

November 17, 2003

Mr. Dan Tingen
Tingen Construction Company
8411 Garvey Drive/# 101
Raleigh, NC 27616

RE: Agenda for the December 9, 2003 Building Code Council Meeting

Dear Dan:

This is to officially notify you and other interested parties of a regularly scheduled meeting of the Building Code Council.

1. The work session will begin at 9:00 AM on Monday, December 8, 2003. The work session is open to the public on a non-contributing basis.
2. The public hearing is scheduled for 1:00 PM December 8, 2003.
3. The Building Code Council meeting will begin at 9:00 AM on Tuesday, December 9, 2003.

The December Building Code Council meeting will be held at the Wake County Commons located at 4011 Carya Drive, Raleigh, NC 27603. Persons requiring auxiliary aid or service should notify the Council at least (10) working days prior to the meeting.

**ITEM 1 - APPROVAL OF MINUTES OF THE SEPTEMBER 9, 2003
BUILDING CODE COUNCIL MEETING**

**ITEM 2 - EVALUATION OF STATEMENT OF ECONOMIC INTEREST FILED
BY ALAN W. PERDUE, ROBERT F RUFFNER, JR., AND WALTER
L. SIMMONS.**

PETITIONS FOR RULEMAKING

The following petitions for rulemaking have been received since the last Council meeting. The Council votes to grant or deny the petitions. Petitions that are granted may proceed through the rulemaking process. The Council will give no further consideration to petitions that are denied. The Council may send any petition to the appropriate committee for review. Committee meetings if scheduled, will be March 8, 2004. The public hearing for petitions granted will be held on June 8, 2004.

**ITEM 3- REQUEST BY JOSEPH R HETZEL WITH DOOR AND ACCESS SYSTEMS
 MANUFACTURERS ASSOCIATION TO REVISE TABLE 4402(b) IN THE NORTH
 CAROLINA RESIDENTIAL CODE AS FOLLOWS:**

**TABLE 4402(b)
 DESIGN PRESSURES IN PSF FOR GARAGE DOORS ^{1,2,3,4,5,6}
 POSITIVE AND NEGATIVE IN PSF**

9x7 Doors

Velocity (mph)	Mean Roof Height (ft)		
	15	25	35
<u>110</u>	<u>20 + 19.1 -21.6</u>	<u>23 + 19.1 -21.6</u>	<u>26 + 20.0 -22.6</u>
<u>120</u>	<u>25 + 22.8 -25.8</u>	<u>29 + 22.8 -25.8</u>	<u>32 + 23.8 -26.9</u>
<u>130</u>	<u>30 + 26.7 -30.2</u>	<u>35 + 26.7 -30.2</u>	<u>39 + 27.9 -31.5</u>

16x7 Doors

Velocity (mph)	Mean Roof Height (ft)		
	15	25	35
<u>110</u>	<u>+ 18.3 -20.4</u>	<u>+ 18.3 -20.4</u>	<u>+ 19.1 -21.3</u>
<u>120</u>	<u>+ 21.8 -24.3</u>	<u>+ 21.8 -24.3</u>	<u>+ 22.8 -25.4</u>
<u>130</u>	<u>+ 25.6 -28.5</u>	<u>+ 25.6 -28.5</u>	<u>+ 26.7 -29.8</u>

1. The pressures in this table are for garage doors at least 9 ft x 7 ft and at least 2 ft from a corner.
2. Alternate design pressures may be determined by using the North Carolina State Building Code General Construction, ASCE 7-98 or the 2000 International Building Code.
3. For doors in a structure with a roof slope of 10 degrees (2:12) or less from the horizontal the pressures from this table may be multiplied by 0.92.
4. Design pressure ratings based on tests done according to ASTM E330 or ANSI/DASMA 108 are adequate documentation.
5. Garage doors on the ground level of a structure in a flood zone do not have to meet the above design pressures provided all of the following conditions are met:
 - Structure is anchored to the girders and top of the piling to resist the forces given in Chapter 44. The garage door occurs below the top of the piling.
 - Provide openings at the garage level that comply with either of the following options:
 1. Design all exterior walls at the garage level to break away at 20 psf or less or:
 2. Provide openings (in walls at the garage level without the garage door) equal to at least 20% of the total wall area from the ground to the roof.
6. Design pressures are based on Exposure B condition.
 - a. For 15' mean roof height, multiply by 1.21 for Exposure C values and by 1.47 to get Exposure D values
 - b. For 25' mean roof height, multiply 1.34 for Exposure C values and by 1.60 to get Exposure D values
 - c. For 35' mean roof height, multiply 1.38 for Exposure C values and by 1.63 to get Exposure D values

