



**GAF-ELK Composite Building Products, Inc.**  
9806 Lackman Road  
Lenexa, Kansas 66219  
(866) 322-7452

## 1.0 Subject

*GAF-ELK Composite Building Products, Inc.*

*CrossTimbers® Professional Grade Deck Boards*

## 2.0 Research Scope

### 2.1. Building Codes:

2006 International Building Code® (IBC)

2006 International Residential Code® (IRC)

1997 Uniform Building Code (UBC)

### 2.2. Properties:

Structural Performance

Durability

Surface Burning

Decay

Termite

## 3.0 Description

3.1. General – *CrossTimbers® Professional Grade Deck Boards* are deck boards intended for use as a walking surface on exterior decks, balconies, porches, and walkways, including stairs.

3.2. Materials and Processes - *CrossTimbers® Professional Grade Deck Boards* deck boards are extruded thermoplastic composite utilizing polypropylene and rice husk.

3.3. *CrossTimbers® Professional Grade Deck Boards* are manufactured in either solid or voided profiles.

3.3.1. *CrossTimbers® Professional Grade Solid Deck Boards* have a solid rectangular profile, 5.5" wide and 1.00" thick (Nom 5/4 X 6). Edges are rounded with a 1/8" radius. See Figure 1.

3.3.2. The *CrossTimbers® Professional Grade Voided Deck Boards* have an outside dimensions of 5.5" wide and 1.00" thick (Nom 5/4 X 6). Edges are rounded with a 1/8" radius. There are six 0.61" dia. extruded voids extending throughout the interior of the extruded length. Also, an extruded groove exists on each edge of the board to facilitate fastening with Sabre™ hidden fastener system.. See Figure 2.

3.4. The *CrossTimbers® Professional Grade Deck Boards*, Solid and Voided, are recognized in two different colors and surface finish classes; Professional Grade and Professional Grade High Definition.

3.4.1. The *CrossTimbers® Professional Grade Deck Boards* are recognized in four different colors: Pewter Grey, New Cedar, Sandalwood and Weatheredwood. The walking surface is finished with an embossed simulated wood grain and the other side is smooth

3.4.2. The *CrossTimbers® Professional Grade-High Definition Deck Boards* are recognized in two different colors: Stone Grey and Carribean Walnut. Both faces are smooth without simulated wood grain.

## 4.0 Performance Characteristics

4.1. *CrossTimbers® Professional Grade Solid and Voided Deck Boards* are rated for a uniform live load of 100 lbs/ft.<sup>2</sup> when installed on support framing spaced at 24"

4.2. *CrossTimbers® Professional Grade Solid Deck Boards* used as stair treads are rated for the code-prescribed concentrated load equal to 300 lb when installed on a minimum 2 span condition with a maximum 16" support span. Overhang must not exceed 2".

*Use of the CrossTimbers® Professional Grade Voided Deck Boards as stair treads is not included in this report.*

4.3. *CrossTimbers® Professional Grade Solid Deck Boards* have a wind uplift resistance rating equal to 262 lb/ft.<sup>2</sup> when installed using two #8 by 3.0" long deck screws into each joist with joists spaced 24" apart.



4.4. *CrossTimbers® Professional Grade Voided Deck Boards* have a wind uplift resistance rating equal to 194 lb/ft.<sup>2</sup> when installed using a single Sabre Fastening Clip at each joist with joists spaced 24" apart. Wind uplift ratings for the *CrossTimbers®*

4.5. *CrossTimbers® Professional Grade Deck Boards* have a flame spread index of 85 when tested according to ASTM E 84. The referenced criteria, AC174, requires a flame spread index not exceeding 200.

4.6. *CrossTimbers® Professional Grade Deck Boards* are deemed equivalent to preservative treated or naturally durable wood for resistance to weathering effects, attack from termites and fungus decay.

## 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. Face fastening of the *CrossTimbers® Professional Grade Solid Deck Board™ Boards* shall be with #8 x 3" long deck screws. Two fasteners are required at every joist  $\frac{3}{4}$ " from the side and at least 1" from the end of the board.

Face fastening of Professional Grade Voided Deck Boards is not included in this report other than as described in Section 5.2.

5.2. *CrossTimbers® Professional Grade Voided Deck Boards* shall be attached at each joist, with the Sabre™ fastening clips utilizing the 2.25" long screws supplied with the clips regardless of joist spacing. (See Figure 3). Board attachment at butt joints can be accomplished with the Sabre™ fastening clips in lieu of face fastening. However, face fastening along the ledger board, where Sabre™ fastening clips cannot be installed, is required using a #8 x 3" long deck screw at each joist for the length of the board.

