

# SOUNDS LIKE A WINNER

CASE STUDY



# Sounds Like a Winner

## California State Lottery

The ceilings at the California State Lottery headquarters appear as folded planes of wood. They are also acoustically absorptive, which is essential in the main assembly chamber, “the Pavilion.”



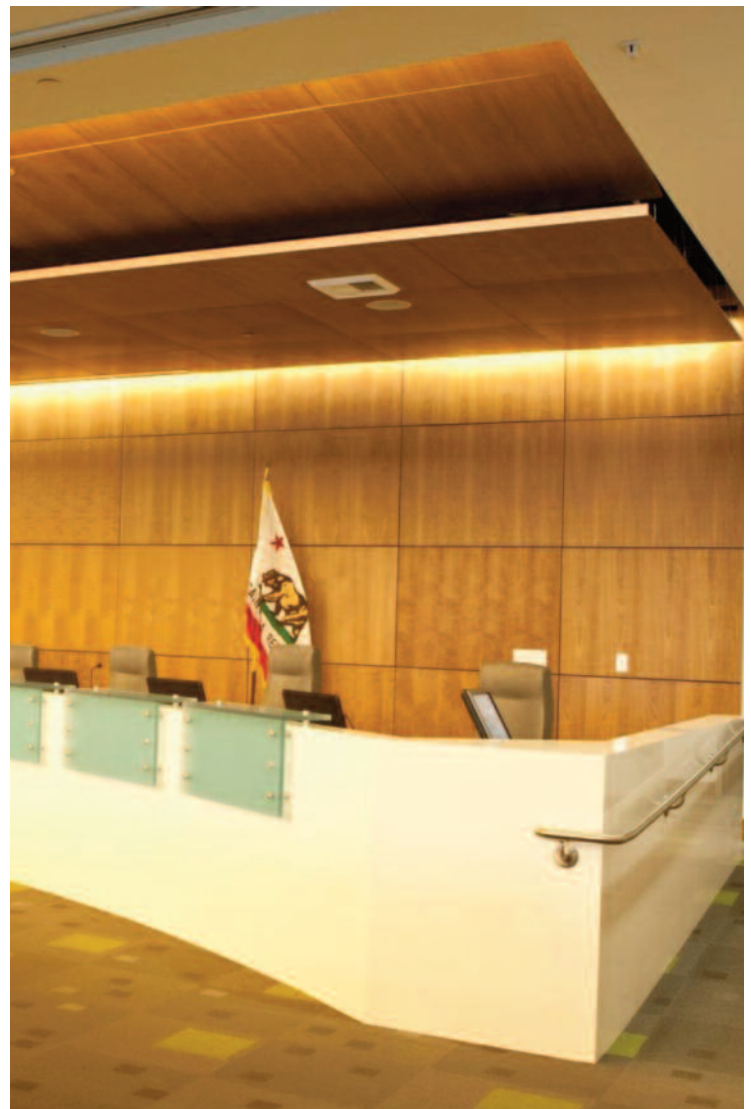
The architectural vocabulary for the California state lottery headquarters building is all about angles. Angles on the exterior. Angles in the shape of the rooms. Angles overhead.

“The angular forms evoke energy and excitement,” says Curtis Owyang, AIA, principal with the design firm, LPAS Architecture + Design. “It represents an important identity for the client.” This brings us to the ceilings — “folded planes of wood,” as the Owyang describes them, that are also acoustically absorptive. The panels have a noise reduction coefficient (NRC) of .90 with added 1-1/2” insulation. Ready for the project, installing them and integrating them with other systems took work.

A first challenge involved tolerances. The Cherry veneer was ultra-thin — only 1/42” thick. “An error in judgment while sanding can be a disaster in this situation,” said the 9Wood custom assembly department supervisor.

