

# ICC-ES Evaluation Report

**ESR-1573**

Reissued June 1, 2011

This report is subject to renewal in two years.

[www.icc-es.org](http://www.icc-es.org) | (800) 423-6587 | (562) 699-0543

A Subsidiary of the International Code Council®

**DIVISION: 06 00 00—WOOD, PLASTICS, AND  
COMPOSITES**
**Section: 06 53 00—Plastic Decking**
**REPORT HOLDER:**

**UFP VENTURES II, INC.**  
1801 EAST LESSARD STREET  
PRAIRIE DU CHIEN, WISCONSIN 53821  
(608) 326-0900  
[www.ufpi.com](http://www.ufpi.com)

**EVALUATION SUBJECT:**

**LATITUDES INTREPID™ SOLID (ALSO KNOWN AS VERANDA® SOLID), LATITUDES INTREPID™ SLOTTED (ALSO KNOWN AS VERANDA® SLOTTED), LATITUDES CAPRICORN® (ALSO KNOWN AS VERANDA TROPICS™), DECKORATORS CS™ – TREAD AND TRIM BOARD (ALSO KNOWN AS VERANDA HP™), DECKORATORS CS™ – SLOTTED (ALSO KNOWN AS VERANDA HP™ – SLOTTED), DECKORATORS TS™ – TREAD AND TRIM BOARD, DECKORATORS WPC™ (ALSO KNOWN AS EVERX™) LATITUDES CAPTIVA™ – TREAD AND TRIM BOARD (ALSO KNOWN AS LATITUDES CAPRICORN® – TREAD AND TRIM BOARD), LATITUDES CAPTIVA™-SOLID (ALSO KNOWN AS LATITUDES CAPRICORN®-SOLID), LATITUDES CAPTIVA™ – SLOTTED (ALSO KNOWN AS LATITUDES CAPRICORN® SLOTTED) AND LATITUDES® MARINE BOARD (ALSO KNOWN AS VERANDA® MARINE BOARD) WOOD PLASTIC COMPOSITE DECK BOARDS, AND EQUATOR® HIDDEN FASTENER SYSTEM**

**1.0 EVALUATION SCOPE**
**Compliance with the following codes:**

- 2009 and 2006 *International Building Code*® (IBC)
- 2009 and 2006 *International Residential Code*® (IRC)

**Properties evaluated:**

- Structural
- Durability
- Surface-burning characteristics

**2.0 USES**

Latitudes Intrepid™ Solid (also known as Veranda® Solid), Latitudes Intrepid™ Slotted (also known as Veranda® Slotted), Latitudes Capricorn® (also known as Veranda Tropics™), Deckorators CS™ – Tread and Trim Board (also known as Veranda HP™), Deckorators CS™ – Slotted (also known as Veranda HP™ – Slotted), Deckorators TS™ Tread and Trim Board, Deckorators WPC™ (also known as EverX™), Latitudes Captiva™ –

Tread and Trim Board (also known as Latitudes Capricorn® – Tread and Trim Board), Latitudes Captiva™ – Solid (also known as Latitudes Capricorn® – Solid), Latitudes Captiva™ – Slotted (also known as Latitudes Capricorn® – Slotted) and Latitudes® Marine Board (also known as Veranda® Marine Board) wood plastic composite deck boards evaluated in this report are limited to exterior use as deck boards for balconies, porches, stair treads, and decks of buildings of Type V-B (IBC) construction and dwellings constructed in accordance with the IRC. Deck boards for use as stair treads are limited to the deck boards in Section 4.3.