ITEM 4 – REQUEST BY JOSEPH R. HETZEL WITH DASMA TO ADD A NEW TABLE 301.2(5) IN THE NORTH CAROLINA RESIDENTIAL CODE AS FOLLOWS:

**TABLE 301.2(5)
DESIGN PRESSURES FOR GARAGE DOORS ^{1,2,3,4,5,6}
POSITIVE AND NEGATIVE IN PSF**

9x7 Doors

Velocity (mph)	Mean Roof Height (ft)		
	15	25	35
90	+ 12.8 -14.5	+ 12.8 -14.5	+ 13.4 -15.1
100	+ 15.8 -17.9	+ 15.8 -17.9	+ 16.5 -18.7

16x7 Doors

Velocity (mph)	Mean Roof Height (ft)		
	15	25	35
90	+ 12.3 -13.7	+ 12.3 -13.7	+ 12.8 -14.3
100	+ 15.2 -16.9	+ 15.2 -16.9	+ 15.8 -17.6

1. The pressures in this table are for garage doors at least 2 ft from a corner.
2. Alternate design pressures may be determined by using the North Carolina State Building Code General Construction, ASCE 7-98 or the 2000 International Building Code.
3. For doors in a structure with a roof slope of 10 degrees (2:12) or less from the horizontal pressures from this table may be multiplied by 0.90.
4. Design pressure ratings based on tests done according to ASTM E330 or ANSI/DASMA 108 are adequate documentation.
5. Garage doors on the ground level of a structure in a flood zone do not have to meet the above design pressures provided all of the following conditions are met:
 - a. Structure is anchored to the girders and top of the piling to resist the forces given in Chapter 44.
 - b. The garage door occurs below the top of the piling.
 - c. Provide openings at the garage level that comply with either of the following options:
 1. Design all exterior walls at the garage level to break away at 20 psf or less or:
 2. Provide openings (in walls at the garage level without the garage door) equal to at least 20% of the total wall area from the ground to the roof.
6. Design pressures are based on Exposure B condition.
 - a. For 15' mean roof height, multiply by 1.21 for Exposure C values and by 1.47 to get Exposure D values
 - b. For 25' mean roof height, multiply by 1.34 for Exposure C values and by 1.60 to get Exposure D values
 - c. For 35' mean roof height, multiply by 1.38 for Exposure C values and by 1.63 to get Exposure D values

ITEM 5 – REQUEST BY JOSEPH R HETZEL WITH DASMA TO REVISE SECTION R614.1 IN THE NORTH CAROLINA RESIDENTIAL CODE AS FOLLOWS:

R614.1 Side Hinge and Garage Doors. Exterior side hinge doors and garage doors shall have a structural design pressure rating as required by ~~Table 301.2(4)~~ Table 301.2(5) or Section 4402. These doors are not required to be rated for water resistance nor air infiltration.

ITEM 6 – REQUEST BY CHRIS EDWARDS OF THE NC ASSOCIATION OF LAUNDERERS AND CLEANERS, TO ADD THE FOLLOWING EXCEPTION TO SECTION 1208.2 IN THE NORTH CAROLINA FIRE PREVENTION CODE AS FOLLOWS:

1208.2 Automatic sprinkler system. An automatic sprinkler system shall be installed in accordance with Section 903.3.1.1 throughout dry cleaning plants containing Type II, Type III-A or Type III-B dry cleaning systems.

