1.0 EVALUATION SCOPE

Compliance with the following codes:


For evaluation for compliance with codes adopted by the Los Angeles Department of Building and Safety (LADBS), see ESR-2611 LABC and LARC Supplement.

Property evaluated:
Structural

2.0 USES

Simpson Strong-Tie® proprietary SSTB® series and SB series cast-in-place anchor bolts are used with light-frame wood and cold-formed steel construction to provide anchorage against uplift and overturning due to wind loads and seismic loads. The SSTB series and SB series cast-in-place anchor bolts are alternatives to cast-in-place anchors addressed in 2018 and 2015 IBC Section 1905 (2012 IBC Sections 1908 and 1909; 2009 and 2006 IBC Sections 1911 and 1912). For structures regulated under the IRC, the anchors may be used to meet the prescribed anchorage requirements and where an engineered design is submitted in accordance with Section R301.1.3.

3.0 DESCRIPTION

3.1 General:

3.1.1 SSTB Series Anchor Bolts: The SSTB series cast-in-place anchor bolts are ductile steel anchors that transmit applied tension forces from light frame construction into the concrete foundation stem-wall or concrete foundation. One end of the bolts has general-purpose, Unified National Coarse (UNC), rolled threads compliant with ANSI/ASME B18.2.1, followed by a length of plain (unthreaded) bar where the manufacturer’s identification is stamped onto the bar along with a stamped “embedment line” to facilitate the installation of the anchor with the required minimum embedment length, le, into the concrete foundation stem-wall or foundation to achieve the tabulated allowable tension loads. Below the stamped “embedment line” mark, the anchor is bent 6 1/2 degrees. The S-shape embedded end of the SSTB anchor bolts develops a mechanical interlock with the surrounding concrete to achieve the tabulated allowable loads when transferring applied tension forces into normal-weight concrete foundation stem-walls or foundations. SSTB anchor bolts are available with standard and extended thread lengths. Table 1 and Table 3, and Figures 1 through 5 and 11 through 19, provide product dimensions, installation details, minimum embedment lengths, and allowable tension loads. The SSTBL models (e.g., SSTB24L) have the same capacity and characteristic as the comparable SSTB models (e.g., SSTB24), except they have longer thread lengths. See footnote 8 to Table 1 of this report.

3.1.2 SB Series Anchor Bolts: The SB Bolt series cast-in-place anchor bolts are ductile steel anchors that transmit applied tension forces into the concrete foundation stem-wall and concrete foundation. A mechanical interlock is formed between the hardened concrete and a factory-installed 1/8-inch-thick (9.5 mm) steel bearing plate (washer) held onto the end of the SB bolt with two hex head nuts, one having an indentation to prevent removal of the bearing plate. The SB anchor bolts have UNC rolled threads compliant with ANSI/ASME B18.2.1, a straight length of plain (unthreaded) bar where the stamped manufacturer’s identification is located and a stamped “embedment line” to facilitate the installation of the anchor with the required minimum embedment length, le, into the concrete foundation stem-wall or concrete foundation to achieve the tabulated allowable tension loads. The bottom portion of the SB anchors has a large-radius bend, which provides increased concrete coverage for the steel bearing plate at the end of the anchors embedded in the concrete foundation stem-wall or concrete foundation. Table 2 and Table 4, and Figures 6 through 10 and 20 through 28, provide product dimensions, installation details, minimum embedment lengths and allowable tension loads.

3.2 Material:

3.2.1 Bolts: The proprietary SSTB or SB anchor bolts described in this report are manufactured from steel complying with ASTM F1554 Grade 36, with a minimum yield strength of 36,000 psi (248 MPa) and a minimum tensile strength of 58,000 psi (400 MPa). ASTM F1554 Grade 36 anchor bolts meet the definition of ductile steel elements in accordance with ACI 318 Chapter 2 (ACI 318 Section D.1 for the 2012, 2009, and 2006 IBC). Some
anchor bolts may also be available with batch hot-dipped galvanized coating and have an average minimum specified coating weight of 1.25 ounces of zinc per square foot of surface area (381 g/m²), in accordance with ASTM A153 Class C. These anchors are denoted by model numbers ending with the letters HDG; model numbers in this report do not list the HDG ending, but the information shown applies.