**3.0 DESCRIPTION**
**3.1 General:**

Latitudes Intrepid Solid (also known as Veranda Solid), Latitudes Intrepid Slotted (also known as Veranda Slotted), Latitudes Capricorn (also known as Veranda Tropics), Deckorators CS – Tread and Trim Board (also known as Veranda HP), Deckorators CS – Slotted (Also Known as Veranda HP – Slotted), Deckorators TS Tread and Trim Board, Deckorators WPC (also known as EverX), Latitudes Captiva – Tread and Trim Board (also known as Latitudes Capricorn – Tread and Trim Board), Latitudes Captiva-Solid (also known as Latitudes Capricorn-Solid), Latitudes Captiva – Slotted (also known as Latitudes Capricorn – Slotted) and Latitudes Marine Board (also known as Veranda Marine Board) products described in this report are wood thermoplastic composite lumber (WTCL) consisting of a minimum of 50 percent wood flour and a maximum of 50 percent high-density polyethylene and other processing additives. The deck boards are manufactured by an extrusion process in accordance with the approved quality assurance manual in four colors (redwood, cedar, gray and walnut). Latitudes Capricorn and Captiva, Deckorators CS (also known as Veranda HP) and Deckorators TS, have a 1/32-inch-thick (0.8 mm) polyethylene coating embossed on top. Figure 1 provides dimensioned cross-sectional profiles of each board type.

The Equator® Hidden Fastener System consists of a plastic clip made of polypropylene copolymer and No. 8 by 2-inch-long (51 mm) square drive stainless steel screws with 0.22-inch (5.6 mm) head diameters. The Equator Hidden Fastener System is designed specifically for attachment of Latitudes Intrepid Slotted Latitudes Captiva Slotted, Deckorators CS-Slotted and Latitudes Capricorn deck boards. See Figure 2.

**3.2 Deck Boards:**

Latitudes Intrepid Solid (also known as Veranda Solid), Latitudes Intrepid Slotted (also known as Veranda slotted), Latitudes Capricorn (also known as Veranda Tropics), Deckorators CS – Tread and Trim Board (also known as

Veranda HP), Deckorators CS – Slotted (Also Known as Veranda HP – Slotted), Deckorators TS Tread and Trim Board, Deckorators WPC (also known as EverX), Latitudes Captiva– Tread and Trim Board (also known as Latitudes Capricorn – Tread and Trim Board), Latitudes Captiva-Solid (also known as Latitudes Capricorn-Solid), Latitudes Captiva – Slotted (also known as Latitudes Capricorn – Slotted) and Latitudes Marine Board (also known as Veranda Marine Board) wood plastic composite deck boards are manufactured in different sizes ranging from 0.9 inch by 5.2 inches (22.9 mm by 132.1 mm) to 1.25 inch by 5.4 inches (31.7 mm by 137.2 mm). The deck boards are all solid boards, with Latitudes Intrepid Slotted (also known as Veranda Slotted), Latitudes Capricorn (also known as Veranda Tropics), Deckorators CS – Slotted (also known as Veranda HP – Slotted) and Latitudes Captiva – Slotted (also known as Latitudes Capricorn – Slotted) having two keyhole slot openings of 0.15 inch by 0.38 inch (3.8 by 9.7 mm) on each board edge to allow for fastener attachments. The Latitudes Captiva - Solid (also known as Latitudes Capricorn – Solid, Latitudes Captiva - Slotted (also known as Latitudes Capricorn – Slotted, Deckorators CS – Slotted (also known as Veranda HP – Slotted) and the Deckorators WPC (also known as EverX) have 4 lobes on the bottom surface.

### 3.3 Durability:

When subjected to weathering, insect attack, and other decaying elements, the material used to manufacture the deck board products is equivalent in durability to preservative-treated or naturally durable lumber when used in locations described in Section 2.0 of this report. The deck boards have been evaluated for use within a temperature range of -20°F to 125°F (-29°C to 52°C).

### 3.4 Surface-burning Characteristics:

When tested in accordance with ASTM E 84, the deck board products have a flame-spread index no greater than 200.

## 4.0 DESIGN AND INSTALLATION

### 4.1 General:

Installation of deck boards must comply with this report and the manufacturer's published installation instructions. The manufacturer's published installation instructions must be available at the jobsite at all times during installation. When the manufacturer's published installation instructions differ from this report, this report governs.