Exception: Automatic sprinkler systems are not required in dry cleaning plants where the quantity of Class IIIA solvent in dry cleaning machines and storage does not exceed 330 gal (1250 L), and a new machine is being installed that is specifically designed for class IIIA solvents and has been listed by a North Carolina recognized testing laboratory or a used machine is being installed that was manufactured after January 1, 1999 and was specifically designed by the original manufacturer for class IIIA solvents and has been listed by a North Carolina recognized testing laboratory, and a type IIIA dry cleaning machine is not being installed in a Type II dry cleaning room, and dry cleaning machines are equipped with instrumentation, equipment, or controls that provide any one of the following:

- a. Features that limit oxygen concentrations to less than 8 percent by volume
- b. Features that limit solvent temperatures to less than 30° F (16.7° C) below their flash point
- c. Features that limit solvent vapor concentration to less than 25 percent of the LEL
- d. Features that incorporate equipment approved for use in Class I, Division 2 hazardous locations
- e. Features that incorporate an integral automatic fire extinguishing system conforming with Section 1208.3

Exception: Automatic sprinkler systems are not required in dry cleaning plants where the quantity of Class IIIB solvent in dry cleaning machines and storage does not exceed 3300 gal (12,490 L), and a new machine is being installed that is specifically designed for class IIIB solvents and has been listed by a North Carolina recognized testing laboratory or a used machine is being installed that was manufactured after January 1, 1999 and was specifically designed by the original manufacturer for class IIIB solvents and has been listed by a North Carolina recognized testing laboratory, and a type IIIB dry cleaning machine is not being installed in a Type II dry cleaning room.

ITEM 7 – REQUEST BY THE RESIDENTIAL COMMITTEE TO REVISE SECTION R903.3 OF THE NORTH CAROLINA RESIDENTIAL CODE AS FOLLOWS:

R903.3 Coping. Parapet walls shall be properly coped with noncombustible, weatherproof materials of a width no less than the thickness of the parapet wall. Parapet coping shall extend 2 inches minimum down the faces of the parapet.

ITEM 8 – REQUEST BY THE RESIDENTIAL COMMITTEE TO REVISE SECTION R703.8 OF THE NORTH CAROLINA RESIDENTIAL CODE AS FOLLOWS:

R 708.3 Flashing. Approved corrosion-resistive flashing shall be provided in the exterior wall envelope in such a manner as to prevent the entry of water into the wall cavity or penetration of water to the building structural framing components. Install flashing per ASTM E 2112 *Standard Practice for Installation of Exterior Windows, Doors and Skylights*, or in accordance with manufacturer's instructions. Aluminum flashing may not be used in contact with cementitious material, except at counter flashing. The flashing shall extend to the surface . . .
(Include a reference to the standard in Chapter 43 – References.)

ITEM 9 – REQUEST BY THE RESIDENTIAL COMMITTEE TO ADD THE FOLLOWING TO SECTION R 602.10.5 AND FIGURE R602.10.5 (2) OF THE NORTH CAROLINA RESIDENTIAL CODE:

R602.10.5

(Add the following after the first paragraph.)

Exception: Vertical wall segments in the first of one or first of two story buildings next to garage openings shall be permitted to have a 6:1 height-to-width ratio (with height being measured from top of header to sill plate) when constructed in accordance with the following provisions. Each panel shall have a length of not less than 16 inches (406 mm) and a height of not more than 10 feet (3048 mm). Each panel shall be sheathed on one face with a single layer of 3/8-inch-minimum-thickness (9.5 mm) wood structural panel sheathing nailed with 8d common or galvanized box nails in accordance with Figure R602.10.5 (2). The wood structural panel sheathing shall extend up over the solid sawn or glued-laminated header and shall be nailed in accordance with Figure R602.10.5 (2). The header shall extend between the inside faces of the first full-length outer studs of each panel. The clear span of the header between the inner studs of each panel shall be not less than six feet (1829 mm) and not more than 18 feet (5486 mm) in length. A strap with an uplift capacity of not less than 1000 pounds (454 kg) shall fasten the header to the side of the inner studs opposite the sheathing. Two anchor bolts shall be installed in accordance with Section R403.1.6, and plate washers shall be a minimum of 2 inches by 2 inches by 3/16 inch (51 mm by 51 mm by 4.8 mm) thick and shall be used on each bolt. This exception is only permitted in Seismic Design Categories A-C.

