



Code Compliance Research Report

CCRR-0101

Subject to Renewal: 08/19/10
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1.0 Subject

AZEK Deck Boards (1 x 3½ and 1 x 5½) and AZEK Porch Boards (1 x 3⅝)

2.0 Research Scope

2.1 Building Codes:

- 2009 International Building Code (IBC)
- 2009 International Residential Code (IRC)

2.2 Properties:

- Structural Performance
- Durability
- Surface Burning

3.0 Description

3.1 General - *AZEK Decking* (Deck and Porch Boards) are intended for use as a walking surface on exterior decks, balconies, porches, and walkways, including stairs.

3.2 Materials and Processes - *AZEK Decking* is a solid extruded thermoplastic composite utilizing Poly Vinyl Chloride (PVC) and Agrifibre filler. The walking surface is embossed with a simulated wood grain.

3.3 *AZEK 1x3½ and 1x5½ Deck Boards* have a rectangular profile 1" thick and either 3.5" or 5.5" wide respectively and are manufactured in five colors: Ivory, Brownstone, Slate Gray, Clay and White. Edges are rounded with a 1/8" radius. See Figure 1.

3.4 *AZEK 1x3⅝ Porch Boards* measure 1" thick and 3⅝" exposure width (3⅝" overall width) and are manufactured in two colors: Brownstone and Slate Gray. The edges are machined with a tongue and groove pattern. See Figure 1.

4.0 Performance Characteristics

4.1 *AZEK Decking* is rated for a uniform live load of 100 lbs/ft² when installed on support framing spaced at 16" on center.

4.2 *AZEK 1x5½ Deck Boards* used as stair treads shall be installed on a minimum of a two-span condition and are rated for the code-prescribed concentrated load equal to 300 lbs when installed in accordance with Figures 2, 3 or 4.

4.3 The use of *AZEK 1x3½ Deck Boards* as a stair tread is not within the scope of this report.

4.4 *AZEK 1x3⅝ Porch Boards* used as stair treads shall be installed on a minimum of a two-span condition and are rated for the code-prescribed concentrated load equal to 300 lbs when installed at a maximum of 11 inches on center in accordance with Figure 2.

4.5 *AZEK Decking* has a wind uplift resistance rating equal to 160 lbs/ft.² when installed on support framing spaced at 16 inches on center.

4.6 *AZEK Decking* has a flame spread index of 40 when tested according to ASTM E 84. The referenced criterion, AC174, requires a flame spread index not exceeding 200.

4.7 *AZEK Decking* is deemed equivalent to preservative treated or naturally durable wood for resistance to weathering effects, attack from termites and fungus decay

4.8 *AZEK Decking* structural performance has been demonstrated for a temperature range of -20° F to 125° F.

5.0 Installation

Installation shall be in accordance with the manufacturer's installation instructions and this report. Where differences occur between this report and the manufacturer's installation instructions, this report shall govern.

5.1 *AZEK 1x5½ and 1x3½ Deck Boards* shall be installed with two screws driven through the face of the board at each support. Minimum screw size shall be # 7 x 2-1/4". Screws shall be stainless steel.

5.2 Tongue and Groove AZEK 1x3 $\frac{1}{8}$ Porch Boards shall be installed with one screw at an angle of between 30° to 45° through the root of the tongue at each support. Screws shall be # 7 x 2", 305 stainless steel trim head screw with a #17 drill point. The starting board shall have an additional screw driven through the face towards the grooved edge at each support.

5.3 AZEK 1x3 $\frac{1}{8}$ Porch Boards used as stair treads shall be installed as shown in Figure 2.

5.4 AZEK 1x5 $\frac{1}{2}$ Deck Boards used as stair treads shall be installed as shown in Figures 2, 3 and 4.

5.5 AZEK 1x3 $\frac{1}{2}$ Deck Boards shall not be used as a stair tread.

6.0 Supporting Evidence

6.1 Manufacturer's drawings and installation instructions.

6.2 Reports of testing demonstrating compliance with ICC-ES Acceptance Criteria for Deck Board Span Ratings and Guardrail Systems (Guards and Handrails), AC174 effective June 1, 2009.

6.3 Quality control manual in accordance with ICC-ES Acceptance Criteria for Quality Control Documents AC10, revised July 2008.

7.0 Conditions of Use

The AZEK Decking applications identified in this report are deemed to comply with the intent of the provisions of the referenced building codes subject to the following conditions.

7.1 AZEK Decking is limited to use in Type V-B (5B) construction.

7.2 The wind uplift resistance rating recognized in this report is based on attachment to treated Southern Pine framing (specific gravity, G=0.55). Installation on wood framing with a lesser specific gravity may result in a lower wind uplift rating.

7.3 AZEK Decking shall be fastened directly to supporting construction. Conventional wood supporting structure is not within the scope of this report and is subject to the evaluation and approval by the building official. Design and construction of supporting structure must satisfy the design load requirements of Chapter 16 of the IBC.