### 4.2 Deck Boards:

**4.2.1 Structural:** Latitudes Intrepid Solid (also known as Veranda Solid), Latitudes Intrepid Slotted (also known as Veranda slotted), Latitudes® Capricorn (also known as Veranda Tropics), Deckorators CS – Tread and Trim Board (also known as Veranda HP), Deckorators CS – Slotted (also known as Veranda HP – Slotted), Deckorators TS Tread and Trim Board, Deckorators WPC (also known as EverX), Latitudes Captiva-Tread and Trim Board (also known as Latitudes Capricorn – Tread and Trim Board), Latitudes Captiva-Solid (also known as Latitudes Capricorn-Solid), Latitudes Captiva – Slotted (also known as Latitudes Capricorn – Slotted) and Latitudes Marine Board (also known as Veranda Marine Board), when used as a deck board, have allowable capacity, when installed at a maximum center-to-center spacing of the supporting construction as prescribed in Table 1. A minimum of 1/4 inch (6.4 mm) side gapping must be provided between the decking materials and any permanent structure or post.

### 4.2.2 Fasteners:

**4.2.2.1 Latitudes Intrepid Solid (also known as Veranda Solid), Latitudes Captiva - Solid (also known as Latitudes Capricorn - Solid), Deckorators TS – Tread and Trim Board, Deckorators CS – Tread and Trim Board (also known as Veranda HP), Deckorators WPC (also known as EverX) and Latitudes Captiva – Solid (also known as Latitudes Capricorn – Solid) and Latitudes Marine Board (also known as Veranda Marine Board):** The boards must be attached at each joist using two No. 7 by 2 1/2-inch-long (64 mm) corrosion-resistant wood screws. The maximum allowable fastener head pull-through load is 296 lbf (1348 N) per fastener. Fasteners located within 1 1/2 inch (38 mm) of board ends must be predrilled.

**4.2.2.2 Latitudes Intrepid Slotted (also known as Veranda Slotted) and Latitudes® Capricorn (also known as Veranda Tropics), Deckorators CS – Slotted (also known as Veranda HP-Slotted) and Latitudes Captiva – Slotted (also known as Latitudes Capricorn Slotted):** The boards are attached at each joist using the Equator Hidden Fastener and one No. 8 by 2-inch-long (51 mm) stainless steel, square drive screw with 0.22-inch (5.6 mm) head diameter through the plastic clip. The fastener wings must remain level with the joist for the boards to fit correctly. The deck boards must be attached to the outside and inside edges of the deck with No. 8 by 2-inch-long (51 mm) corrosion-resistant traditional screws at 16 inches on center. Fasteners located within 1 1/2 inches (38 mm) of board ends must be predrilled. The Equator Hidden Fasteners have allowable negative pressure of 80 psf (3830 Pa).

**4.2.2.3 Deck Boards to Rim Joists:** The boards must be attached to rim joists with one No. 8 or No. 9 by 2 1/2-inch-long (64 mm) corrosion-resistant screw spaced at 16 inches (406 mm) on center.

### 4.3 Deck Boards Used as Stair Treads:

Latitudes Intrepid Solid (also known as Veranda Solid), Latitudes Intrepid Slotted (also known as Veranda slotted), Latitudes Capricorn (also known as Veranda Tropics), Deckorators CS – Tread and Trim Board (also known as Veranda HP), Deckorators TS Tread and Trim Board, Latitudes Captiva-Tread and Trim Board (also known as Latitudes Capricorn – Tread and Trim Board), and Latitudes Marine Board (also known as Veranda Marine Board), when used as stair treads, are satisfactory to resist the code prescribed concentrated load of 300 lbf (1.33 kN) when installed at a maximum center-to-center spacing of the supporting construction as shown in Table 2.