Anchor bolts used in contact with preservative-treated or fire-retardant-treated lumber must comply with 2018 and 2015 IBC Section 2304.10.5 (IBC Section 2304.9.5 for the 2012, 2009, or 2006 IBC); or 2018, 2015, 2012 and 2009 IRC Section R317.3 or 2006 IRC Section R319.3, as applicable. The lumber treater, the report holder (Simpson Strong-Tie Company), or both, shall be contacted for recommendations on minimum corrosion resistance used with specific proprietary preservative-treated or fire-retardant-treated lumber.

3.2.2 Nuts and Washers: The end of each SB anchor bolt embedded in concrete has a factory-installed, 3/16-inch-thick (9.5 mm), ASTM A36 steel bearing plate (washer) sandwiched between two hex head nuts.

Nuts and washers, or transition couplers, used to connect an SSTB or SB anchor bolt to a hold-down device or threaded rod are not supplied with the anchor bolts. Hex head nuts and washers, or transition couplers must be specified by the report holder (Simpson Strong-Tie Company), the design professional, or both. Nuts and washers or transition couplers shall be of appropriate material, size, and coating to match the anchor bolt or attachment requirements.

3.2.3 Concrete: Concrete must be normal-weight concrete complying with the provisions of IBC Chapter 19 or IRC Section R402.2, as applicable. The design values in this report are based on a minimum specified concrete compressive strength, \(f'_c\), of 2,500 psi (17.4 MPa).

3.2.4 Steel Reinforcing Bars (Rebar): Steel reinforcement must be minimum No. 4 deformed reinforcing bars complying with ACI 318.

4.0 DESIGN AND INSTALLATION

4.1 Design:

Applied loads (from engineered design) or prescribed loads (from the IRC) must not exceed the allowable loads shown in this report. Tables 1 and 3 and Tables 2 and 4 specify Allowable Stress Design (ASD) tension loads for, respectively, the SSTB and SB series cast-in-place anchor bolts. Allowable tension loads are shown for different anchor locations, as indicated in the tables, and for type of loading (seismic or wind). When the governing load combination includes seismic loads, the allowable (ASD) seismic load values shown in the tables must be converted to strength design (LRFD) load values for compliance with 2018 and 2015 IBC Section 1905, 2012 IBC Section 1909 or 2009 and 2006 IBC Section 1912. The procedure for converting tabulated allowable (ASD) load values to strength design (LRFD) load values is provided in the footnotes to the tables.

The first exception to IBC Section 1613.1 permits detached one- and two-family dwellings assigned to Seismic Design Category (SDC) A, B, or C to be exempt from the seismic design provisions of the code.

4.2 Installation:

Installation of the proprietary bolts must be in accordance with this evaluation report and the manufacturer’s published installation instructions. In the event of a conflict between this report and the manufacturer’s published installation instructions, this report governs.

The SSTB and SB series cast-in-place anchor bolts must be installed in normal-weight concrete foundation walls or stem-walls having the minimum thickness shown in the tables, or in a monolithic concrete slab with integral footing with minimum dimensions shown in the tables. A horizontal cold joint is not allowed within the anchor’s required minimum embedment depth, unless provisions are made to transfer the load.

Anchor bolts must be installed with the minimum embedment length, \(l_e\), noted in the tables of this report. Each anchor bolt has a stamped embedment line to facilitate proper installation. Placement of the S-shaped end of the SSTB anchor bolts and the larger-radius bent end of the SB anchor bolt must be between 45 and 90 degrees relative to the edge of concrete foundation walls or stem-walls or foundation, except for corner and end-wall installations where it must be 45 degrees. Anchors must be installed with a minimum concrete edge to center of bolt distance of 1 3/16 inches (44.5 mm) and a minimum end to center of bolt distance equal to the embedment length, \(l_e\), to achieve the tabulated maximum allowable tension load. Tables 1 and 2 also provide allowable tension loads when the anchors are installed at reduced end distances and Tables 3 and 4 provide allowable tension loads for installations in alternate footing configurations. Minimum anchor center-to-center spacing, \(S_{min}\), must be three times the minimum required embedment length, \(l_e\), that is, \(S_{min} = 3 \times l_e\), for anchors acting in tension at the same time for each anchor to be assigned the tabulated maximum allowable tension load.

