

**Section 905.2 Installation standards.** Standpipe systems shall be installed in accordance with this section and NFPA 14.

**Exception:** In other than high-rise buildings, where buildings are sprinklered in accordance with 903.3.1.1, the water supply is not required to meet the higher pressures required for a standpipe system.

**NOTICE**

**NORTH CAROLINA ADMINISTRATION AND ENFORCEMENT  
REQUIREMENTS CODE**

A revised blue page has been issued for the Administration and Enforcement Requirements Code book for pages 21 and 22. If you did not receive a copy of the blue sheet with your code book, contact the NC Department of Insurance at 919/733-3901 for your copy.

The change concerns a correction to Table 502. Group A1-Large Assembly has been changed to Group A.

**Occupancy Group**

**Building Plans to be Approved**

Group A<sup>1</sup>

Occupant load over 1,000

**AGENDA**  
**BUILDING CODE COMMITTEE MEETING**  
**TUESDAY, MARCH 12, 2002**  
**9:00 AM**  
NC Department of Insurance  
Conference Room  
410 North Boylan Avenue, Raleigh, NC 27603

**ITEM 1 – PROPOSAL BY BILL ZIEGERT OF THE SMOKE SAFETY COUNCIL TO REVISE SECTION 707.14.1 OF THE NC BUILDING CODE AS FOLLOWS:**

**707.14.1 Elevator lobby.** Elevators opening into a fire resistance rated corridor as required by Section 1004.3.2.1 and elevators opening into non-rated corridors of A, E, I, M, and R occupancies with occupant loads of 30 or more, shall be provided with an elevator lobby at each floor containing such a corridor. The lobby shall completely separate the elevators from the corridor by ~~fire barriers~~ smoke partitions as defined in Section 710, and required opening protection. Elevator lobbies shall have at least one means of egress complying with Chapter 10 and other provisions of this code.

**ITEM 2 – PROPOSAL BY THE NC BUILDING INSPECTOR'S ASSOCIATION TO REVISE SECTION 302.3.3 EXCEPTION 2 AS FOLLOWS:**

The private garage in Group R-2 and R-3 occupancies shall be separated from the residence and its attic area by means of minimum ½ inch (12.7 mm) gypsum board applies to the garage side. Door openings between the garage and the residence shall be equipped with either solid wood doors not less than 1-3/8 inches (35 mm) thick, solid of honeycomb core steel doors not less than 1-3/8 inches (35 mm) thick or doors in compliance with Section 714.2.3. Openings from a private garage directly into a room used for sleeping purposes shall not be permitted.

**ITEM 3 – PROPOSAL BY THE NC BUILDING INSPECTORS ASSOCIATION TO REVISE SECTION 309.1 OF THE BUILDING CODE AS FOLLOWS:**

**309.1 Mercantile Group M.** Mercantile Group M occupancy includes, among others, buildings and structures or a portion thereof, for the display and sale of merchandise, and involves stocks of goods, wares or merchandise incidental to such purposes and accessible to the public. Mercantile occupancies shall include, but not be limited to the following:

**Automotive lubrication service facility**

Automotive service station

Department stores

Drug stores

Markets

~~Motor vehicle service stations~~

Retail or wholesale stores

Sales rooms

**ITEM 4 – PROPOSAL BY THE NC BUILDING INSPECTORS ASSOCIATION TO REVISE SECTION 406.5 OF THE NC BUILDING CODE AS FOLLOWS:**

**SECTION 406.5 ~~Motor Vehicle~~ Automobile Service Station**

**406.5.1 Construction.** Automobile service stations shall be constructed in accordance with the *International Fire Code* and this section. An automobile service station building shall not have a basement.

**406.5.3 Automotive lubrication service facility.** An automotive lubrication service facility of Group M occupancy is a place of retail business at which periodic servicing of automotive equipment is accomplished by the removal and/or replacement of oils, fluids, filters, greases and minor parts necessary for the maintenance and upkeep of vehicles normally used for transportation on public roads and highways. These facilities may be used for the tuning of engines.

**406.5.3.1 Floor opening.** An automotive lubrication service facility may have a basement or under floor work and storage area whereby access may be gained to portions of vehicles being serviced through openings in the floor complying with Section 707. A basement or under floor work area shall be continuously ventilated to the outside air by fans supplying not less than six air changes per hour.

