ICC-ES Evaluation Report

ESR-3288

Reissued February 2025

Subject to renewal December 2025

This report also contains:

- **City of LA Supplement**
- **CA Supplement**

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DIVISION: 03 00 00 — CONCRETE **Section: 03 01 00 — Maintenance of Concrete** **DIVISION: 04 00 00 — MASONRY** **Section: 04 01 00 — Maintenance of Masonry** **Section: 04 01 20 — Maintenance of Unit Masonry**	**REPORT HOLDER:** **SIKA CORPORATION**	**EVALUATION SUBJECT:** **CONCRETE AND MASONRY STRENGTHENING USING THE SIKAWRAP HEX STRUCTURAL COMPOSITE SYSTEM**	

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2018, 2015, 2012 and 2009 *International Building Code*® (IBC)
- 2018, 2015, 2012 and 2009 *International Residential Code*® (IRC)
- 2013 *Abu Dhabi International Building Code* (ADIBC)†

†The ADIBC is based on the 2009 IBC. 2009 IBC code sections referenced in this report are the same sections in the ADIBC.

- 1997 *Uniform Building Code*™ (UBC)

Properties evaluated:

- Structural
- Physical
- Durability
- Fire resistance

2.0 USES

The SikaWrap Hex Structural Composite System is used as an alternate to systems addressed in the 2018, 2015, 2012 and 2009 IBC, and 1997 UBC, to strengthen existing concrete and masonry structural elements as described in Section 4.1 of this report for exterior applications. For structures regulated under the IRC, the SikaWrap Hex Structural composite system may be used where an engineering design is submitted in accordance with Section R301.1.3 and where approved by the building official in accordance with Section R104.11.

3.0 DESCRIPTION

3.1 General:

The SikaWrap Hex Structural Composite Systems are externally bonded fiber reinforced polymer (FRP) systems applied to normal-weight concrete and masonry substrates. The SikaWrap Hex system consists of carbon and glass fabrics combined with Sikadur epoxy resins which, in combination, create the FRP composite system.

3.2 Materials:

All materials must comply with specifications outlined in the Sika quality control documentation, dated May 2017.

3.2.1 High-strength Fabrics: The SikaWrap Hex high-strength fabric is composed of either carbon or glass fibers and is designated as SikaWrap Hex 100G, SikaWrap Hex 103C, SikaWrap Hex 106G, SikaWrap Hex 230C, SikaWrap Hex 103C-2X, SikaWrap Hex 103C HM, and SikaWrap 600C+/-45.

SikaWrap Hex 100G is a glass-fiber, unidirectional fabric weighing 27 ounces per square yard (917 g/m^2). SikaWrap Hex 103C is a carbon-fiber, unidirectional fabric weighing 18 ounces per square yard (611 g/m^2). SikaWrap Hex 106G is a glass-fiber, bi-directional, open-weave fabric weighing 9.6 ounces per square yard (325 g/m^2). SikaWrap Hex 230C is a carbon-fiber, unidirectional fabric weighing 6.7 ounces per square yard (228 g/m^2). SikaWrap Hex 103C-2X is a carbon-fiber, unidirectional fabric weighing 37.2 ounces per square yard (1,262 g/m^2). SikaWrap Hex 103C HM is a carbon-fiber, unidirectional fabric weighing 18 ounces per square yard (611 g/m^2). SikaWrap 600C±45 is a carbon-fiber, bi-directional (±45^o), fabric weighing 17.11 ounces per square yard (580 g/m^2). Standard rolls of fabric are shipped in boxes in various widths and lengths depending upon the specific fabric. Material properties vary with fiber type.

3.2.2 Sikadur Hex 300 Resin: Sikadur Hex 300 is an ambient-cure epoxy resin used to bind and environmentally protect the fibers. The epoxy is packaged in 4-gallon (15.1 L) units (inclusive of both component A and component B) or 55-gallon (208 L) drums and is mixed at the jobsite prior to application. Mixing ratio is 2.8 gallons (10.6 L) of component A to 1.2 gallons (4.5 L) of component B.

3.2.3 Sikadur 330 Primer: Sikadur 330 is an optional ambient-cure epoxy resin used to prime the concrete and/or masonry substrate to facilitate installation of saturated fabrics, especially for vertical and overhead installations prior to installation of FRP composite systems. The Sikadur 330 primer is packaged in 1.6-gallon (22.7 L) units (inclusive of both component A and component B) and is mixed at the jobsite prior to application. Mixing ratio is 1.25 gallons (4.7 L) of component A to 0.35 gallons (1.3 L) of component B.