The tabulated allowable tension loads are based on anchors installed in concrete reinforced with a minimum of one No. 4 deformed steel reinforcing bar located within the potential concrete failure region at the top portion of the foundation wall where the proprietary anchor bolt is located. The No. 4 steel reinforcing bar must be installed from 3 to 5 inches (75.6 mm to 126 mm) from top of foundation, and centered within the concrete stem-wall or placed 3 to 4 inches (75.6 mm to 100.8 mm) from the edge of a monolithic concrete slab with integral footing. The No. 4 reinforcing bar is not required to be tied to the anchor bolt provided the reinforcing bar is installed at locations shown in the figures of this report and as described in the manufacturer’s published installation instructions. The anchor bolts and the required No. 4 deformed steel reinforcing bar must be accurately placed and supported to preclude dislocation during placement of concrete.

When the foundation is reinforced structural concrete, the foundation rebar may be used in lieu of installing the No. 4 rebar previously described, provided the foundation rebar is located within the potential concrete failure region at the top portion of the foundation wall where the proprietary anchor bolt is placed.

When the foundation (footings and foundation walls) is permitted to consist of plain (unreinforced) structural concrete in accordance with 2018, 2015, 2012 and 2009 IBC Section 1807, or 2006 IBC Section 1805, or IRC Chapter 4, installation of one No. 4 rebar is required within the potential concrete failure region at the top portion of the foundation wall where the proprietary anchor bolt is located, except the rebar need not be continuous throughout the foundation wall.

The rebar must have the minimum length and must be placed as shown in Figures 2 and 7. The No. 4 reinforcing bar is not required for Slab-on-Grade Edge, Slab-on-Grade...
Garage Curb or Stem wall Garage Front Installations, as shown in Figures 11 through 28.

4.3 Special Inspection:
For installations under the IBC, special inspection shall be conducted as required under 2018 and 2015 Sections 1704.2, 1705.11 and 1705.12 (2012 IBC Sections 1704.2, 1705.10 and 1705.11, 2009 IBC Sections 1704.1, 1706 and 1707, and 2006 IBC Sections 1704.1 and 1707), where the SSTB and SB anchor bolts are part of the main wind-force-resisting system or main seismic-force-resisting system, except where not required by 2018 and 2015 IBC Section 1704.2 (IBC 1704.1 for the 2009 and 2006 IBC).

For installations under the IRC, special inspection is not normally required. However, for an engineered design where calculations are required to be signed by a registered design professional, the requirements of the IBC apply.

5.0 CONDITIONS OF USE
The Simpson Strong-Tie SSTB Series and SB series cast-in-place anchor bolts described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

5.1 Proprietary bolt sizes, dimensions, minimum embedment depths, spacing and edge distances are as set forth in this report.

5.2 Calculations showing compliance with this report must be submitted to the code official. The calculations must be prepared by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed.

5.3 Under the conditions noted in this report, the proprietary bolts are limited to resisting only tension forces.

5.4 Use of proprietary bolts with preservative- or fire-retardant-treated lumber must be in accordance with Section 3.2.1 of this report.

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

6.0 EVIDENCE SUBMITTED
Data in accordance with the ICC-ES Acceptance Criteria for Cast-in-place Proprietary Bolts in Concrete for Light-frame Construction (AC399), dated February 2017 (editorially revised February 2018).

7.0 IDENTIFICATION
7.1 The cast-in-place proprietary bolts described in this report are identified with the Simpson Strong-Tie Company trademark logo (“no equal” symbol, ≠), the model number length (for example, “16” for model SSTB16), and bolt orientation stamped onto the top of the bolt head. In addition, the evaluation report number (ESR-2611) must be on the carton or container.

7.2 The report holder’s contact information is the following:
SIMPSON STRONG-TIE COMPANY INC.
5956 WEST LAS POSITAS BOULEVARD
PLEASANTON, CALIFORNIA 94588
(800) 999-5099
www.strongtie.com
<table>
<thead>
<tr>
<th>SSTB ANCHOR BOLT</th>
<th>INSTALLATION</th>
<th>ALLOWABLE TENSION LOADS&lt;sup&gt;b,c&lt;/sup&gt; (lbs.) BASED ON ANCHOR LOCATION:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model No.</td>
<td>Major Thread Dia. (in.)</td>
<td>Total Length (in.)</td>
</tr>
<tr>
<td>SSB16</td>
<td>(\frac{5}{16})</td>
<td>17(\frac{1}{2})</td>
</tr>
<tr>
<td>SSB20</td>
<td>(\frac{7}{32})</td>
<td>21(\frac{1}{2})</td>
</tr>
<tr>
<td>SSB24</td>
<td>(\frac{25}{32})</td>
<td>25(\frac{1}{8})</td>
</tr>
<tr>
<td>SSB28</td>
<td>(\frac{29}{32})</td>
<td>24(\frac{1}{4})</td>
</tr>
<tr>
<td>SSB34</td>
<td>(\frac{34}{32})</td>
<td>34(\frac{1}{8})</td>
</tr>
<tr>
<td>SSB36</td>
<td>(\frac{36}{32})</td>
<td>36(\frac{1}{8})</td>
</tr>
</tbody>
</table>

