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Airfloor, Inc.
7451 Spring Grove Ave.
Spring Grove, IL 60081

RESEARCH REPORT: RR 25679

Attn: Matt Odwyer
(847) 459-6080

Expires: September 1, 2018
Issued Date: May 1, 2017
Code: 2017 LABC

GENERAL APPROVAL – Renewal and Clerical Modification - Airfloor - Forms used to create hollow concrete floors for air distribution.

DETAILS

Airfloor is a system of hollow, interlocking metal forms and air registers that are placed on top of a building floor system and then covered with a concrete topping slab. The floor then becomes a plenum through which heating and cooling air flows, resulting in a radiant floor and ventilating system. The 12" square by approximately 4" thick Airfloor forms are shaped out of 26 gauge steel to resemble a groined vault having 8.5" wide by 3.75" tall arches on each side. Airfloor connecting details to concrete slab (SX-1), concrete slab with metal deck (SX-3), and wood floor (SX-2), are provided in the attachment.

The approval is subject to the following conditions:

1. Not more than 2" and not less than 1" of minimum 2,500 psi normal weight or sand-lightweight concrete topping shall be placed above the top of the forms.
2. Airfloor shall be anchored to the building floor system. See Table-1 for detail.

Table-1

Material	Detail Attachment	# of Bolts (diameter)	Bolt Material	Embedment	Spacing
Concrete ¹	SX - 1	1 (5/8)	A307/A36	4.5 in.	10'-0"
Wood	SX - 2	2 (3/4)	A307/A36	Thru	6"-0"
Metal Deck with Concrete	SX - 3	1 (5/8)	A307/A36	Thru	10'-0"

¹ Anchor bolts shall be approved with an LARR.

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3. When placed over a wood floor system, a minimum of 23/32" plywood or OSB shall be used and 26 gauge galvanized sheet metal shall be provided between the Airfloor forms and the sheathing.
4. When used on a project that is located on site class F, the engineer of record shall provide analysis and design for the lateral attachment of the Airfloor system.
5. The Airfloor system shall not be used to transfer structural loads between floors. Where column and bearing walls occur, the Airfloor forms are to be omitted to allow direct load transfer of walls and columns through the structural floor system.
6. The concrete structural floor supporting the Airfloor system must be designed by an engineer registered in the State of California, and must have a minimum thickness of 8 inches. Calculations must be presented to the plan check engineer. See detail SX-1 of the attachment.
7. The Airfloor shall be installed per the manufactures' instructions and this report.
8. Slab on grade does not require any additional action other than slab on grade construction in accordance with the 2017 Los Angeles City Building Code.

DISCUSSION

The clerical modification is to change the contact information of the petitioning organization and update the report to the 2017 Los Angeles City Building Code.

The report is in compliance with the 2017 Los Angeles City Building Code.

This approval is based on tests and analyses.

Addressee to whom this Research Report is issued is responsible for providing copies of it, complete with any attachments indicated, to architects, engineers and builders using items approved herein in design or construction which must be approved by Department of Building and Safety Engineers and Inspectors.

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This general approval of an equivalent alternate to the Code is only valid where an engineer and/or inspector of this Department has determined that all conditions of this approval have been met for the project in which it is to be used.

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Attachments: Details and Specifications (3 Pages)