**AGENDA**  
**BUILDING AND FIRE PREVENTION CODE COMMITTEES MEETING**  
**TUESDAY, MARCH 12, 2002**  
**1:00 PM**  
NC Department of Insurance  
Conference Room  
410 North Boylan Avenue, Raleigh, NC 27603

**ITEM 1 - REQUIREMENT IN SECTION 903.2.1.3 FOR CHURCHES WITH  
OCCUPANCIES OF 300 OR GREATER TO BE SPRINKLERED**

**AGENDA**  
**ENERGY CODE COMMITTEE MEETING**  
**WEDNESDAY, MARCH 13, 2002**  
**10:00 AM**  
NC Department of Insurance  
Conference Room  
410 North Boylan Avenue, Raleigh, NC 27603

**ITEM 1 – PROPOSAL BY WILLIAM PRINDLE TO REVISE SECTION N1102.2 IN THE NC RESIDENTIAL CODE AS FOLLOWS:**

**N1102. Maximum solar heat gain coefficient for fenestration products.** The area-weighted-average solar heat gain coefficient (SHGC) for glazed fenestration (windows, doors, and skylights) shall not exceed 0.40. The SHGC of fenestration products shall be determined in accordance with NFRC 200 by an accredited, independent laboratory, and certified and labeled by the manufacturer.

Compliance alternatives. If fenestration products meeting the area-weighted 0.4 SHGC requirement are not installed, the requirements of this section shall be met through documentation of installation of permanent solar shading devices. These may include roof overhangs, awnings, or shade screens. Shade screens shall have a rated SHGC of .4 or less, determined in accordance with NFRC 200 by an accredited, independent laboratory, and certified and labeled by the manufacturer.

**ITEM 2 – PROPOSAL BY WILLIAM PRINDLE TO REVISE SECTIONS 502.1.5, 502.2.4.15 AND 602.2 OF THE NC ENERGY CODE AS FOLLOWS:**

**502.1.5 Fenestration Solar Heat Gain Coefficient.** The area-weighted-average solar heat gain coefficient (SHGC) for glazed fenestration (windows, doors, and skylights) shall not exceed 0.40. The SHGC of fenestration products shall be determined in accordance with NFRC 200 by an accredited, independent laboratory, and certified and labeled by the manufacturer.

Compliance alternatives. If fenestration products meeting the area-weighted 0.4 SHGC requirement are not installed, the requirements of this section shall be met through documentation of installation of permanent solar shading devices. These may include roof overhangs, awnings, or shade screens. Shade screens shall have a rated SHGC of .4 or less, determined in accordance with NFRC 200 by an accredited, independent laboratory, and certified and labeled by the manufacturer.

**502.2.4.15 Fenestration solar heat gain coefficient.** ~~In locations with HDD less than 3,500,~~ fenestration products shall also meet the requirements of Section 502.1.5.

**602.2 Maximum solar heat gain coefficient for fenestration products.** The area-weighted-average solar heat gain coefficient (SHGC) for glazed fenestration (windows, doors, and skylights) shall not exceed 0.40. The SHGC of fenestration products shall be determined in accordance with NFRC 200 by an accredited, independent laboratory, and certified and labeled by the manufacturer.

Compliance alternatives. If fenestration products meeting the area-weighted 0.4 SHGC requirement are not installed, the requirements of this section shall be met through documentation of installation of permanent solar shading devices. These may include roof overhangs, awnings, or shade screens. Shade screens shall have a rated SHGC of .4 or less, determined in accordance with NFRC 200 by an accredited, independent laboratory, and certified and labeled by the manufacturer.

**ITEM 3 - PROPOSAL BY JEFF TILLER TO REVISE SECTIONS 602.2 AND 502.1.5 OF THE NC ENERGY CODE AS FOLLOWS:**

**602.2 Maximum solar heat gain coefficient for fenestration products.** In locations with heating degree days (HDD) less than 3,500, homes shall use low-emissivity windows in which the area-weighted average solar heat gain coefficient (including the effects of any permanent exterior solar shading devices) shall not exceed 0.40.

