



## Case Study: Educational

### Stanford University/Huang Engineering Center

**Industry:**  
Education

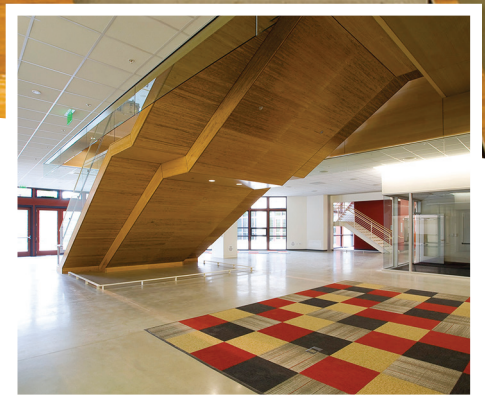
**Location:**  
Palo Alto, California

**Architect:**  
Boora Architects

LEED Platinum is in the design for the new Huang Engineering Center at Stanford University. In this ambitious project, Plyboo strand and flat grain amber plywood were used. In addition to applications as stair tread platforms and under sheathing to the stair case, bamboo plywood was used for wall treatments and cabinetry. Formaldehyde-free and FSC were important as contributors to this LEED platinum project.

**Possible LEED Credits:**

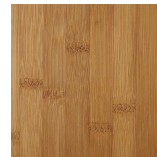
Low emitting materials and certified wood  
Floorscore Certified



**Materials Used:**



Sahara Strand  
Bamboo Plywood  
BP-4896PH-NAUF / FSC



Amber Flat Grain  
Bamboo Plywood  
BP-4896A-NAUF / FSC



Sahara Strand  
Bamboo Flooring  
FL-P5872PH-NAUF / FSC

### Physical / Mechanical Properties - Strand Bamboo Plywood

Dimensions:	3/4" x 48" x 96" 19mm x 1219mm x 2438mm (*mm tolerance +/- .5mm thickness)
Construction:	Three-ply, cross core construction.
Working with Plyboo:	A worksheet is provided with each panel containing useful tips and information and is also available on our website at <a href="http://plyboo.com/downloads">plyboo.com/downloads</a> .
ASTM E84: Surface Burning	Class C
ASTM D1037: Dimensional Stability	<ul style="list-style-type: none"> <li>•Linear Expansion (3-ply): Parallel -0.09% / Perpendicular -0.07%</li> <li>•Thickness Swell (3-ply): -0.3%</li> </ul> Screw Hold (3-ply) (face/back/edge) <ul style="list-style-type: none"> <li>• 1009lbs/ 681 lbs/ 516 lbs average</li> </ul>
ASTM D4442: Moisture Content	6-9% average
ASTM D 6007-02: Formaldehyde Concentration in Air from Wood Products, small chamber test	Plyboo = 0.004 ppm (surpasses CARB II standards, 0.05ppm & ULEF standards of 0.04ppm)

### Physical / Mechanical Properties - Flat Grain Bamboo Plywood

Dimensions:	3/4" x 48" x 96" 19mm x 1219mm x 2438mm (*mm tolerance +/- .5mm thickness)
Construction:	Three-ply, cross core construction.
Working with Plyboo:	A worksheet is provided with each panel containing useful tips and information and is also available on our website at <a href="http://plyboo.com/downloads">plyboo.com/downloads</a> .
ASTM E84: Surface Burning	Class C
ASTM D1037: Dimensional Stability	<ul style="list-style-type: none"> <li>•Linear Expansion (3-ply): Parallel -0.04% / Perpendicular -0.07%</li> <li>•Thickness Swell (3-ply): -0.13%</li> </ul> Screw Hold (3-ply) (face/back/edge) <ul style="list-style-type: none"> <li>• 742 lbs/ 831 lbs/ 860 lbs average</li> </ul>
ASTM D4442: Moisture Content	6-9% average
ASTM D 6007-02: Formaldehyde Concentration in Air from Wood Products, small chamber test	Plyboo = 0.004 ppm (surpasses CARB II standards, 0.05ppm & ULEF standards of 0.04ppm)

### Physical / Mechanical Properties - Strand Bamboo Flooring

Dimensions:	9/16" x 3 3/4" x 72" - 14mm x 96mm x 1830mm
Installation:	Tongue and Groove, glue down
ASTM E648:Critical Radiant Flux:	Class 1
ASTM D1037: Dimensional Stability	Linear Expansion: Parallel -0.02%, Perpendicular -0.23%, Thickness Swell -0.25%, Hardness (Janka Ball Test): 3,500 lbf average
ASTM D2394: Coefficient of Friction	Static Coefficient/Dynamic (Sliding) Coefficient: 0.562/ 0.497
ASTM 4442: Moisture Content	6-9% average
ASTM D5116: Organic Emission (CA Section 01350)	Classroom scenario/Office scenario: Pass/Pass