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ADVISORY MEMO

TO: All Building Officials and Mechanical Chiefs in Miami-Dade County

**FROM: Herminio Gonzalez, P.E., Secretary
Board of Rules and Appeals**

DATE: December 1, 2003

SUBJECT: Mechanical Attachment of Air Handling Units to Fibrous Glass Duct

It has been brought to our attention that there is some confusion regarding the requirements for mechanical fastening of fibrous glass duct to air handling units.

The following code sections from the Florida Mechanical Code should help clarify the issue:

§M603.1.1 Mechanical fastening. All joints between sections of air ducts and plenums, between intermediate and terminal fittings and other components of air distribution systems, and between subsections of these components shall be mechanically fastened to secure the sections independently of the closure system(s).

§M603.1.6 Approved mechanical attachments. Approved mechanical attachments for air distribution system components include screws, rivets, welds, inter-locking joints crimped and rolled, staples, twist in(screw attachment), and compression systems created by bend tabs or screw tabs and flanges or by clinching straps. Mechanical attachments shall be selected to be appropriate to the duct system type.

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The issue of mechanical fastening was discussed by the Florida Building Commission, Energy Code Technical Advisory Committee. Ultimately the Florida Building Commission determined that mechanical fastening of fibrous glass duct to air handling units is limited to one side of the plenum only. This change will go into effect on January 1, 2005 along with the other code cycle changes.

In cases where space restrictions do not allow adequate access for mechanical fastening, the Building Official may consider alternative methods of construction as specified in Section 103.7 of the Florida Building Code.

103.7 Alternate materials and methods.

§103.7.1 The provisions of the technical codes are not intended to prevent the use of any material or method of construction not specifically prescribed by them, provided any such alternate has been reviewed by the building official. The building official shall approve any such alternate, provided the building official finds that the alternate for the purpose intended is at least the equivalent of that prescribed in the technical codes in quality, strength, effectiveness, fire resistance, durability and safety. When alternate life safety systems are designed, the "SFPE Engineering Guide to Performance-Based Fire Protection Analysis and Design of Buildings," or other methods approved by the building official may be used. The building official shall require that sufficient evidence or proof be submitted to substantiate any claim made regarding the alternate.

The application of Section 103.7, above, has been helpful in cases where the use of alternates have proven to be more practical than the written code. An example of the use of this consideration is the installation of residential bath exhaust ducts. Florida Mechanical Code Section M501.5 requires all exhaust ducts to be of metal; however, in some municipalities the Building Official has approved alternate materials which were submitted as equivalent.

If you have any questions on this matter please contact Mr. Pete Quintela of my staff at 305-375-2901

HFG:MG:PQ