3.2.4 FRP Composite Materials: SikaWrap Hex Structural composites are comprised of materials covered in Sections 3.2.1, 3.2.2 and 3.2.3 of this report.

3.2.4.1 SikaWrap Hex 100G Composite: In the primary direction, SikaWrap Hex 100G glass-fiber composite has a design ultimate tensile strength of 78.4 ksi (541 MPa), design tensile modulus of 3.97 × 10^3 ksi (27.4 × 10^3 MPa), and design elongation of 1.82 percent. Nominal layer thickness is 0.040 inch (1 mm).

3.2.4.2 SikaWrap Hex 103C Composite: In the primary direction, SikaWrap Hex 103C carbon-fiber composite has a design ultimate tensile strength of 160.9 ksi (1,110 MPa), design tensile modulus of 10.39 × 10^3 ksi (71.7 × 10^3 MPa), and design elongation of 1.45 percent. Nominal layer thickness is 0.04 inch (1 mm).

3.2.4.3 SikaWrap Hex 230C Composite: In the primary direction (0^o), SikaWrap Hex 230C carbon-fiber composite has a design ultimate tensile strength of 116.1 ksi (801 MPa), design tensile modulus of 10.83 × 10^3 ksi (74.7 × 10^3 MPa), and design elongation of 1.01 percent. Nominal layer thickness is 0.015 inch (0.38 mm).

3.2.4.4 SikaWrap Hex 106G Composite: In both primary and secondary directions (0^o/90^o), SikaWrap Hex 106G glass-fiber composite has a design ultimate tensile strength of 65.6 ksi (452 MPa), design tensile modulus of 4.24 × 10^3 ksi (29.2 GPa), and design elongation of 1.45 percent. Nominal layer thickness is 0.007 inch (0.18 mm) in each direction.

3.2.4.5 SikaWrap Hex 103C-2X Composite: In the primary direction, SikaWrap Hex 103C-2X carbon-fiber composite has a design ultimate tensile strength of 160.1 ksi (1,104 MPa), design tensile modulus of 12.3 x 10^3 ksi (84.2 GPa), and design elongation of 1.15 percent. Nominal layer thickness is 0.07 inch (1.8 mm).

3.2.4.6 SikaWrap Hex 103C HM Composite: In the primary direction, SikaWrap Hex 103C HM carbon-fiber composite has a design ultimate tensile strength of 152.0 ksi (1,048 MPa), design tensile modulus of 13.5 x 10^3 ksi (93.1 GPa), and design elongation of 1.05 percent. Nominal layer thickness is 0.04 inch (1 mm).

3.2.4.7 SikaWrap 600C±45 Composite: In both directions (±45°), SikaWrap 600C±45 carbon-fiber composite has a design ultimate tensile strength of 144.4 ksi (996 MPa), design tensile modulus of 12.52 x 10^3 ksi (86.3 GPa), and design elongation of 1.09 percent. Nominal layer thickness is 0.0195 inch (0.50 mm) in each fiber direction.

3.2.5 Sikacrete-213F Fire Protection Mortar: Sikacrete-213F is a cement-based, pre-bagged, dry mix fire protection mortar, packaged in 26.46 lbs. (12 kg) bags.

3.2.6 Storage Recommendations: For the epoxies, finishes and fibers must not be subjected to water contamination or exposed to temperatures above 100°F (38°C). Storage life must not exceed two years for the epoxies, and ten years for the fibers.

4.0 DESIGN AND INSTALLATION

4.1 Design:

4.1.1 General: Design of the composite system must be based on strength design requirements in accordance with Chapters 19 and 21 of the IBC and UBC, as applicable. The owner and registered design professional are responsible for determining, through analysis, the design strengths and demands of the structural elements to be strengthened by the Sika System, subject to the approval of the code official.

4.1.2 Composite Design Properties: Structural design properties for the composites are found in the Design Manual for the Sika Fiber-Reinforced Polymer (FRP) Composite Strengthening System, dated April 7, 2017 (hereinafter referred to as the Design Manual).