For SI: 1 in. = 25.4 mm, 1 lb. = 4.45 N, 1 psi = 6.895 kPa.

<sup>1</sup>Minimum specified concrete compressive strength, \(f'_c\) is 2,500 psi, unless required otherwise by 2018 and 2015 IBC Section 1904, 2012 IBC Section 1904.2.2, or IRC Section R402.2, as applicable.

<sup>2</sup>Allowable loads for all installations are based on minimum edge distance of 1\(\frac{1}{4}\) inches (measured from the edge of the concrete to the centerline of the SSTB anchor bolt).

<sup>3</sup>One No. 4 rebar must be installed in the breakout zone of the concrete foundation stem-wall where the SSTB anchor is located. Typically, providing one No. 4 rebar located from 3 to 5 inches from the top of the stem wall is adequate. May be foundation rebar; not post-tensioned cable.

<sup>4</sup>Minimum center-to-center spacing is 3 times the required anchor embedment (\(S_{min} = 3 \times l_e\)) for SSTB bolts acting in tension simultaneously for the tabulated tension load assigned to each anchor.

<sup>5</sup>For compliance with 2018 and 2015 IBC Section 1905, 2012 IBC Section 1905 or 2009 and 2006 IBC Section 1912, the allowable (ASD) seismic or wind loads must be converted to strength design (LRFD) load values by multiplying the tabulated Allowable Stress Design (ASD) load values by 1.43 or 1.67, respectively. The tabulated ASD loads are adjusted nominal strength values and include a strength reduction factor, \(\Phi\), for tension (uplift) loads. Consequently, when using the load combinations of 2018, 2015 and 2012 IBC Section 1605.2 or 2009 and 2006 IBC Section 1605.2.1, it is not necessary to apply a strength reduction factor, \(\Phi\), because it is already incorporated into the derived strength design (LRFD) load values.

<sup>6</sup>Tabulated allowable tension loads shown in the table for SSTB anchor bolts installed at corner and end of concrete foundation stem walls are based on a minimum end distance of 5 inches from the centerline of the anchor bolt to the end of the concrete foundation stem wall. See Figures 4 and 5. Allowable tension loads under the header “Continuous Concrete Foundation Stem-Wall” are used when the SSTB anchor is installed 1.5 times the required anchor embedment, \(l_e\), or greater from the end. For this condition, terminate rebar at the end of the stem wall with concrete clear cover as required by ACI 318 or if a stem wall return exists, extend rebar into return similar to Figure 4.

<sup>7</sup>According to the first exception to IBC Section 1613, detached one- and two-family dwellings assigned to Seismic Design Category (SDC) A, B, or C are exempt from the seismic design provisions of IBC Section 1905. When this is the case, the allowable wind loads assigned to the SSTB anchor bolts may be used.

<sup>8</sup>For SSTBL models, longer thread lengths are: 16L = 5\(\frac{1}{2}\) inches; 20L = 6 inches; 24L = 6\(\frac{1}{2}\) inches; 28L = 7 inches.

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**FIGURE 1**—TYPICAL SSTB ANCHOR BOLT (Identification on Bolt Top, Req’d Embedment, \(l_e\))

**FIGURE 2**—TYPICAL SSTB ANCHOR BOLT INSTALLATION (No. 4 Rebar in Breakout Zone, Min. 1\(\frac{1}{4}\)" Edge Distance)

**FIGURE 3**—SSTB ANCHOR BOLT INSTALLATION—ALONG CONTINUOUS STEM WALL (No. 4 Rebar Min. Length = 4\(l_e\), Min. 1\(\frac{1}{4}\)" Edge Distance)