## 5.0 CONDITIONS OF USE

Latitudes Intrepid Solid (also known as Veranda Solid), Latitudes Intrepid Slotted (also known as Veranda Slotted), Latitudes Capricorn (also known as Veranda Tropics), Deckorators CS – Tread and Trim Board (also known as Veranda HP), Deckorators CS – Slotted (also known as Veranda HP – Slotted), Deckorators TS Tread and Trim Board, Deckorators WPC (also known as EverX), Latitudes Captiva-Tread and Trim Board (also known as Latitudes Capricorn – Tread and Trim Board), Latitudes Captiva-Solid (also known as Latitudes Capricorn-Solid), Latitudes Captiva – Slotted (also known as Latitudes Capricorn – Slotted) and Latitudes Marine Board (also known as Veranda® Marine Board) wood plastic composite deck boards 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** Latitudes Intrepid Solid (also known as Veranda Solid), Latitudes Intrepid Slotted (also known as Veranda Slotted), Latitudes Capricorn (also known as Veranda® Tropics), Deckorators CS – Tread and Trim Board (also known as Veranda HP), Deckorators TS Tread and Trim Board, Latitudes Captiva-Tread and Trim Board (also known as Latitudes Capricorn – Tread and Trim Board), and Latitudes Marine Board (also known as Veranda Marine Board) are limited to exterior use as deck boards for balconies, porches, stair treads, and decks of buildings of Type V-B (IBC) construction and dwellings constructed in accordance with the IRC.
- 5.2** Deckorators CS - Slotted (also known as Veranda HP - Slotted), Latitudes Captiva-Solid (also known as Latitudes Capricorn –Solid), Deckorators WPC (also known as EverX) and Latitudes Captiva – Slotted (also known as Latitudes Capricorn – Slotted), are limited to exterior use as deck boards only for balconies, porches and decks of buildings of Type V-B (IBC) construction and dwellings constructed in accordance with the IRC.
- 5.3** Installation must comply with this report, the manufacturer's published installation instructions and the applicable code. Only those fasteners and fastener configurations described in this report have been evaluated for the installation of Latitudes Intrepid Solid (also known as Veranda Solid), Latitudes Intrepid Slotted (also known as Veranda Slotted) Latitudes Capricorn (also known as Veranda® Tropics), Deckorators CS – Tread and Trim Board (also known as Veranda HP), Deckorators CS – Slotted (also known as Veranda HP – slotted), Deckorators TS Tread and Trim Board, Deckorators WPC (also known as EverX), Latitudes Captiva-Tread and Trim Board (also known as Latitudes Capricorn – Tread and Trim Board), Latitudes Captiva-Solid (also known as Latitudes Capricorn-Solid), Latitudes Captiva – Slotted (also known as Latitudes Capricorn – Slotted) and Latitudes Marine Board (also known as Veranda Marine Board). In the event of conflict between this report and the manufacturer's published installation instructions, this report governs.
- 5.4** The use of deck boards as a component of a fire-resistance-rated assembly is outside the scope of this report.
- 5.5** The compatibility of the fasteners with the supporting construction, including chemically treated wood, is outside the scope of this report.
- 5.6** Adjustment factors outlined in the AF&PA *National Design Standard* and applicable codes must not apply to the allowable capacity and maximum spans for deck boards.
- 5.7** The deck boards must be directly fastened to supporting construction. Where required by the code official, engineering calculations and construction documents consistent with this report must be submitted for approval. The calculations must verify that the supporting construction complies with the applicable building code requirements and is adequate to resist the loads imparted upon it by the products and systems discussed in this report. The documents must contain details of the attachment to the supporting structure consistent with the requirements of this report. The documents must be prepared by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed.
- 5.8** The deck boards are produced by UFP Ventures II in Prairie du Chien, Wisconsin, under a quality control program with inspections by PFS Corporation (AA-652).

## 6.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Acceptance Criteria for Deck Board Span Ratings and Guardrail Systems (Guards and Handrails) (AC174), dated July 2010.

## 7.0 IDENTIFICATION

The deck boards described in this report must be identified by a stamp on each individual piece bearing the manufacturer's name (UFP Ventures II, Inc.) or the company name, the product name, the span rating for use as deck board, the allowable span for use as a stair tread, the name of the inspection agency (PFS Corporation) and the ICC-ES evaluation report number (ESR-1573).