4.1.3 Structural Design Provisions: Structural design provisions for the composite system are based on test results and structural design requirements prescribed in IBC Sections 1604 and 1605. The basis of the design includes strain compatibility and all applicable limit states. All designs must follow procedures as detailed in the IBC and UBC, as applicable, and the Sika Design Manual, dated April 7, 2017.

4.1.4 Factors of Safety: The strength reduction factors provided in Section 21.2 of ACI 318-14 (2018 and 2015 IBC), Section 9.3 of ACI 318-11 (2012 IBC) or ACI 318-08 (2009 IBC) or Chapter 19 of the UBC, as applicable (for concrete), and Chapter 21 of the IBC (TMS 402) or Chapter 21 of the UBC (for masonry), as applicable.

4.1.5 Load Combinations: The load combinations used in design must comply with Section 1605 of the IBC and Section 5.3 of ACI 318-14 (for the 2018 and 2015 IBC), Section 9.2 of ACI 318-11 (for the 2012 IBC) or ACI 318-08 (for the 2009 IBC), as applicable, or Section 1612 of the UBC.

4.1.6 Columns:

4.1.6.1 Potential Applications: The composite systems are applied to columns to enhance their ductility and their axial, flexural and shear strengths, and to provide confinement to the lap splices of steel reinforcement.

4.1.6.2 Structural Design Requirements: Concrete design must comply with the Design Manual and with Chapter 19 of the IBC or UBC, as applicable. Masonry design must comply with the Design Manual and with Chapter 21 of the IBC or UBC, as applicable.

4.1.7 Beams and Slabs:

4.1.7.1 Potential Applications: The composite systems are applied to beams to enhance their ductility and their flexural and shear strengths. The composite systems are applied to slabs to enhance their flexural strength and shear strength for gravity and wind load resistance only.

4.1.7.2 Structural Design Requirements: Concrete design must comply with the Sika Design Manual, dated April 7, 2017 and with Chapter 19 of the IBC or UBC, as applicable. Masonry design must comply with the Sika Design Manual, dated April 7, 2017 and with Chapter 21 of the IBC or UBC.

4.1.8 Walls:

4.1.8.1 Potential Applications: The composite systems are applied to concrete walls to enhance out-of-plane flexural, in-plane flexural and shear strengths. The composite systems are applied to masonry walls to enhance out-of-plane flexural strength.

4.1.8.2 Structural Design Requirements: Concrete design must comply with the Sika Design Manual, dated April 7, 2017 and with Chapter 19 of the IBC or UBC, as applicable. Masonry design must comply with the Sika Design Manual, dated April 7, 2017 and with Chapter 21 of the IBC or UBC, as applicable.

4.1.9 Bond Strength: Where bond is critical to the system design, as determined by the registered design professional, the bond strength of the SikaWrap Hex system to a properly prepared surface must exceed 200 psi (1,378 kPa) for concrete and $2.5x(f'_m)^{0.5}$ for masonry. Testing in accordance with ASTM D7234 or D7522 may be used to estimate the bond strength of installations. The test must indicate failure in the host substrate. Sufficient bond area must be used to prevent bond failure.

4.2 Installation:

Installation must be performed by applicators trained by the manufacturer in accordance with the published literature. Installation of the system is detailed in Section 4 of the Sika Design Manual, dated April 7, 2017.

4.2.1 Saturation: The fibers and the matrix are combined in accordance with an established weight and volume ratio, using a calibrated Saturator or manual methods.

4.2.2 Application: The composite fabric is applied to the substrate using manual methods. Manual methods are used to remove air bubbles and to ensure desired fiber orientation. Pot life of the saturated fabric is three hours at 70°F (21°C), and varies with temperature. Higher temperatures result in a shorter pot life, and lower temperatures result in a longer pot life.

4.2.3 Finishing: A final layer of thickened epoxy is applied and can be coated with paints that may be required for environmental and aesthetic reasons.

4.2.4 Cure Time Prior to Loading: The SikaWrap Hex Structural composites must be allowed a minimum of 48 hours of cure time (depending on temperatures) prior to application of superimposed loading onto the structural member. Final determination of required cure time must be made by the registered design professional.

