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RESEARCH REPORT: RR 25701

(CSI #03 16 00, CSI #05 05 19)

BASED UPON ICC EVALUATION SERVICE REPORT NO. ESR-1917

REEVALUATION DUE DATE: May 1, 2018 Issued Date: May 1, 2017 Code: 2017 LABC

GENERAL APPROVAL – Clerical Modification – Hilti Kwik Bolt TZ Carbon and Stainless Steel Anchors in Concrete.

DETAILS

The above assemblies and/or products are approved when in compliance with the use, description, design, installation, conditions of use, and identification of Evaluation Report No-1917, revised September 2016 of the ICC-ES Evaluation Services, Incorporated, the report, in its entirety, is attached and made part of this general approval.

The parts of Report No. ESR-1917 which are excluded on the attached copy have been removed by the Los Angeles Building as not being included in this approval.

The approval is subject to the following conditions:

- 1. The allowable values listed in the attached report and tables are for the fasteners only. Connected members shall be checked for their capacity (which may govern).
- 2. The anchors are identified by packaging labeled with the manufacturer's name (Hilti, Inc.) and contact information, anchor name, anchor size, and evaluation report number (ESR-1917). The anchors have the letters KB-TZ embossed on the anchor stud and four notches embossed into the anchor head, and these are visible after installation for verification.

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RE: Hilti Kwik Bolt TZ Carbon and Stainless Steel Anchors in Concrete.

- 3. The anchors shall be installed as per the attached manufacturer's instructions except as otherwise stated in this report. Copies of the installation instructions shall be available at each job site.
- 4. Design values and minimum embedment requirements shall be per Tables in ICC ES Report No. ESR-1917.
- 5. The concrete shall have attained its minimum design strength prior to installation of the anchors.
- 6. Special inspection in accordance with Section 1705.3 and Table 1705.3 of the 2017 Los Angeles City Building Code shall be provided for anchor installations.
- 7. The use of zinc-coated carbon steel KB-TZ anchors is limited to dry and interior locations.
- 8. This general approval is applicable only for cracked and uncracked concrete.
- 9. Calculations demonstrating that the applied loads or factored loads are less than the allowable load values or design strength level values respectively, described in this report shall be submitted to the plan check Engineer at the time of permit application. The calculations shall be prepared by a Civil or Structural Engineer registered in the State of California.

EXCEPTION: Anchors used for the installation of mechanical, plumbing and electrical equipment may be designed and detailed on a plan prepared by an engineer licensed by the state of California.

10. The anchors shall be installed at a minimum nominal embedment depth, h_{nom}, (see Figure 2 and Tables 1A and 1B) prior to tightening the anchor. This is to ensure that the minimum effective embedment, h_{ef}, of the expansion element (as shown in figure 2) is provided after the anchor has been torqued. The approved plans shall include a detailed drawing showing the required installation depth.

DISCUSSION

The clerical modification is to update the report to the 2017 City of Los Angeles Building Code.

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

The approval is based on load tests. The anchors have been tested in accordance with the ICC-ES Acceptance Criteria for Mechanical Anchors in Concrete Elements (AC 193), dated October 2015, which incorporates requirements in ACI 355.2-07/ACI 255.2-04 for use in cracked and uncracked concrete.

This general approval will remain effective provided the Evaluation Report is maintained valid and unrevised with the issuing organization. Any revisions to this report must be submitted to Hilti, Inc.RE: Hilti Kwik Bolt TZ Carbon and Stainless Steel Anchors in Concrete.

this Department, with appropriate fee, for review in order to continue the approval of the revised report.

Addresses to whom this Research Report is issued is responsible for providing copies of it, <u>complete with any attachments indicated</u>, 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.

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 in the project in which it is to be used.

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QN RR25701 TLB1700146 R04/22/17 1909

Attachment: ICC ES Evaluation Report No. ESR-1917 (14 pages)