**TABLE 1—DECK BOARD SPAN RATINGS**

DECK BOARD	MAXIMUM SPAN (in) <sup>1</sup>	ALLOWABLE CAPACITY (lbf/ft <sup>2</sup> ) <sup>2</sup>
Latitudes Intrepid Solid (also known as Veranda Solid) at 90° to supporting joist	16	100
Latitudes Captiva – Tread and Trim Board (also known as Latitudes Capricorn), Deckorators TS – Tread and Trim Board, Deckorators CS – Tread and Trim Board (also known as Veranda HP)	16	100
Latitudes Intrepid Solid (also known as Veranda Solid) at 45° to supporting joist	12	100
Latitudes Intrepid Slotted (also known as Veranda Slotted) or Latitudes Capricorn (also known as Veranda Tropics) at 90° to supporting joist	16	100
Latitudes Intrepid Slotted (also known as Veranda Slotted) or Latitudes Capricorn (also known as Veranda Tropics) at 45° to supporting joist	12	100
Latitudes Marine Board (also known as Veranda Marine Board) at 90° to supporting joist	24	100
Deckorators WPC (also known as EverX), Latitudes Captiva- Solid (also known as Latitudes Capricorn – Solid) at 90° to supporting joist	16	100
Deckorators CS – Slotted (also known as Veranda HP – Slotted), Latitudes Captiva – Slotted (also known as Latitudes Capricorn – Slotted)	16	100

For **SI**: 1 inch = 25.4 mm; 1 lbf/ft<sup>2</sup> = 47.9 Pa.

<sup>1</sup>Maximum span is measured center-to-center perpendicular, of the supporting construction.

<sup>2</sup>Maximum allowable capacity is adjusted for durability. No further increases are permitted.

TABLE 2—MAXIMUM STAIR TREAD SPANS

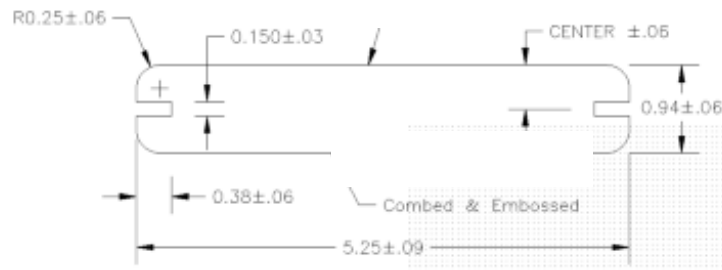
PRODUCT	MAXIMUM SPAN (in) <sup>1</sup>
Latitudes Intrepid Slotted (also known as Veranda Slotted), Latitudes Intrepid Solid (also known as Veranda Solid), Deckorators TS – Tread and Trim Board, Deckorators CS – Tread and Trim Board (also known as Veranda HP), Latitudes Captiva – Tread and Trim Board (also known as Latitudes Capricorn Tread and Trim Board), Latitudes Capricorn (also known as Veranda Tropics) at 90° to supporting stringer	8 <sup>2</sup>
Latitudes Intrepid Slotted (also known as Veranda Slotted), Latitudes Intrepid Solid (also known as Veranda Solid), Deckorators TS – Tread and Trim Board, Deckorators CS – Tread and Trim Board (also known as Veranda HP), Latitudes Captiva – Tread and Trim Board (also known as Latitudes Capricorn Tread and Trim Board) Latitudes Capricorn (also known as Veranda Tropics) at 90° to supporting stringer	12 <sup>3</sup>
Latitudes Marine Board (also known as Veranda Marine Board) at 90° to supporting stringer	12 <sup>2</sup>

For SI: 1 inch = 25.4 mm; 1 lbf/ft<sup>2</sup> = 47.9 Pa.