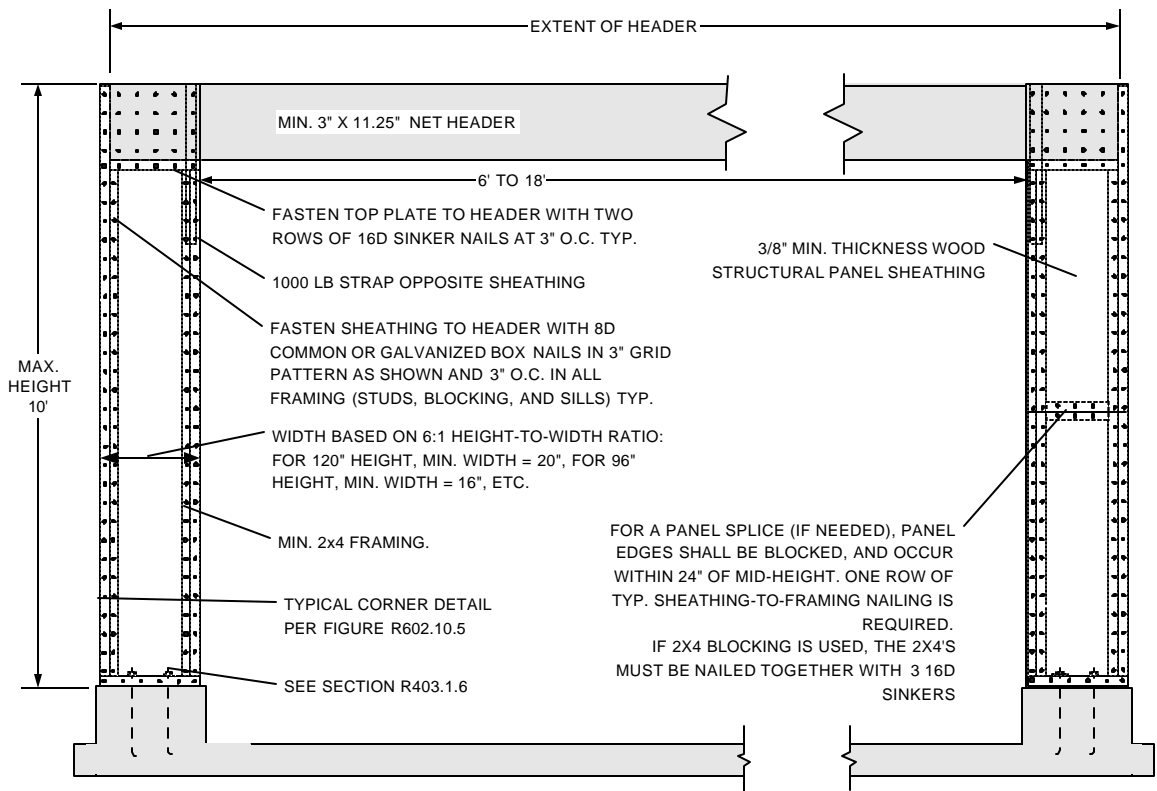


FIGURE R602.10.5(2)
GARAGE DOOR BRACED WALL PANEL FOR USE WITH CONTINUOUSLY SHEATHED WALLS

ITEM 10 – REQUEST BY JEFF GRIFFIN, MECKLENBURG COUNTY, TO ADD TO TABLE 602.3. (1) OF THE NORTH CAROLINA RESIDENTIAL CODE AS FOLLOWS:

**TABLE 602.3(1)
FASTENER SCHEDULE FOR STRUCTURAL MEMBERS**

DESCRIPTION OF BUILDING ELEMENTS	NUMBERS AND TYPE OF FASTENERS	SPACING OF FASTENERS
Ledger Strip	3-16d common 4 – 3” x 0.131” nail 3 – 3” 14 gage staple	Face nail at 2” on center under each joist

ITEM 11 – REQUEST BY ED ADAMS, CHET ADAMS COMPANY TO ADD A NEW SECTION 608 TO THE NORTH CAROLINA MECHANICAL CODE AS FOLLOWS:

**SECTION 608
FABRIC AIR DISTRIBUTION DEVICE**

608.1 General. Fabric air distribution devices are supply air distribution systems operating under positive pressure. Air distribution occurs through any combination of permeable fabric, linear perforated vents, linear mesh vents or orifices. The systems consist of circular, semi-circular or quarter circle sections ranging from 6 inches to 84 inches joined together with zippers. Fittings include elbows, transitions, reducers, saddle-T’s, and end caps.