**FIGURE 4**—SSTB ANCHOR BOLT INSTALLATION—CORNER OF STEM WALL (Min. 16" Return Stem Wall, Min. 5" End Distance)

**FIGURE 5**—SSTB ANCHOR BOLT INSTALLATION—END OF STEM WALL (Min. 5" End Distance, and No. 4 Rebar Min. Length)
### TABLE 2—ALLOWABLE STRESS DESIGN (ASD) LOADS FOR SB SERIES CAST-IN-PLACE ANCHOR BOLTS

<table>
<thead>
<tr>
<th>SB ANCHOR BOLT</th>
<th>INSTALLATION1,2</th>
<th>ALLOWABLE TENSION LOADS3,4,5 (lbs.)</th>
<th>BASED ON ANCHOR LOCATION:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Continuous Concrete Foundation Stem Wall6</td>
<td>Corner of Concrete Foundation Stem Wall6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>A, B8, C, D, E, F</td>
<td>Wind</td>
</tr>
<tr>
<td>Model No.</td>
<td>Major Thread Dia. (in.)</td>
<td>Thread Length (in.)</td>
<td>Total Length (in.)</td>
</tr>
<tr>
<td>SB5/8x24</td>
<td>5/8</td>
<td>6</td>
<td>24</td>
</tr>
<tr>
<td>SB7/8x24(8)</td>
<td>7/8</td>
<td>6</td>
<td>24</td>
</tr>
<tr>
<td>SB1x30</td>
<td>1</td>
<td>6</td>
<td>30</td>
</tr>
</tbody>
</table>

For **St**: 1 inch = 25.4 mm, 1 lb. = 4.45 N, 1 psi = 6.895 kPa.

1Minimum specified concrete compressive strength, $f'$c, is 2,500 psi, unless required otherwise by 2018 and 2015 IBC Section 1904, 2012 IBC Section 1904.2, or 2009 IBC Section 1904.3, or 2006 IBC Section 1904.2.2, or IRC Section 402.2, as applicable.

2Allowable loads for all installations are based on minimum edge distance of 13/4 inches (measured from the edge of the concrete to the centerline of the SB anchor bolt).

3One No. 4 rebar must be installed in the breakout zone of the concrete foundation stem-wall where the SB anchor is located. Typically, providing one No. 4 rebar located from 3 to 5 inches from the top of the stem wall is adequate. May be foundation rebar; not post-tensioned cable.

4Minimum center-to-center spacing is 3 times the required anchor embedment ($S_{min} = 3 \times l_e$) for SB bolts acting in tension simultaneously for the tabulated tension load assigned to each anchor.

5Tabulated allowable loads for end of stem wall and corner installations are based on a minimum end distance of 41/2 inches for SB7/8, and 5 inches for SB1 from the end of the wall. See Figures 9 and 10. Allowable tension loads under the header “Continuous Concrete Foundation Stem-Wall” are used when the SB anchor is installed 1.5 x $l_e$, or greater from the end. For this condition, terminate rebar at the end of the stem wall with concrete clear cover as required by ACI 318 or if a stem wall return exists, extend rebar into return similar to Figure 9.

6Tabulated allowable loads for end of stem wall and corner installations are based on a minimum end distance of 13/4 inches for SB anchor bolts. May be foundation rebar; not post-tensioned cable.

7For SB7/8x24 installed in concrete having a minimum specified compressive strength of 3,000 psi, the seismic values listed under the column “Continuous Concrete Foundation Stem Wall” may be adjusted: Allowable Load for SDC A, B = 11,205 lb and SDC C, D, E, and F = 9,415 lbs.

8According to the first exception to IBC Section 1613.1, detached one- and two-family dwellings assigned to Seismic Design Category (SDC) A, B, or C are exempt from the seismic design provisions of IBC Section 1613. When this is the case, the allowable wind loads assigned to the SB anchor bolts may be used.