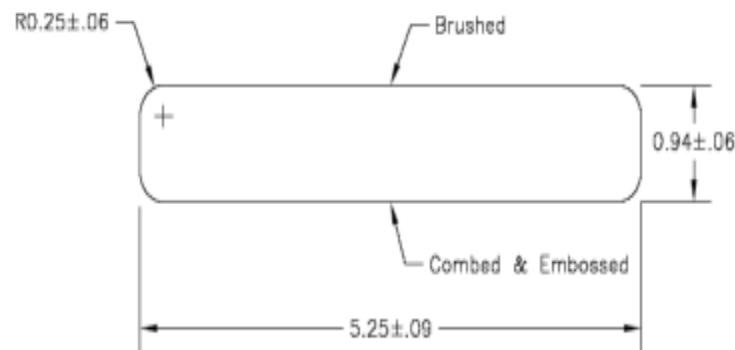
<sup>1</sup>Maximum span is measured center-to-center perpendicular, of the supporting construction.

<sup>2</sup>For use as a stair tread with a one-span condition.

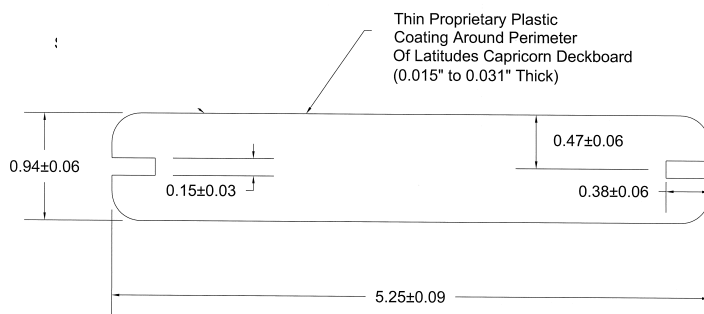
<sup>3</sup>For use as a stair tread with a two-span condition.



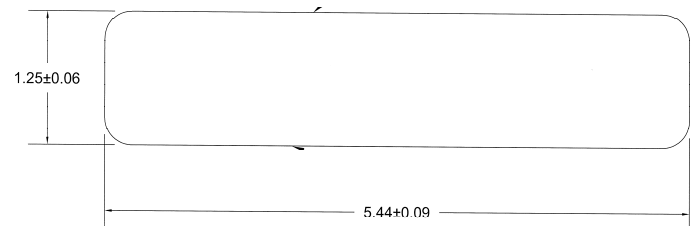
**LATITUDES INTREPID SLOTTED**  
(Also known as Veranda Slotted)