4.2.5 Fire-resistance-rated Assembly:

The use of Sikacrete-213F yields up to a four-hour fire-resistance rating under full design load in accordance with ASTM E-119 for the following system: The Sikacrete-213F system must be applied to square, normal-weight concrete columns measuring 12 inches (305 mm) by 12 inches (305 mm) with a minimum 28-day compressive strength of 4,000 psi (27.6 MPa). Minimum concrete cover to main vertical bars is 2 inches (51 mm), and minimum concrete cover to ties is 1.5 inches (38 mm). Grade 60 reinforcement must consist of 4 x No. 8 vertical bars and No. 3 horizontal hoops spaced at 16 inches (406 mm) on center. The concrete surface must be mechanically abraded and cleaned, then primed with Sikadur 330 epoxy primer. Three layers of SikaWrap Hex 103C carbon fiber fabric, 24 in. (610 mm) wide, each layer saturated on both sides with Sikadur Hex 300 Epoxy must be applied around the column. The saturated carbon fiber fabric must be wrapped around the column with last layer overlapped the first layer by a 6 in. (152 mm) vertical overlap. All entrapped air must be removed with a serrated roller. Sikadur 330 Epoxy primer must be applied over the composite system. Before the primer is dry, silica sand #28 must be applied over the primer. Sikacrete-213F mixed with water, in accordance with the manufacturer's instructions, must be spray applied in one or more coats to minimum average thickness of $1^{9}/_{16}$ in. (40 mm).

4.2.6 Health Effects Coating: Following SikaWrap Structural Composite Systems comply with ANSI/NSF 61, as referenced by Section 605 of the International Plumbing Code (IPC). (1) Sikadur 330 primer with SikaWrap Hex 100G fabric saturated with Sikadur Hex 300 epoxy (2) Sikadur 330 primer with SikaWrap Hex 103C fabric saturated with Sikadur Hex 300 (3) Sikadur Hex 300 primer with SikaWrap Hex 100G fabric saturated with Sikadur Hex 300 epoxy. (4) Sikadur Hex 300 primer with SikaWrap Hex 103C fabric saturated with Sikadur Hex 300. Surface area to volume ratio for all systems must be 262.5 sq. cm/L. Following systems are recognized:

(1) For use with tanks greater than or equal to 100 gallons (378.5 L) and pipes where the diameter is greater than or equal to 6 inches (152 mm), only when applied in the following order of application- Layer 1 (1 coat of Sikadur 330 primer) followed by Layer 2 (8 coats of SikaWrap Hex 100G Fabric saturated with Sikadur Hex 300); mix ratio (Part A:Part B) for Sikadur 330 primer is 100:24.7 by weight and Sikadur Hex 300 is 100:34.5 by weight. Application method: roller. Maximum application thickness: Layer 1 is 16 mils, Layer 2 is 8 coats at 40 mils per coat. Minimum application thickness: Layer 1: 16 mils, Layer 2: 1 coat at 40 mils per coat. Final cure time is 7 days at 75°F (24°C) [each layer must be applied wet-on-wet within 60 minutes of prior layer at 75°F (24°C)].

(2) For use with tanks greater than or equal to 100 gallons (378.5 L) and pipes where the diameter is greater than or equal to 6 inches (152 mm), only when applied in the following order of application: Layer 1 (1 coat of Sikadur 330 primer) followed by Layer 2 (8 coats of SikaWrap Hex 103C Fabric saturated with Sikadur Hex 300); mix ratio (Part A:Part B) for Sikadur 330 primer is 100:24.7 by weight and for Sikadur Hex 300 is 100:34.5 by weight. Application method: roller. Maximum application thickness: Layer 1: 16 mils, Layer 2: 8 coats at 40 mils per coat. Minimum application thickness: Layer 1: 16 mils, Layer 2: 1 coat at 40 mils per coat. Final cure time is 7 days at 75°F (24°C) [each layer must be applied wet-on-wet within 60 minutes of prior layer at 75°F (24°C)].

(3) For use with tanks greater than or equal to 100 gallons (378.5 L) and pipes where the diameter is greater than or equal to 6 inches (152 mm), only when applied in the following order of application: Layer 1 (1 coat of Sikadur Hex 300 epoxy) followed by Layer 2 (8 coats of SikaWrap Hex 103C Fabric saturated with Sikadur Hex 300); mix ratio (Part A:Part B) for Sikadur Hex 300 is 100:34.5 by weight. Application method: roller. Maximum application thickness: Layer 1: 16 mils, Layer 2: 8 coats at 40 mils per coat. Minimum application thickness: Layer 1: 16 mils, Layer 2: 1 coat at 40 mils per coat. Final cure time: 7 days at 75°F (24°C) [each layer must be applied wet-on-wet within 60 minutes of prior layer at 75°F (24°C)].