608.2 Material. The materials shall have a flame-spread index not exceeding 25 and a smoke-developed index not exceeding 50. Fabric shall meet the criteria as set forth in Section 4.0 of the ACCEPTANCE CRITERIA FOR FABRIC AIR DISPERSION SYSTEMS (AC167 dated July 2000) by ICBO Evaluation Service, Inc. Product must be listed by UL as "Distribution Devices, Air" and be tested by an ICBO Evaluation Service accredited independent testing laboratory (or other third party code evaluation service acceptable to NCDOI) that the material is in accordance with the ACCEPTANCE CRITERIA FOR FABRIC AIR DISPERSION SYSTEMS (AC167 dated July 2000).

608.3 Design. The fabric air dispersion system shall be designed in accordance with the manufacturer's design guide or design manual. The design shall be documented in such a way as to be verifiable by the Authority Having Jurisdiction if requested by that AHJ. Design criteria shall include, but not be limited to, fabric air distribution device sizing, length, and support system, vent or orifice location and sizing, and system supply flow rates. Maximum air temperature, velocity, pressure and fabric permeability shall be taken into consideration.

Exception: The fabric air dispersion system may be designed by a licensed design professional in lieu of the above.

608.4 LIMITATIONS:

608.4.1 The use of the fabric air dispersion system shall be those imposed by the evaluation report(s) for that manufacturer’s product and by all North Carolina Mechanical Code requirements that may apply.

608.4.2 Product installation and supports shall comply with the manufacturer’s installation instructions, the requirements of North Carolina Mechanical Code Chapter 6 and the approved evaluation report(s).

608.4.3 Product shall not pass through any fire-rated construction or penetration.

- 608.4.4 Product shall be used for positive pressure air distribution only. Negative pressure uses (i.e., return or exhaust air) are prohibited.
- 608.4.5 Product shall be used in exposed interior locations only, and cannot be concealed from view by building walls, partitions, floor/ceiling assemblies, or roof.
- 608.4.6 Clearance from combustibles shall be in accordance with the manufacturers installation instructions or North Carolina Mechanical Code Chapter 3, as applicable
- 608.4.7 Maximum positive pressure differential shall be limited to 3.1 inches of water column or the maximum positive pressure differential of that manufacturer's product, whichever is less.
- 608.4.8 Periodic cleaning and maintenance shall be in accordance with the manufacturer's recommendations. Mechanical duct cleaning means are prohibited.
- 608.4.9 Documentation shall be provided from the AHU manufacturer that using this product will not adversely affect the operation of the AHU.
- 608.4.10 Fabric air dispersion systems shall meet the requirements of North Carolina Mechanical Code paragraph 309.1.

PUBLIC HEARING AND FINAL ADOPTION

Items 13 through 18 are on the agenda for final approval by the Council. Items approved by the Council will go to the Rules Review Commission for approval. The Council will give no further consideration to items that are denied.

ITEM 13 – REQUEST BY MIKE BOGGS TO ADD NEW SECTION 911.5 TO THE NC FIRE PREVENTION CODE AS FOLLOWS:

911.5 Liquefied petroleum gas distribution facilities.
Liquefied petroleum gas distribution facilities shall comply with Chapter 119, Article 5 of the General Statutes of North Carolina, and the North Carolina Administrative Code, Title 2, Chapter 38, Section 0.700, as enforced by the N. C. Department of Agriculture and Consumer Services through the provisions of NFPA 58.

ITEM 14 – REQUEST BY MIKE BOGGS TO DELETE REFERENCES TO LIQUEFIED PETROLEUM GAS IN TABLE 911.1 OF THE NC FIRE PREVENTION CODE AS FOLLOWS:

**TABLE 911.1
EXPLOSION CONTROL REQUIREMENTS**

MATERIAL	CLASS	Barricade construction	Explosion (deflagration) venting or explosion (deflagration) prevention systems
Liquefied petroleum gas distribution facilities	_____	Not required	Required

ITEM 15- REQUEST BY MIKE BOGGS TO REVISE TABLE 911.1 OF THE NC FIRE PREVENTION CODE AS FOLLOWS:

TABLE 911.1

EXPLOSION CONTROL REQUIREMENTS

MATERIAL	CLASS	Barricade construction	Explosion (deflagration) venting Or explosion (deflagration) prevention systems
Flammable gas, <u>not including Liquefied petroleum gas</u>	Gaseous Liquefied	Not required Not required	Required Required