7.4 Where required by the building official, engineering calculations and details shall be provided. The calculations shall verify that the anchorage complies with the building code for the type of framing and condition of the supporting construction

7.5 The compatibility of all fasteners with supporting structure, including chemically treated wood, is not within the scope of this report.

7.6 AZEK Deck Boards and Porch Boards are manufactured in Foley, AL and Moosic, PA in accordance with the manufacturer's approved quality control system with inspections by Architectural Testing, Inc. (AA-676).

8.0 Identification

AZEK Decking produced in accordance with this report shall be identified with labeling on the individual deck boards that includes the following information:

8.1 The mark of the independent inspection agency, Architectural Testing, Inc. (AA-676)

8.2 The ATI Code Compliance Research Report Number (CCRR-0101)

9.0 Code Compliance Research Report Use

9.1 Approval of building products and/or materials can only be granted by a building official having legal authority in the specific jurisdiction where approval is sought.

9.2 Code Compliance Research Reports shall not be used in any manner that implies an endorsement of the product or manufacturer by ATI.

9.3 Reference to the Architectural Testing internet web site address at www.archtest.com is recommended to ascertain the current version and status of this report.

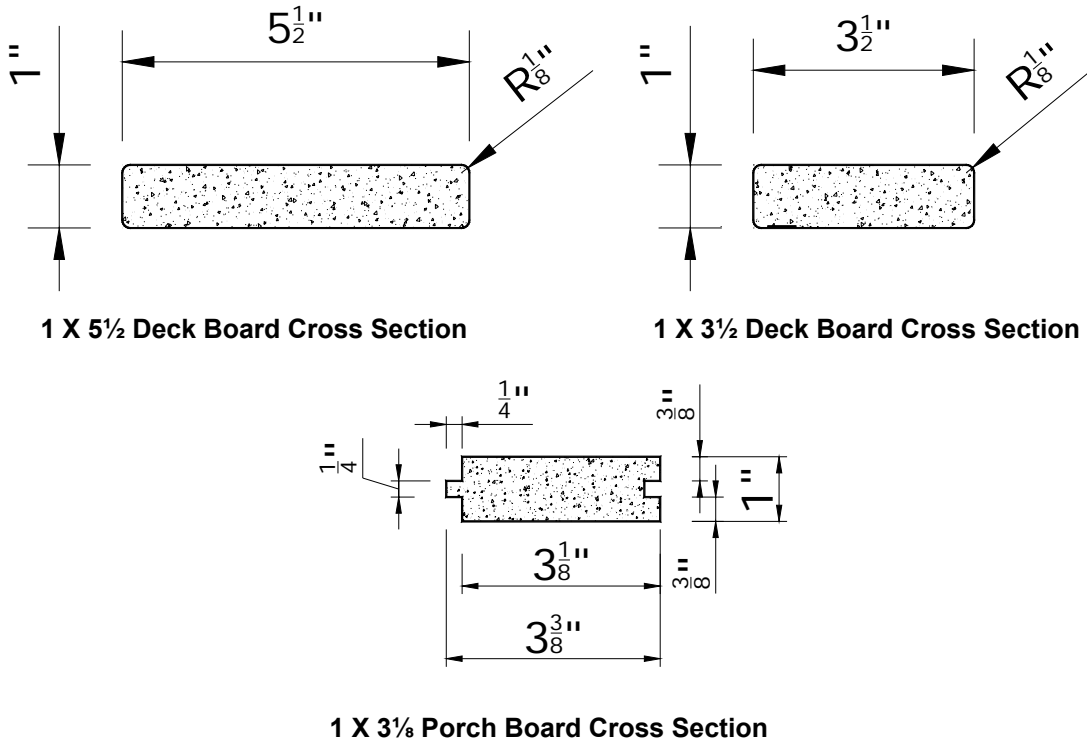
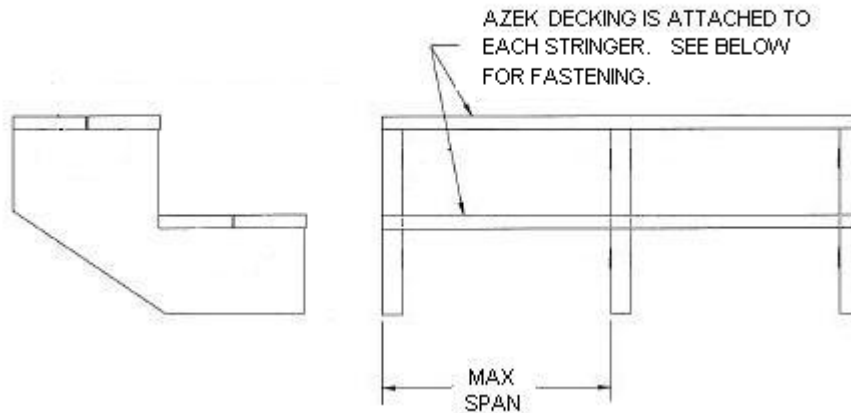


Figure 1 - AZEK Decking Cross Sections (in inches)



BOARD TYPE	MAX. SPAN	FASTENING
1X5½ Deck Board	9 Inches	Two #7 x 2¼" deck screws
1x3⅛ Porch Board	11 Inches	One #7 x 2" trim head screw through tongue. End boards receive an extra screw through face.