**Exception:** In rooms with substantial thermal storage mass (4" or greater slab floors, masonry walls externally insulated, or water-filled containers having a ratio of at least 3 gallons per square foot of glass), the solar heat gain coefficient may exceed 0.40.

**502.1.5 Fenestration solar heat gain coefficient.** In locations with heating degree days (HDD) less than 3,500, homes shall use low-emissivity windows in which the area-weighted average solar heat gain coefficient (including the effects of any permanent exterior solar shading devices) shall not exceed 0.40.

**Exception:** In rooms with substantial thermal storage mass (4" or greater slab floors, masonry walls externally insulated, or water-filled containers having a ration of at least 3 gallons per square foot of glass), the solar heat gain coefficient may exceed 0.40.

**AGENDA**  
**MECHANICAL CODE COMMITTEE MEETING**  
**WEDNESDAY, MARCH 13, 2002**  
**1:00 PM**  
NC Department of Insurance  
Conference Room  
410 North Boylan Avenue, Raleigh, NC 27603

**ITEM 1 – REQUEST BY DANIEL GLEIBERMAN OF FALCON WATERFREE TECHNOLOGIES TO REVISE SECTION 419 AND 425 AS FOLLOWS:**

**419.1 Approval.** Urinals shall conform to ASME 112.19.2, CSA B45.1 or CSA B45.5. Urinals shall conform to the water consumption requirements of Section 604.4. Urinals shall conform to the hydraulic performance requirements of ASME 112.19.6, CSA B45.1 or CSA B45.5.

Urinals that do not use water shall be permitted provided the urinals

- (1) provide a barrier liquid sealant contained in a removable trap to maintain the trap seal;
- (2) permit the uninhibited flow of water through the trap to the sanitary drainage system;
- (3) comply with ANSI Z124.9 and ASME 112.19.2, as applicable,
- (4) a working water supply line shall be provided and installed for all urinal rough-ins; however, a flushometer valve, flush tank, or similar device shall not be required for urinal fixtures that comply with the waterless test requirements of ANSI Z124.9.

**425. Flushing devices required.** Each water closet, urinal, clinical sink, and any plumbing fixture that depends on trap siphonage to discharge the fixture contents to the drainage system shall be provided with a flushometer valve, flushometer tank or a flush tank designed and installed to supply water in quantity and rate of flow to flush the contents of the fixture, cleanse the fixture, and refill the fixture trap.

A flushometer valve, flush tank, or similar device shall not be required for urinal fixtures that comply with the waterless test requirements of ANSI Z124.9 and which:

- (1) provide a barrier liquid sealant contained in a removable trap to maintain the trap seal;
- (2) permit the uninhibited flow of water through the trap to the sanitary drainage system;
- (3) comply with ANSI Z124.9 and ASME 112.19.2 as applicable, and
- (4) a working water supply line shall be provided and installed for all urinal rough-ins.

**AGENDA**  
**JOINT STRUCTURAL AND RESIDENTIAL CODE COMMITTEES MEETING**  
**TUESDAY, MARCH 19, 2002**

**9:00 AM**

NC Department of Insurance  
Conference Room  
410 North Boylan Avenue, Raleigh, NC 27603

**ITEM 1 - PRESENTATION RESEARCH FINDINGS ON WIND-BORNE DEBRIS BY  
LARRY TWISDALE OF APPLIED RESEARCH**

**ITEM 2 - PROPOSAL BY NANETTE McELMAN OF IBHS TO INCLUDE WINDBORNE  
DEBRIS PROTECTION IN BUILDING CODE AS PRINTED IN SECTION  
1609.1.4, TABLE 1609.1.4 AND SECTION 1609.2 OF THE 2000  
INTERNATIONAL BUILDING CODE**

**ITEM 3 - PROPOSAL BY NANETTE McELMAN OF IBHS TO INCLUDE WINDBORNE  
DEBRIS PROTECTION IN RESIDENTIAL CODE AS PRINTED IN SECTION  
R301.2.1.2, TABLE R301.2.1.2 AND SECTIONS R613.4 AND R613.7 OF THE  
2000 INTERNATIONAL RESIDENTIAL CODE**