(4) For use with tanks greater than or equal to 100 gallons (378.5 L) and pipes where the diameter is greater than or equal to 6 inches (152 mm), only when applied in the following order of application: Layer 1 (1 coat of Sikadur Hex 300 epoxy) followed by Layer 2 (8 coats of SikaWrap Hex 100G Fabric saturated with Sikadur Hex 300); mix ratio (Part A:Part B) for Sikadur Hex 300 is:100: 34.5 by weight. Application method: roller. Maximum application thickness: Layer 1: 16 mils, Layer 2: 8 coats at 40 mils per coat. Minimum application thickness: Layer 1: 16 mils, Layer 2: 1 coat at 40 mils per coat. Final cure time: 7 days at 75°F (24°C) [each layer must be applied wet-on-wet within 60 minutes of prior layer at 75°F (24°C)].

4.3 Special Inspection: Special inspection during the installation of the system must be in accordance with the ICC-ES Acceptance Criteria for Inspection and Verification of Concrete and Unreinforced Masonry Strengthening Using Fiber-reinforced Polymer (FRP) Composite Systems (AC178), dated October 2017 (editorially revised December 2017). A statement of special inspection must be prepared in accordance with Sections 1704.3 of the 2018, 2015, and 2012 IBC or Section 1705 of the 2009 IBC. Inspection must also comply with Sections 1704 and 1705 of the 2018, 2015, and 2012 IBC, or Section 1704 through 1707 of the 2009 IBC or Section 1701 of the UBC.

5.0 CONDITIONS OF USE

The SikaWrap Hex Structural Composite System, described in this report complies with, or is a suitable alternative to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

5.1 Design and installation must be in accordance with this report; the Sika Design Manual, dated April 7, 2017; the quality control manual dated May 2017; Sika published installation guidelines; and the IBC or UBC.

5.2 Copies of the Sika quality control manual, dated May 2017, and the Design Manual, dated April 7, 2017, must be submitted to the code official for approval with each project using the system.

5.3 Complete construction documents, including plans and calculations verifying compliance with this report, must be submitted to the code official for each project at the time of permit application. The construction documents must be prepared and sealed by a registered design professional where required by the statutes of the jurisdiction in which the project will be constructed.

5.4 Except as described in Section 4.2.5 of this report, fire-resistance ratings of column, beam and slab, and wall assemblies, as recognized in Section 4.1 of this report, must comply with Chapter 7 of the IBC or UBC and are not reduced by application of the SikaWrap Hex composite system. The structural load-carrying capacities of fire-resistance-rated assemblies must be based on the design of the concrete or masonry without the Sika composite system, in accordance with the IBC or UBC.

5.5 Special inspection must be provided in accordance with Section 4.3 of this report.

5.6 Application of the composite systems to concrete or masonry at a fabricator's facility must be by an approved fabricator complying with Chapter 17 of the IBC or UBC, or at a jobsite with continuous special inspections in accordance with Chapter 17 of the IBC or UBC and Section 4.3 of this report.

5.7 SikaWrap Hex materials are manufactured by Sika Corporation, 1682 Marion-Williamsport Road East, Marion, Ohio, under a quality control program with inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED

Data in accordance with the Acceptance Criteria for Concrete and Reinforced and Unreinforced Masonry Strengthening Using Fiber-reinforced, Composite Systems (AC125), dated October 2019.

7.0 IDENTIFICATION

7.1 Products of the structural composite system are labeled in accordance with the approved quality control documentation, with the company name (Sika Corporation) and address, product name, expiration date, and evaluation report number (ESR-3288).

7.2 The report holder's contact information is the following:

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DIVISION: 03 00 00—CONCRETE
Section: 03 01 00—Maintenance of Concrete

DIVISION: 04 00 00—MASONRY
Section: 04 01 00—Maintenance of Masonry
Section: 04 01 20—Maintenance of Unit Masonry

REPORT HOLDER:

SIKA CORPORATION

EVALUATION SUBJECT:

CONCRETE AND MASONRY STRENGTHENING USING THE SIKAWRAP HEX STRUCTURAL COMPOSITE SYSTEM

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that Concrete and Masonry Strengthening using SikaWrap Hex Structural Composite System, described in ICC-ES evaluation report ESR-3288, has also been evaluated for compliance with the codes noted below as adopted by the Los Angeles Department of Building and Safety (LADBS).

