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TO: DSD Associates

FROM: Michael Shannon, Director and Building Official

DATE: October 13, 2017

FILE: Code Interpretation Manual

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INTERPRETATION NUMBER: CI2017-003

TITLE: Alternative to 2015 IBC Under-Floor Ventilation and 2015 IECC Floor Insulation Requirements

CODE EDITION: 2015 International Energy Conservation Code (IECC), as amended by COSA

SECTION: 2015 IBC Section 1203.4 & 2015 IECC Section 402.2.4

QUESTION 1: Does the City permit a new building design the use of the following "demand ventilation" system in lieu of the minimum under-floor ventilation openings required per Section 1203.4 (2015 IBC)? The proposed "demand ventilation" system for under-floor shall meet all of the following:

1. The "demand ventilation" system is designed by a registered professional engineer for the proposed project.
2. The ground surface is covered with a Class I vapor retarder.
3. The perimeter walls exposed to the under-floor crawl space are insulated in accordance with the 2015 International Energy Conservation Code (IECC) Section 402.2.3 for "above-grade walls".
4. The "demand ventilation" system shall be a mechanical ventilation system which ventilates the under-floor "crawl space" at a rate of 1.0 cubic foot per minute (cfm) for each 50 ft of crawl space floor area and is controlled as follows:
  - The ventilation system would be designed to maintain the under-floor conditions below 80°F DB, above 65°F DB and under-floor dew point temperature below 70°F. The system would utilize outside air to maintain the conditions when the outside air temperature is above 65°F DB, below 80°F DB and below 70°F dew point. The operating status of the

ventilation system (on-off- verified fan or fans operation), under-floor temperature, under-floor humidity, under-floor dew point temperature, outside air temperature, outside air humidity and outside air dew point shall be continuously monitored. All monitored temperature, humidity and dew point values shall be provided with adjustable set-points and alarm settings. The alarm settings and fan status shall be constantly monitored by the building owner's personnel. If an "alarm" or "not operations" signal is received, an alarm shall be transmitted to the owner's maintenance personnel.

ANSWER 1:       **Yes.**

QUESTION 2:     Does the City permit the elimination of the floor insulation material prescribed by 2015 IECC Section C402.2.4 for the following design condition:

1.     The floor structure is suspended concrete with an under-floor crawl space below the concrete slab; and
2.     The "unconditioned" crawl space is provided with a "demand ventilation" system as specified in Question 1 of this Code Interpretation above; and
3.     Above grade wall exposed to the under-floor crawl space are insulated in accordance with 2015 IECC Section C402.2.3 for "above-grade walls".

ANSWER2:       **Yes.**



Michael Shannon, P.E., C.B.O.  
Director and Building Official  
Development Services Department

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**CORE Values:**

**TEAMWORK | INTEGRITY | INNOVATION | PROFESSIONALISM**

**City of San Antonio**