**LATITUDES INTREPID SOLID**  
(Also known as Veranda Solid)

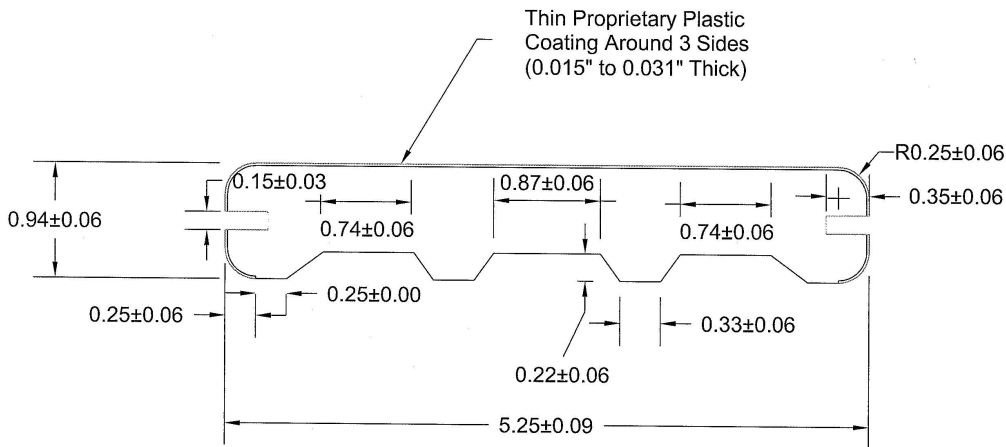


**LATITUDES CAPRICORN**  
(Also known as Veranda Tropics)

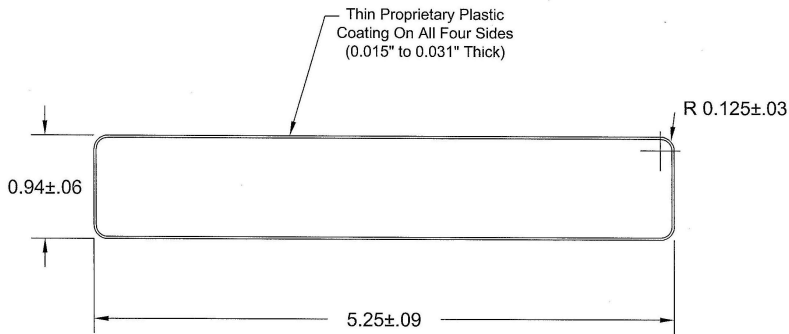


**LATITUDES MARINE BOARD**  
(Also known as Veranda Marine Board)

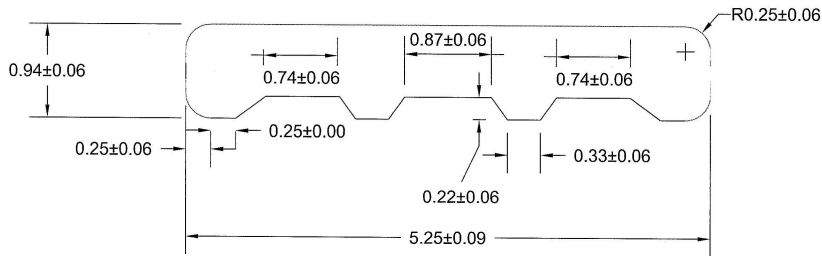