## 6.0 Supporting Evidence

6.1. Manufacturer's drawings and installation instructions.

6.2. Reports of testing in accordance with ICC-ES Acceptance Criteria for Deck Board Span Ratings and Guardrail Systems (Guards and Handrails), AC174 effective March 1, 2007.

6.3. Quality control manual in accordance with ICC-ES Acceptance Criteria for Quality Documentation, AC10, approved June 1, 2008.

## 7.0 Conditions of Use

The *CrossTimbers® Professional Grade Deck Board* 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. *CrossTimbers® Professional Grade Deck Boards* are limited to use in Type V-B (5B) construction.

7.2. *CrossTimbers® Professional Grade Voided Deck Boards* are not to be used as stair treads.

7.3. 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.

7.3.1. 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.

7.4. All products are manufactured in Lenexa, Kansas by GAF-ELK Composite Building Products, in accordance with the manufacturer's approved quality control system with inspections by Architectural Testing, Inc. (AA-676).

## 8.0 Identification

*CrossTimbers® Professional Grade Deck Boards* 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-0xxx)

## 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](http://www.archtest.com) is recommended to ascertain the current version and status of this report.

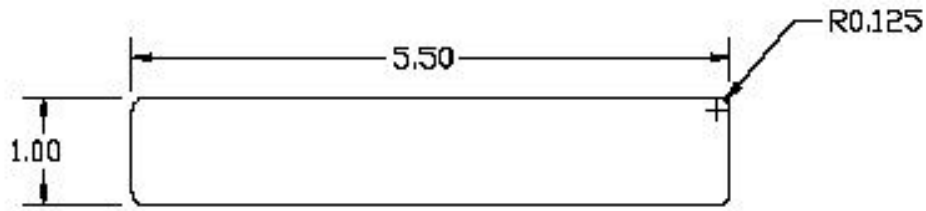


Figure 1 - CrossTimbers® Professional Grade Solid Deck Board Profile

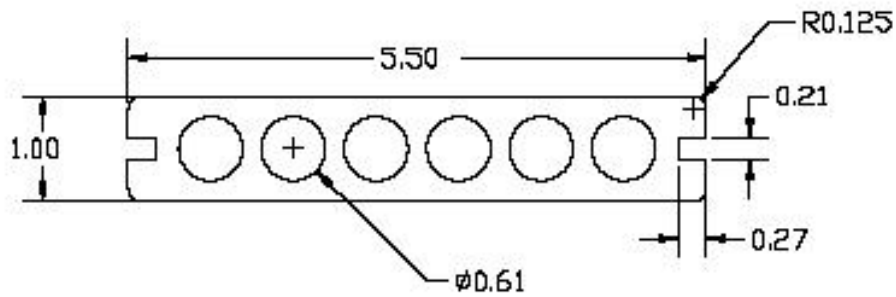


Figure 2: CrossTimbers® Professional Grade Voided Deck Board Profile

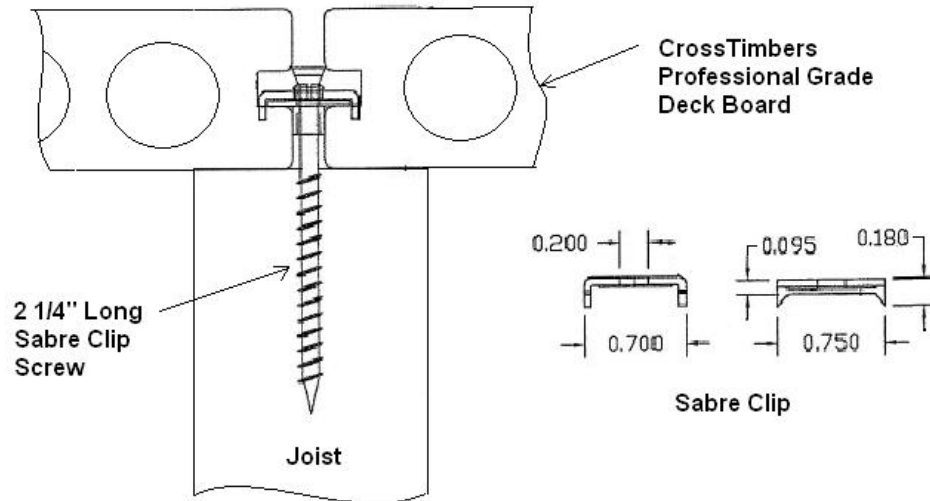


Figure 3: GAF-Elk Composites Building Products Sabre™ Fastening Clips