

Technical Newsletter – May 2008

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► **GDHarley** is currently providing 'due diligence' Field Construction Progress Inspections and Monthly DRAW Review Services for 1,500 apartment units now in construction in Texas. Our client is the 'Equity Investor Partner' involved in the related six projects. These apartment projects are employing similar architectural and engineering construction documents, construction materials and methods including pitched roofs framed with pre-fabricated wood trusses and 'blown-in' loose thermal insulation.



ATTIC – View of 'blown-in' thermal insulation - (Green Arrow)
Three story, wood framed apartments – Texas

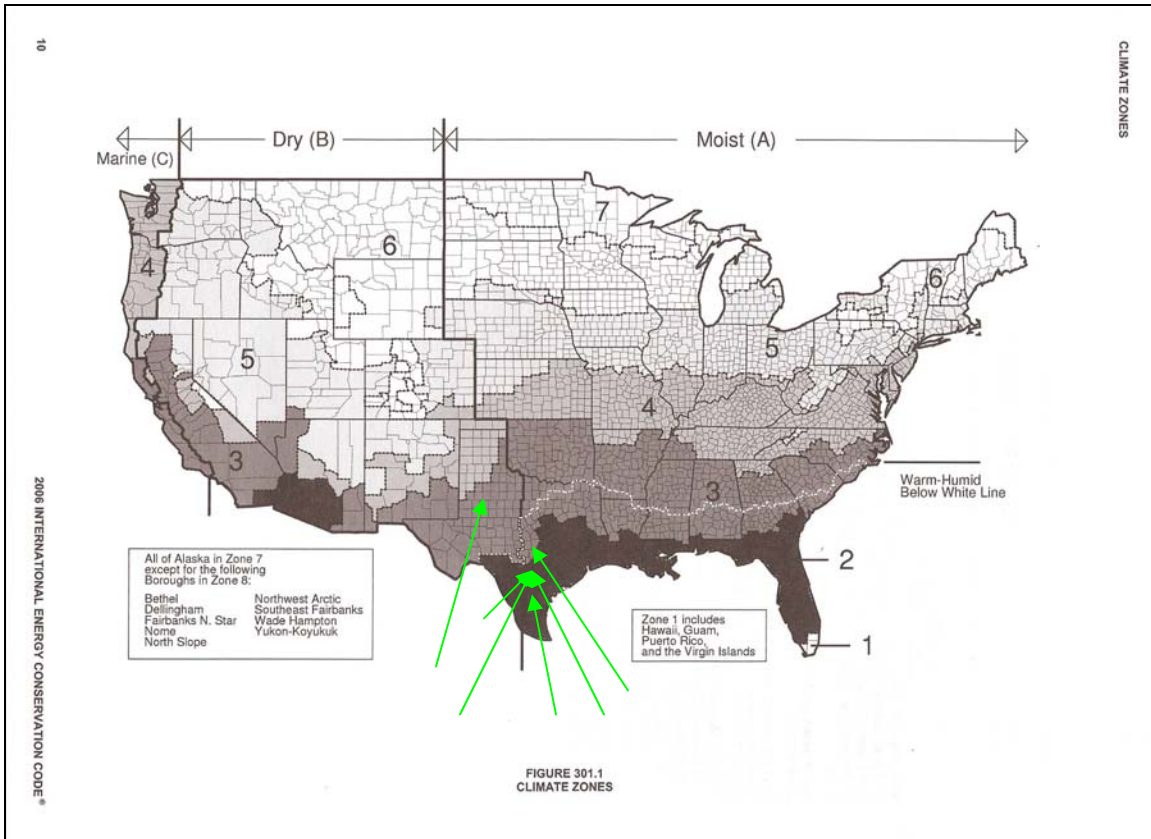
The *2006 International Energy Conservation Code* (ISBN-13: 978-58001-270-6), published by the International Code Council, Inc. establishes minimum regulations for energy efficient buildings using prescriptive and performance-related provisions and is compatible with all codes including the *International Building Code*.

Section 102 – Materials, Systems and Equipment / 102.1.1.1. Blown or sprayed roof/ceiling insulation of this energy code requires... *The thickness of blown in or sprayed roof/ceiling insulation (fiberglass or cellulose) shall be written in inches (mm) on markers that are installed at least one for every 300 square feet (28 m²) throughout the attic space. The markers shall be affixed to the trusses or joists and marked with the minimum initial installed thickness with numbers a minimum of 1 inch (25 mm) in height. Each marker shall*

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face the attic access opening. As a related requirement...this code requires in **SECTION 401 General / 401.3 Certificate** that...*A permanent certificate shall be posted on or in the electrical distribution panel. The certificate shall be completed by the builder or registered design professional. The certificate shall list the predominant R-values of insulation installed in or on ceiling/roof, walls, foundation (slab, basement wall, crawlspace wall and/or floor) and ducts outside conditioned spaces; U-factors for fenestration; and the solar heat gain coefficient (SHGC) of fenestration. Where there is more than one value for each component, the certificate shall list the type and efficiency of heating, cooling and service water heating equipment.*



Green Arrows = Climate Zone location of six Texas Apartment Projects currently served by GDHarley & Associates

SECTION 402 – Building Thermal Envelope / 402.1.1 of this code requires...*The building thermal envelope shall meet the requirements of Table 402.1.1 based on the climate zone specified...*(see Climate Zone map above taken from code). ...for Ceiling R-value ...for Climate Zones 2 & 3 = R30.

Section 402.1.2 R-value Computation of this code requires...The manufacturer's **settled R-value** shall be used for blown insulation.

TABLE 404.5.2(1) of this code requires...Attics ...shall have devices equal to produce...*vented with aperture = 1 ft² per 300 ft² ceiling area.*

► The *International Energy Conservation Code* is available for adoption and use by jurisdictions internationally. Its use within a governmental jurisdiction is intended to be accomplished through adoption by reference in accordance with proceedings establishing the jurisdiction's law.

► This newsletter has been prepared to provide special information related to CONSTRUCTION INSPECTION activities that GDHarley's REGIONAL INSPECTORS may currently observe in the field.

It is provided to others as general information on the subject but is not intended As a full review and should not be used without proper training.

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