ITEM 16 – REQUEST BY MIKE BOGGS TO DELETE SECTION 2207 OF THE NC FIRE PREVENTION CODE AND REPLACE WITH THE FOLLOWING:

2207.1 General. Service stations for LP-gas fuel shall comply with Chapter 119, Article 5 of the General Statutes of North Carolina, and the North Carolina Administrative Code, Title 2, Chapter 38, Section 0.700, as enforced by the NC Department of Agriculture and Consumer Services through the provisions of NFPA 58.

2207.2 Attendants. Motor vehicle fueling operations shall be conducted by qualified attendants or in accordance with Section 2207.3 by persons trained in the proper handling of LP-gas.

2207.3 Private fueling of motor vehicles. Self-service LP-gas dispensing systems, including key, code, and card lock dispensing systems shall not be open to the public and shall be limited to the filling of permanently mounted fuel containers on LP-gas powered vehicles.

Self-service LP-gas dispensing systems shall be in accordance with the following:

1. The system shall be provided with an emergency shutoff switch located within 100 feet (30.480 meter) of, but not less than 20 feet (6.096 meters) from dispensers.
2. The owner of the dispensing facility shall provide for the safe operation of the system and the training of the users.

ITEM 17 – REQUEST BY MIKE BOGGS TO REVISE THE LAST PARAGRAPH OF SECTION 3001.1 OF THE NC FIRE PREVENTION CODE AS FOLLOWS:

LP-Gas shall also comply with ~~Chapter 38~~ and the International Fuel Gas Code, Chapter 119, Article 5 of the General Statutes of North Carolina and the North Carolina Administrative Code, Title 2 Chapter 38, Section .0700.

ITEM 18 – REQUEST BY ERIC JOHNSON OF THE BRICK ASSOCIATION TO REVISE SECTION 1613.3 OF THE NC BUILDING CODE AS FOLLOWS:

1616.3 Determination of seismic design category. All structures shall be assigned to a seismic design category based on their seismic use group and the design spectral

response acceleration coefficients, S_{DS} and S_{D1} , determined in accordance with Section 1615.1.3 or 1615.2.5. Each building and structure shall be assigned to the most severe seismic design category in accordance with Table 1616.3(1) or 1616.3(2) irrespective of the fundamental period of vibration of the structure, T .

Exception: The seismic design category is permitted to be determined from Table 1616.3(1) alone when all of the following apply:

1. the approximate fundamental period of the structure T_a , in each of the two orthogonal directions determined in accordance with Section 1617.4.2.1 is less than $0.8T_s$ determined in accordance with Section 1615.1.4, and
2. equation 16-35 is used to determine the seismic response coefficient, C_s and
3. the diaphragms are rigid as defined in Section 1602.

ITEM 19 – REQUEST BY F. REED JARVIS TO REVISE SECTION 106 TO THE 2002 NORTH CAROLINA FIRE PREVENTION CODE AS FOLLOWS:

Once every year	Hazardous, Institutional, HighRise, Assembly <u>except those noted below</u> and Residential except one and two family dwellings and only interior common areas of dwelling units of multi-family occupancies
Once every two years	Industrial and Educational (Except public schools)
Once every three years	<u>Assembly occupancies with an occupant load less than 100, Business, Mercantile, Storage, Churches and Synagogues</u>

ITEM 20 - COMMITTEE REPORTS

BUILDING CODE COUNCIL COMMITTEES

1. BUILDING COMMITTEE
2. JOINT RESIDENTIAL AND STRUCTURAL COMMITTEE MEETING

AD HOC COMMITTEES

1. INTERNATIONAL EXISTING BUILDING COMMITTEE

COMMENTARY COMMITTEES

1. PLUMBING CODE COMMENTARY
2. MECHANICAL CODE COMMENTARY

ITEM 21 – OTHER ITEMS

Sincerely,

Wanda D. Edwards, PE
Secretary

APPEAL AGENDA

**ITEM 1 – APPEAL BY GLENN JERNIGAN & ASSOCIATES OF DECISION BY CITY OF
FAYETTEVILLE FIRE INSPECTION**