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**FIGURE 6—TYPICAL SB ANCHOR BOLT**

**FIGURE 7—SB ANCHOR BOLT—TYPICAL INSTALLATION**

**FIGURE 8—SB ANCHOR BOLT INSTALLATION—CONTINUOUS STEM WALL**

**FIGURE 9—SB ANCHOR BOLT INSTALLATION—CORNER OF STEM WALL**

**FIGURE 10—SB ANCHOR BOLT INSTALLATION—END OF STEM WALL**
### TABLE 3—ALLOWABLE STRESS DESIGN (ASD) LOADS FOR SSTB ADDITIONAL INSTALLATIONS

#### SSTB BOLTS AT STEMWALL: GARAGE FRONT (See Figures 11, 12, and 13)

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Dimensions (in.)</th>
<th>Allowable Tension Loads (lbs.)</th>
<th>Wind &amp; SDC A&amp;B</th>
<th>SDC C - F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Stemwall Width</td>
<td>Dia.</td>
<td>Length</td>
<td>Min. Embed. (le)</td>
</tr>
<tr>
<td>SSTB28</td>
<td>8</td>
<td>7/8</td>
<td>29/8</td>
<td>24/8</td>
</tr>
</tbody>
</table>

#### SSTB BOLTS AT SLAB ON GRADE: EDGE (See Figures 14, 15, and 16)

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Dimensions (in.)</th>
<th>Allowable Tension Loads (lbs.)</th>
<th>Wind &amp; SDC A&amp;B</th>
<th>SDC C - F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Footing Width</td>
<td>Dia.</td>
<td>Length</td>
<td>Min. Embed. (le)</td>
</tr>
<tr>
<td>SSTB16</td>
<td>12</td>
<td>5/8</td>
<td>17/8</td>
<td>12/8</td>
</tr>
<tr>
<td>SSTB20</td>
<td>12</td>
<td>5/8</td>
<td>21/8</td>
<td>16/8</td>
</tr>
<tr>
<td>SSTB24</td>
<td>12</td>
<td>5/8</td>
<td>25/8</td>
<td>20/8</td>
</tr>
<tr>
<td>SSTB28</td>
<td>12</td>
<td>7/8</td>
<td>29/8</td>
<td>24/8</td>
</tr>
<tr>
<td>SSTB34</td>
<td>12</td>
<td>7/8</td>
<td>34/8</td>
<td>28/8</td>
</tr>
<tr>
<td>SSTB36</td>
<td>12</td>
<td>7/8</td>
<td>36/8</td>
<td>28/8</td>
</tr>
</tbody>
</table>

#### SSTB BOLTS AT SLAB ON GRADE: GARAGE CURB (See Figures 17, 18, and 19)

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Dimensions (in.)</th>
<th>Allowable Tension Loads (lbs.)</th>
<th>Wind &amp; SDC A&amp;B</th>
<th>SDC C - F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Curb Width</td>
<td>Dia.</td>
<td>Length</td>
<td>Min. Embed. (le)</td>
</tr>
<tr>
<td>SSTB28</td>
<td>6</td>
<td>7/8</td>
<td>29/8</td>
<td>24/8</td>
</tr>
</tbody>
</table>

For SI: 1 inch = 25.4 mm, 1 pound = 4.45 N, 1 psi = 6.895 kPa.

1Unless noted otherwise, see footnotes 1, 2, 4, 5, 7 and 8 under Table 1.
2Top #4 rebar not required.
3Midwall loads apply when the anchor is 1.5 le or greater from the end. For bolts acting in tension simultaneously, minimum bolt center-to-center spacing is 3 le.
### TABLE 4—ALLOWABLE STRESS DESIGN (ASD) LOADS FOR SB ADDITIONAL INSTALLATIONS\(^{1,2,3}\)

<table>
<thead>
<tr>
<th>SB BOLTS AT STEMWALL: GARAGE FRONT (See Figures 20, 21, and 22)</th>
<th>Allowable Tension Loads (lbs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model No.</td>
<td>Stemwall Width</td>
</tr>
<tr>
<td>-----------</td>
<td>----------------</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>SB7/8x24</td>
<td>8</td>
</tr>
<tr>
<td>SB1x30</td>
<td>8</td>
</tr>
</tbody>
</table>

**FIGURE 20—STEMWALL GARAGE FRONT**

**FIGURE 21—PERSPECTIVE VIEW**

**FIGURE 22—PLAN VIEW**

<table>
<thead>
<tr>
<th>SB BOLTS AT SLAB ON GRADE: EDGE (See Figures 23, 24, and 25)</th>
<th>Allowable Tension Loads (lbs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model No.</td>
<td>Footing Width</td>
</tr>
<tr>
<td>-----------</td>
<td>---------------</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>SB7/8x24</td>
<td>12</td>
</tr>
<tr>
<td>SB1x30</td>
<td>12</td>
</tr>
</tbody>
</table>