Figure 2 - Stair Tread Installation with no additional support

(Minimum tread length is 36")

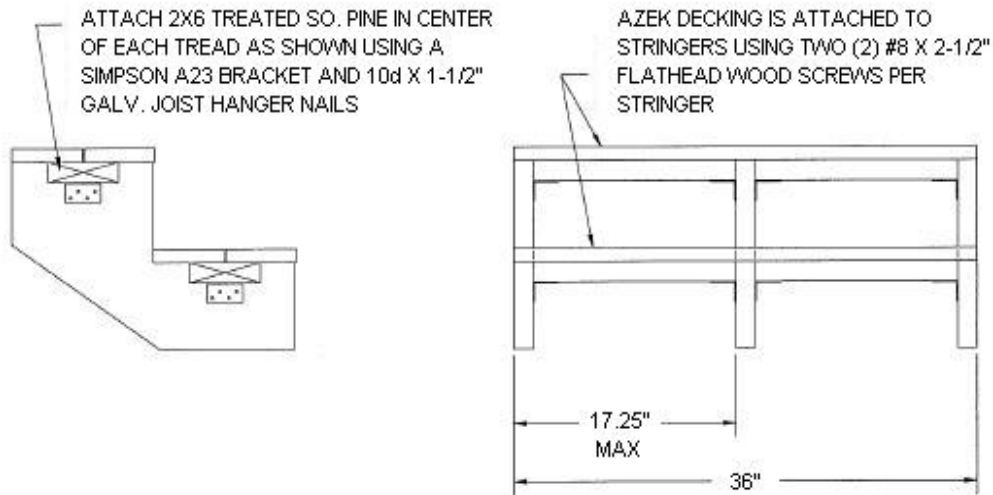


Figure 3 – Alternate 1 X 5½ Stair Tread Installation (2X6 additional support – Max span = 17.25")

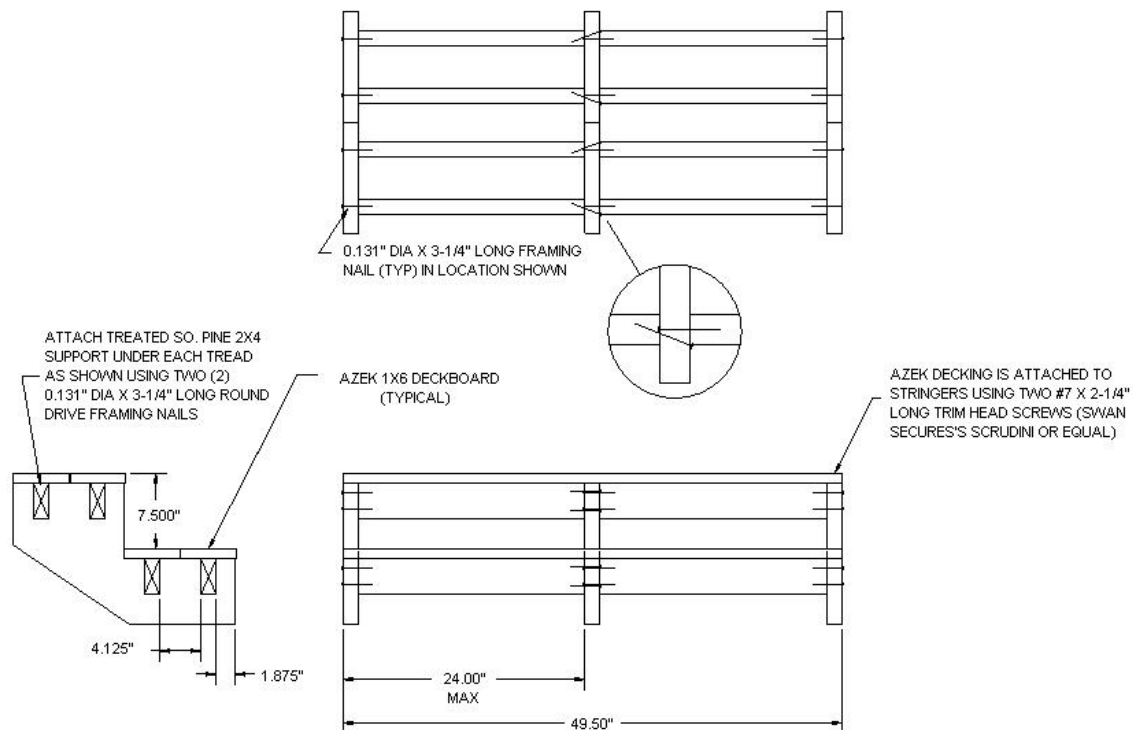


Figure 4 – Alternate 1 X 5½ Stair Tread Installation (2X4 additional supports – Max span = 24.0")