**FIGURE 1—DECK BOARD PROFILES**



**DECKORATORS CS—SLOTTED**  
(Also known as Veranda HP—Slotted)



**DECKORATORS TS—TREAD AND TRIM BOARD**



**DECKORATORS WPC**  
(Also known as EverX)

**FIGURE 1—DECK BOARD PROFILES (Continued)**



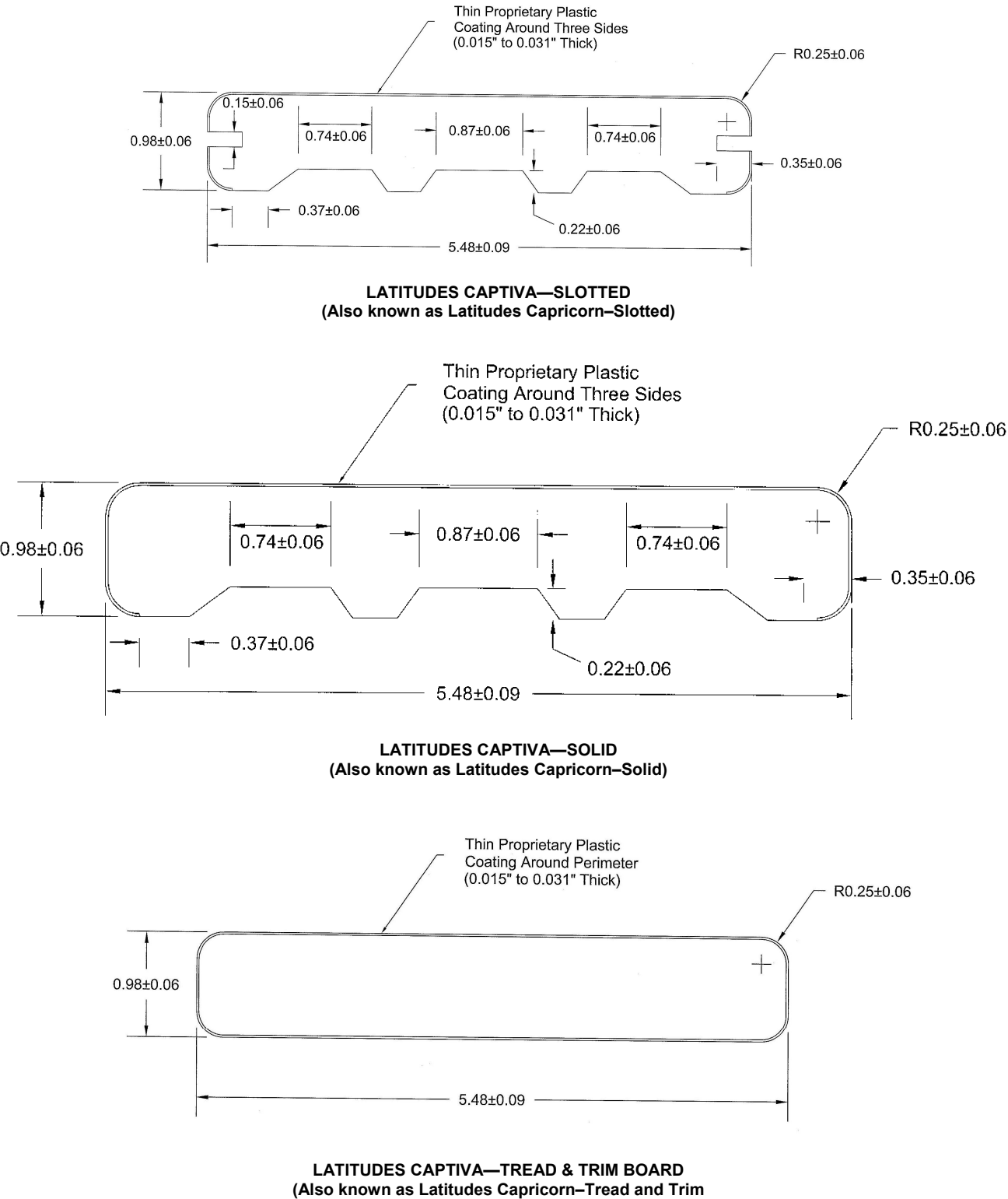


FIGURE 1—DECK BOARD PROFILES (Continued)

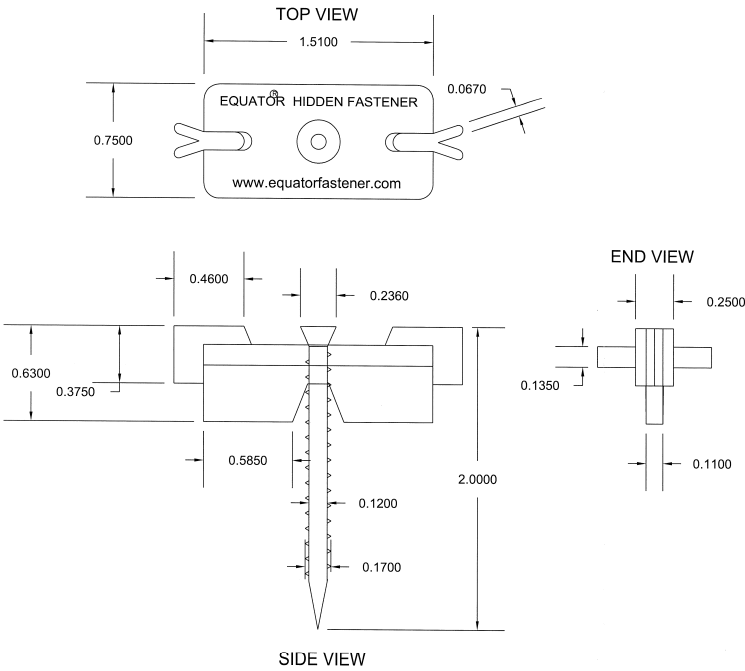


FIGURE 2—EQUATOR HIDDEN FASTENER SYSTEM