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Director

July 29, 2010

TO: SCHOOL SUPERINTENDENTS, ARCHITECTS AND ENGINEERS

FROM: KATHERINE LYNN, DIRECTOR
ALABAMA BUILDING COMMISSION
Katherine Lynn

SUBJECT: ADDITIONAL GUIDANCE ON SAFE SPACE REQUIREMENTS

Since the adoption of the ICC 500 and as a result of reviews of new public schools with safe spaces, the Building Commission has received several requests for clarification of the ICC 500 requirements. This memorandum is being issued to provide school architects, engineers and owners additional guidance on the requirements and interpretation of the ICC 500 for future school projects subject to Act 2010-746.

- 1. Occupant Load (Para. 501.1.1).** Each new public school shall include a safe space or safe spaces of sufficient size to accommodate the student occupant load plus an additional 10% increase for faculty and administration. The student occupant load shall be calculated at 1 student per 30 SF of gross classroom area. Fractions or portions shall be rounded up to whole numbers. Classroom area must include all rooms designated for general classroom instruction (for example: special education, art, computer lab, science lab, etc.). Auxiliary support areas such as cafeterias, band practice rooms, gymnasiums, etc. do not have to be included as general classroom instruction area.
- 2. Safe Space Design Information (Para. 107.2.1 and 107.2.6).** The plan submittal shall include a Safe Space Plan (similar to the Life Safety Plan) with the design information required per these ICC sections. In addition, the safe space plan shall include the maximum number of occupants (seating/standing and wheelchair bound), the number and location of required toilet and handwashing facilities (if applicable), the maximum travel distance to the shelter and accessible route, location of emergency escape openings, locations of all required signage, location of fire extinguishers and first aid kits (if applicable), and indicate the 2-hour firewalls.
- 3. Tornado Wind Speed Determination (Para. 304.2).** A state map with counties is attached that approximates the shelter design wind speeds as illustrated in Figure 304.2 (1). The map is provided as a guide and the design professional must use their professional judgment when determining the appropriate design criteria. The design wind speed must be indicated on the Safe Space Plan and on the required safe space signage.

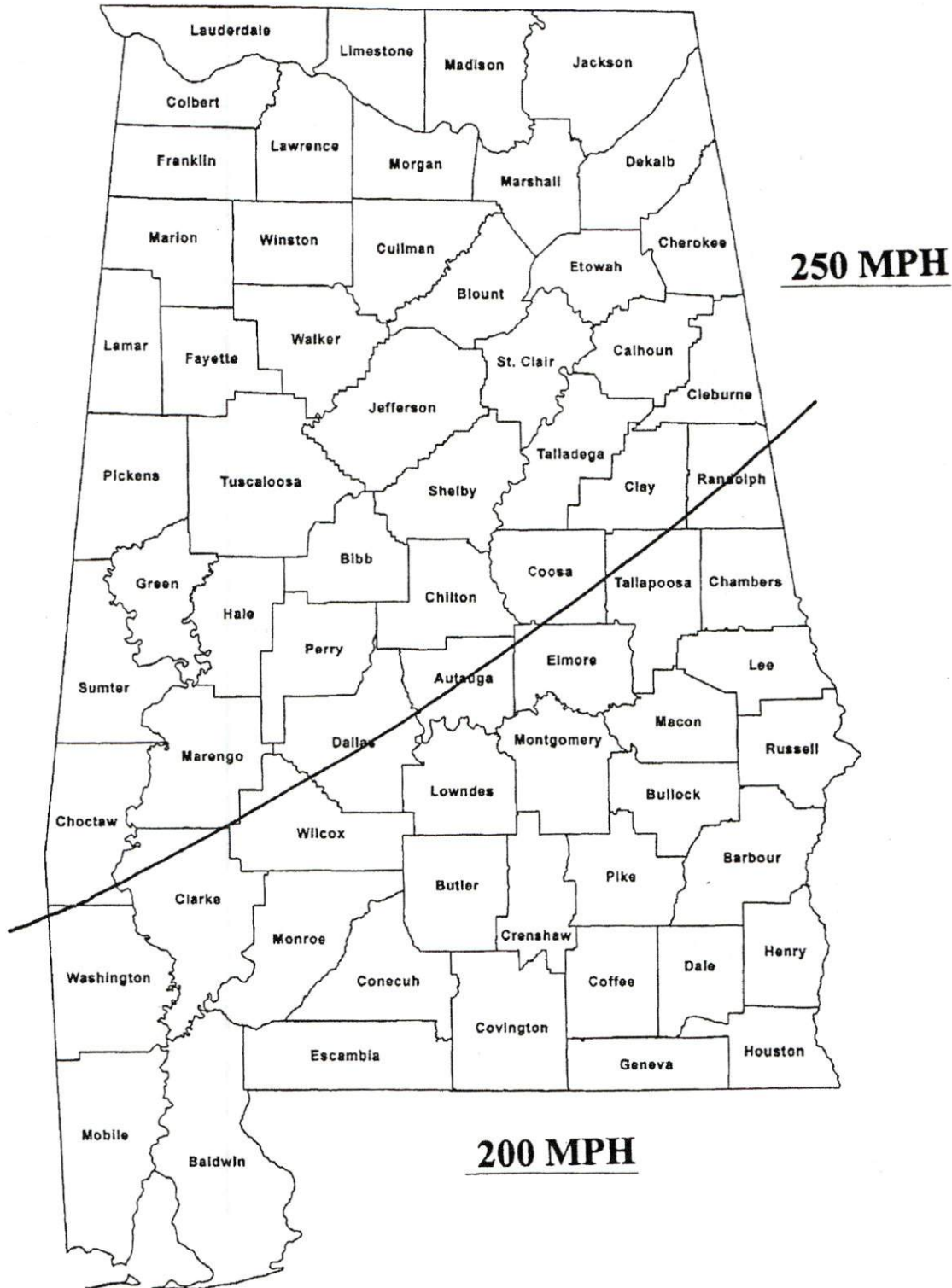
4. **Labeling of Shelter Openings (Para. 108.2).** All shelter-rated assemblies, including but not limited to door opening assemblies, shall include the applicable rating label on each component. The labels shall be factory applied and clearly visible.
5. **Labeling of Fire Barriers (Para. 601.1).** All 2-hour fire barriers shall be permanently identified with signs or stenciling in accordance with the applicable building code.
6. **Shelter Signage. (Para. 108.1).** In addition to the type of shelter, name of builder or manufacturer and the design wind speed, the shelter sign shall also include the maximum occupant load.
7. **Peer Review. (Para. 106.1.1).** When the maximum occupant load of a safe space shelter exceeds 300 occupants, the design professional must submit a letter from an independent structural engineer who has reviewed the construction documents for compliance with Chapter 3 – Structural Design Criteria. The letter must be stamped, signed and dated by the structural engineer and must be submitted with the Final Submittal.
8. **Mandatory Design Professional's Statement. (Para. 106.4).** The attached "Certification of Structural Observations" must be completed by the architect or structural engineer of record and submitted to the Building Commission Inspector at the Final Inspection.
9. **Mandatory Contractor's Statement. (Para. 107.3.3).** The attached "Contractor's Statement of Responsibility" must be completed by the contractor and submitted to the Building Commission Inspector prior to the start of construction. A copy of the Quality Assurance Plan as prepared by the Design Professional must be attached to the Contractor's Statement.
10. **Special Inspections. (Para. 107.2.4).** A list of Special Inspections required for the project must be submitted to the Building Commission Inspector at the Pre-Construction Conference.
11. **Location of Safe Spaces.** It is highly recommended that safe spaces be adequately dispersed to minimize travel times and located within the same structure when possible to avoid travel outside the building during inclement weather. The ideal travel time is 5-10 minutes and the maximum recommended travel time should be no more than 15 minutes. The travel time should consider the time required to organize the students, gather belongings, and proceed in an orderly fashion to the safe space. In addition, safe spaces should be located or dispersed so that they are accessible from areas that are likely to be used outside of school hours, such as band practice rooms, field houses, gymnasiums and similar areas.
12. **Emergency Communication.** It is recommended that safe spaces include some form of reliable emergency communication. Cellular phone communication is not considered reliable since cell towers may be affected by a storm and/or the volume of calls.