**FIGURE 23—SLAB EDGE**

**FIGURE 24—PERSPECTIVE VIEW**

**FIGURE 25—PLAN VIEW**

<table>
<thead>
<tr>
<th>SB BOLTS AT SLAB ON GRADE: GARAGE CURB (See Figures 26, 27, and 28)</th>
<th>Allowable Tension Loads (lbs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model No.</td>
<td>Curb Width</td>
</tr>
<tr>
<td>-----------</td>
<td>------------</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>SB7/8x24</td>
<td>6</td>
</tr>
<tr>
<td>SB1x30</td>
<td>6</td>
</tr>
</tbody>
</table>

**FIGURE 26—SLAB GARAGE CURB**

**FIGURE 27—PERSPECTIVE VIEW**

**FIGURE 28—PLAN VIEW**

For SI: 1 inch = 25.4 mm, 1 pound = 4.45 N, 1 psi = 6.895 kPa.

1Unless noted otherwise, see footnotes 1, 2, 4, 5, and 8 under Table 2.
2Top #4 rebar not required.
3Midwall loads apply when the anchor is 1.5 le or greater from the end. For bolts acting in tension simultaneously, minimum bolt center-to-center spacing is 3 le.
1.0 REPORT PURPOSE AND SCOPE

Purpose:
The purpose of this evaluation report supplement is to indicate that Simpson Strong-Tie Proprietary SSTB® Series and SB Series Cast-In-Place Anchor Bolts, described in ICC-ES evaluation report ESR-2611, have 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 Simpson Strong-Tie Proprietary SSTB® Series and SB Series Cast-In-Place Anchor Bolts, described in Sections 2.0 through 7.0 of the evaluation report ESR-2611, comply with the LABC Chapter 19, and the LARC, and are subjected to the conditions of use described in this supplement.

3.0 CONDITIONS OF USE

The Simpson Strong-Tie Proprietary SSTB® Series and SB Series Cast-In-Place Anchor Bolts, described in this evaluation report supplement, must comply with all of the following conditions:

- All applicable sections in the evaluation report ESR-2611.
- The design, installation, conditions of use and labeling are in accordance with the 2018 International Building Code® (2018 IBC) provisions noted in the evaluation report ESR-2611.
- The tabulated allowable loads in the evaluation report ESR-2611 must not be increased for duration of loading.
- The design, installation and inspection are in accordance with additional requirements of LABC Chapter 16 and 17, as applicable.
- 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 April 2020 and revised July 2020.
1.0 REPORT PURPOSE AND SCOPE

Purpose:
The purpose of this evaluation report supplement is to indicate that Simpson Strong-Tie® Proprietary SSTB® Series and SB Series Cast-In-Place Anchor Bolts, described in ICC-ES evaluation report ESR-2611, have also been evaluated for compliance with the codes noted below.

Applicable code editions:
- 2020 and 2017 Florida Building Code—Building
- 2020 and 2017 Florida Building Code—Residential

2.0 CONCLUSIONS

The Simpson Strong-Tie® proprietary SSTB® Series and SB Series Cast-In-Place Anchor Bolts, described in Sections 2.0 through 7.0 of the evaluation report ESR-2611, comply with the Florida Building Code—Building, and the Florida Building Code—Residential, provided the design requirements are determined in accordance with the Florida Building Code—Building or the Florida Building Code—Residential, as applicable. The installation requirements noted in ICC-ES evaluation report ESR-2611 for the 2018 and 2015 International Building Code® meet the requirements of the Florida Building Code—Building or the Florida Building Code—Residential, as applicable.

Use of the Simpson Strong-Tie® Proprietary SSTB® Series and SB Series Cast-In-Place Anchor Bolts has also been found to be in compliance with the High-Velocity Hurricane Zone provisions of the Florida Building Code—Building, and the Florida Building Code—Residential with the following condition:

a. For connections subject to uplift, the connection must be designed for no less than 700 pounds (3,114 N).

For products falling under Florida Rule 61G20-3, verification that the report holder’s quality assurance program is audited by a quality assurance entity approved by the Florida Building Commission for the type of inspections being conducted is the responsibility of an approved validation entity (or the code official when the report holder does not possess an approval by the Commission).

This supplement expires concurrently with the evaluation report ESR-2611, reissued April 2020 and revised July 2020.