

MEMORANDUM

DATE: November 8, 2010 (Replaces July 29, 2010 memo)

TO: Manufactured Home Set-Up Contractors, Dealers, Building Inspectors, and Other Interested Parties

FROM: Joseph H. Sadler, Jr., P.E.
Acting Deputy Director - Manufactured Building Division

RE: Manufactured Homes – Flood Hazard Area Foundation Designs
State of North Carolina Regulations for Manufactured Homes – 2004 Edition
Appendix B

There has been some confusion over the years regarding the two FEMA foundation designs for manufactured home installations in flood hazard areas designed by Avolis Engineering, PA. The original FEMA foundation plan, dated July 13, 1993, was prepared for the North Carolina Manufactured Housing Institute. This design was based upon the old wind loading requirements of the Federal Manufactured Housing Construction and Safety Standards in which there were only two wind zones, Wind Zone 1, non-hurricane resistive and Wind Zone 2, hurricane resistive. In 1994, the wind loading requirements in the Federal Manufactured Housing Construction and Safety Standards were revised to a three wind zone system, Wind Zones 1, 2 and 3. In 1995, the North Carolina Manufactured Housing Institute had Avolis Engineering revise the old FEMA design resulting in a new FEMA design, dated December 5, 1995, to meet the specific requirements for new Wind Zone 2 and Wind Zone 3 flood hazard installations. Kevin Avolis, PE, the Engineer of Record of both of these FEMA designs, has indicated to this office that the old July 13, 1993 FEMA design was superceded by the new December 5 1995 design and should no longer be used for setting up manufactured homes in flood prone areas. Based upon this information and due to the confusion between the two designs, all manufactured homes to be installed in a flood hazard area which are issued a building permit on or after September 1, 2010 shall be installed using either the December 5, 1995 FEMA foundation design by Avolis Engineering, P.A. (located in *Appendix B, State of North Carolina Regulations for Manufactured Homes – 2004 Edition*) or any other site specific FEMA foundation design prepared by a North Carolina registered design professional.

The use of *Appendix B* in the *State of North Carolina Regulations for Manufactured Homes – 2004 Edition* **has not been approved** for use in setting a modular home or building in a flood hazard area. Modular homes that are located in flood hazard areas must be designed and constructed in accordance with *Section R324 and Chapter 45* in the *2009 North Carolina Residential Code*. Modular commercial buildings with an occupancy other than R-3 must be designed and constructed in accordance with *Appendix G* in the *2009 North Carolina Building Code*.

If you have any questions please contact this office.