Applicable code editions:

- 2020 *City of Los Angeles Building Code (LABC)*
- 2020 *City of Los Angeles Residential Code (LARC)*

2.0 CONCLUSIONS

The Concrete and Masonry Strengthening using SikaWrap Hex Structural Composite System, described in Sections 2.0 through 7.0 of the evaluation report ESR-3288, complies with the LABC Chapter 19 and 21, and the LARC, and is subject to the conditions of use described in this supplement.

3.0 CONDITIONS OF USE

The Concrete and Masonry Strengthening using SikaWrap Hex Structural Composite System described in this evaluation report supplement must comply with all of the following conditions:

- All applicable sections in the evaluation report ESR-3288.
- The design, installation, conditions of use and identification of the Concrete and Masonry Strengthening using SikaWrap Hex Structural Composite System are in accordance with the 2018 *International Building Code®* (IBC) provisions noted in the evaluation report ESR-3288.
- The design, installation and inspection are in accordance with additional requirements of LABC Chapters 16, 17, and 95, as applicable.
- Use of the Concrete and Masonry Strengthening using SikaWrap Hex Structural Composite System for strengthening unreinforced masonry structures must be in accordance with Chapter A1 of the 2020 City of Los Angeles Existing Building Code.
- The Concrete and Masonry Strengthening using SikaWrap Hex Structural Composite System must not be used as compressive reinforcement for strengthening concrete or masonry structure.
- Use of the Concrete and Masonry Strengthening using SikaWrap Hex Structural Composite System to strengthen concrete coupling beams or concrete wall piers is outside the scope of this supplement.

- The Concrete and Masonry Strengthening using SikaWrap Hex Structural Composite System may be used on exterior side of exterior walls without additional weather protection. However, the site-specific exposure conditions must be evaluated by the registered design professional for each application.
- Under the LARC, an engineered design in accordance with LARC Section R301.1.3 must be submitted.

This supplement expires concurrently with the evaluation report, reissued February 2025.

DIVISION: 03 00 00—CONCRETE
Section: 03 01 00—Maintenance of Concrete

DIVISION: 04 00 00—MASONRY
Section: 04 01 00—Maintenance of Masonry
Section: 04 01 20—Maintenance of Unit Masonry

REPORT HOLDER:

SIKA CORPORATION

EVALUATION SUBJECT:

CONCRETE AND MASONRY STRENGTHENING USING THE SIKAWRAP HEX STRUCTURAL COMPOSITE SYSTEM

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that Concrete and masonry strengthening using the SikaWrap Hex Structural Composite system, described in ICC-ES evaluation report ESR-3288, has also been evaluated for compliance with the codes noted below.

Applicable code editions:

- 2019 *California Building Code* (CBC)

For evaluation of applicable chapters adopted by the California Office of Statewide Health Planning and Development (OSHPD) AKA: California Department of Health Care Access and Information (HCAI) and the Division of State Architect (DSA), see Sections 2.1.1 and 2.1.2 below.

- 2019 *California Residential Code* (CRC)

2.0 CONCLUSIONS

2.1 CBC:

The Concrete and masonry strengthening using the SikaWrap Hex Structural Composite system, described in Sections 2.0 through 7.0 of the evaluation report ESR-3288, complies with CBC Chapters 19 and 21, provided the design and installation are in accordance with the 2018 *International Building Code*® (IBC) provisions noted in the evaluation report and the additional requirements of CBC Chapters 7, 14, 17, 19 and 21, as applicable.

2.1.1 OSHPD:

The applicable OSHPD Sections of the CBC are beyond the scope of this supplement.

2.1.2 DSA:

The applicable DSA Sections of the CBC are beyond the scope of this supplement.

2.2 CRC:

The Concrete and masonry strengthening using the SikaWrap Hex Structural Composite system, described in Sections 2.0 through 7.0 of the evaluation report ESR-3288, complies with CRC Section R301.1.3, provided the design and installation are in accordance with the 2018 *International Residential Code*® (IRC) provisions noted in the evaluation report and the additional requirements of CRC Section R301.1.3

This supplement expires concurrently with the evaluation report, reissued February 2025.