City of Glendale, AZ

Technical Guideline

Building Inspection Department

_X_ Technical Guideline **___ Interpretation** **___ Modification**

Issue Date: February 12, 2009
Code/Section: IBC 803.9.1.1; NEC 300.11; NEC 314.27(B); NEC 410.16
Approved: Deborah Mazoyer, Building Official
Developed by: Michael Mosij / Tom Paradise - Senior Inspectors (623)930-2800
References: ASTM C 635; ASTM C 636; Ceilings & Interior Systems Construction Association (CISCA) **Handbook; 2005 NEC; 2006 IBC; Glendale Code Amendments; 1997 UBC Standard 25-2 (25.214)**

Issue:

The issue is the installation of "Slack wires" for supplementary support of suspended ceiling luminaires (fixtures) and Mechanical installations. Some Contractors have made reference to the 2006 IBC Code and the fact that this does not apply to our seismic zone area any longer. However, the City of Glendale has enforced this for many years now and some manufacturers may even require it in their installation instructions for the grid ceiling. In addition to this, we have amended the IBC to include several types of buildings into the more restrictive seismic regulations. Also, the sad events of March 14, 2001, where Phoenix fireman, Bret Tarver, lost his life, reinforced our Building Safety Department's view on the issue of lighting fixtures/mechanical installations and the deadly consequences of not securing them with supplementary supports to the structure to prevent firefighters and others from becoming entangled in the wiring from above suspended ceilings during an emergency such as a fire. We are not willing to compromise on this life/safety issue.

Also, the following Guideline clarifies requirements for Mechanical installations in suspended ceilings.

Guideline: ***The following is effective February 4, 2009.***

Suspended Ceilings. Intermediate or heavy-duty ceiling systems shall be used for the support of luminaires (lighting fixtures). All lighting fixtures shall be positively attached to the suspended ceiling system. The attachment device shall have a capacity of 100 percent of the lighting fixture weight acting in any direction. Luminaires (fixtures) weighing less than 56 pounds and track lighting shall have two 12 gauge wires attached at opposing corners of the luminaire(s) (fixture) or track lighting strip to the structure above. These wires may be slack, and shall contain, at a minimum, at least 3 tight twists within a 3 inch length of the wire at each end. Recessed luminaire housings, exit signage, all single bulb fixtures and emergency

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unit equipment that are installed within or on a suspended ceiling shall have a minimum of at least one 12 gauge wire attached to the structure above and this wire may be slack and shall contain, at a minimum, at least 3 tight twists of the wire within a 3 inch length at each end. Luminaires weighing more than 50 pounds shall comply with NEC 314.27(B).

The guideline for mechanical services shall be as follows: [Based on the 1997 UBC Standard 25-2 (25.214)]

Ceiling-mounted diffusers, grilles, registers or similar devices weighing less than 20 pounds shall be positively attached to the ceiling suspension main runners or to cross runners with the same carrying capacity as the main runners. Diffusers, grilles, registers or similar devices weighing 20 pounds, but not more than 56 pounds, in addition to the above, shall have two No. 26 gage hangers (wires) connected at opposite diagonal corners from the diffusers, grilles, registers or similar device to the ceiling system hangers or to the structure above. These wires may be slack. Diffusers, grilles, registers or similar devices weighing more than 56 pounds shall be supported directly from the structure above by approved hangers, connected at opposite diagonal corners.

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