I understand that the design of safe spaces has presented some new challenges and I appreciate the commitment and support of all school architects and engineers in the implementation of this important legislation. If there are additional questions regarding the ICC 500, please feel free to contact me.

Cc: Perry Taylor, State School Architect

**STATE MAP WITH COUNTIES SHOWING
APPROXIMATE TORNADO WIND SPEED ZONES**

(Refer to ICC 500, Figure 304.2(1) for official map)



This form is mandatory and must be attached to all Certificates of Substantial Completion for all new K-12 public schools awarded after July 1, 2010.

B.C. # _____

CERTIFICATION OF STRUCTURAL OBSERVATIONS

for

Project Name _____

Owner _____

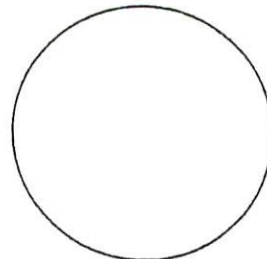
Contractor _____

I, _____, do hereby verify that I have personally
Design Professional

conducted the visual observations of the construction of the structural system for conformance to the approved construction documents for the referenced project. The visual observations of the structural systems were personally conducted by me at all significant construction stages and at the completion of the construction of the structural system. To the best of my knowledge, all structural deficiencies have been resolved except as noted below:

Signed and sealed on this date, _____, 20_____.

Architect or Structural Engineer of Record



Design Professional's Seal

This form is mandatory and must be executed prior to start of construction for all new K-12 public schools awarded after July 1, 2010.

B.C. # _____

Contractor's Statement of Responsibility for Construction of Safe Space

Project Name _____

Owner _____

Architect _____

I, _____, acknowledge that I am responsible to the
General Contractor
Alabama Building Commission, State Department of Education, Architect and Owner for the construction of the main wind-force resisting system and any other components listed in the **attached Quality Assurance Plan (QAP)**.

I acknowledge that I am aware of the special requirements contained in the QAP.

I certify that control will be exercised to obtain compliance with the construction documents. The procedures for exercising control shall be as listed below:

<u>Control Procedure</u>	<u>How Reported</u>	<u>Distributed To</u>	<u>Frequency of Distribution</u>

(Attach additional pages if needed)

Furthermore, the following persons will be responsible for exercising control in accordance with the QAP. Any changes to the persons listed below will be coordinated with the Owner a minimum of 3 calendar days in advance of the change. The Owner shall provide written objections to the changes within 10 calendar days. No response shall be deemed acceptance.

This form is mandatory and must be executed prior to start of construction for all new K-12 public schools awarded after July 1, 2010.

Name of Person _____ Responsibility for QAP _____

Signed and sealed on this date, _____, 20____.

Contractor

By _____

Name and Title _____