“These custom-fabbed angled acoustic tiles had never been done before. It was a test of the 9Wood

**The home of the California State Lottery has the perfect alignment of angles and acoustics.**

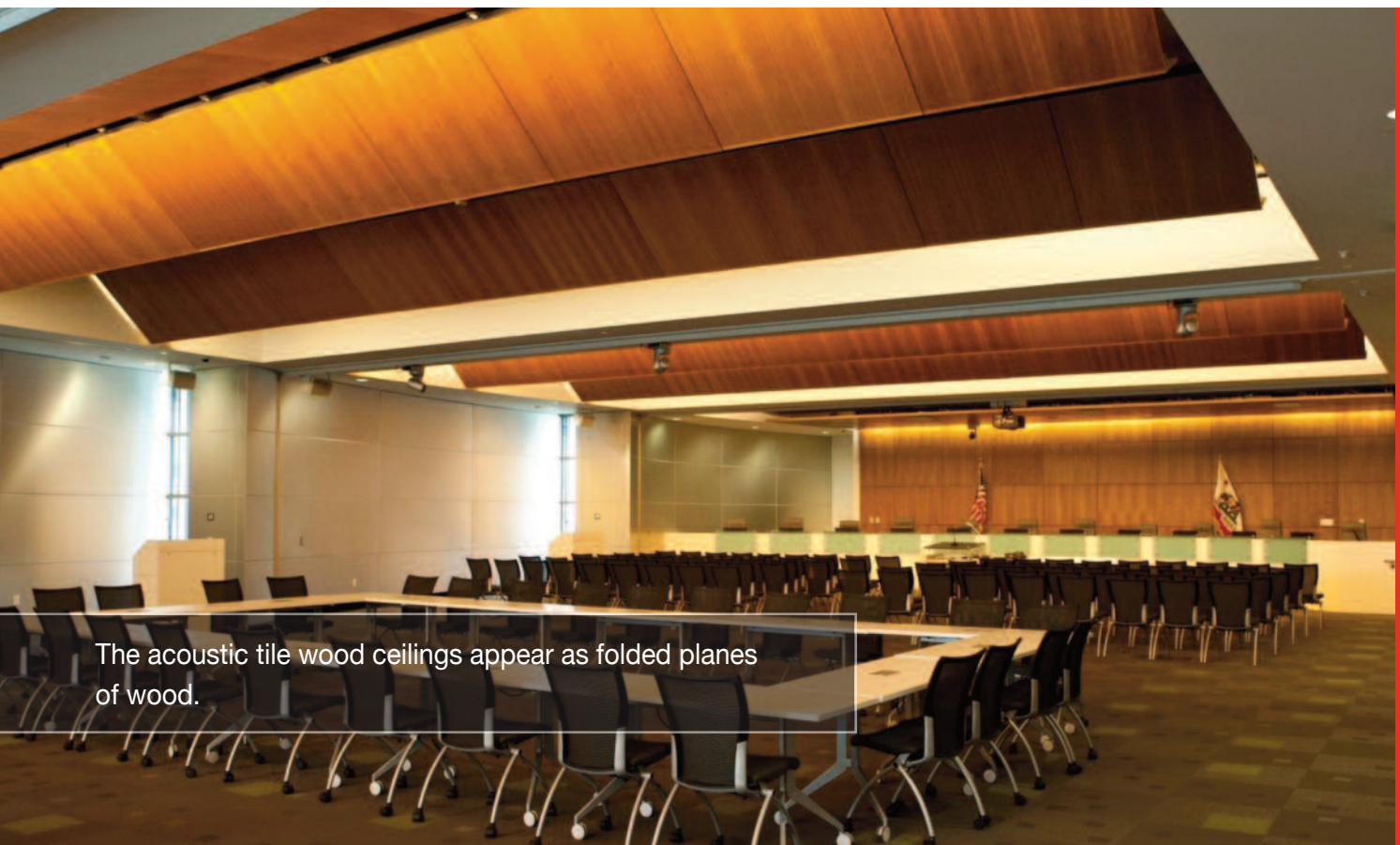


fabrication team’s woodworking capabilities. The final product was truly a tailored-design solution.”

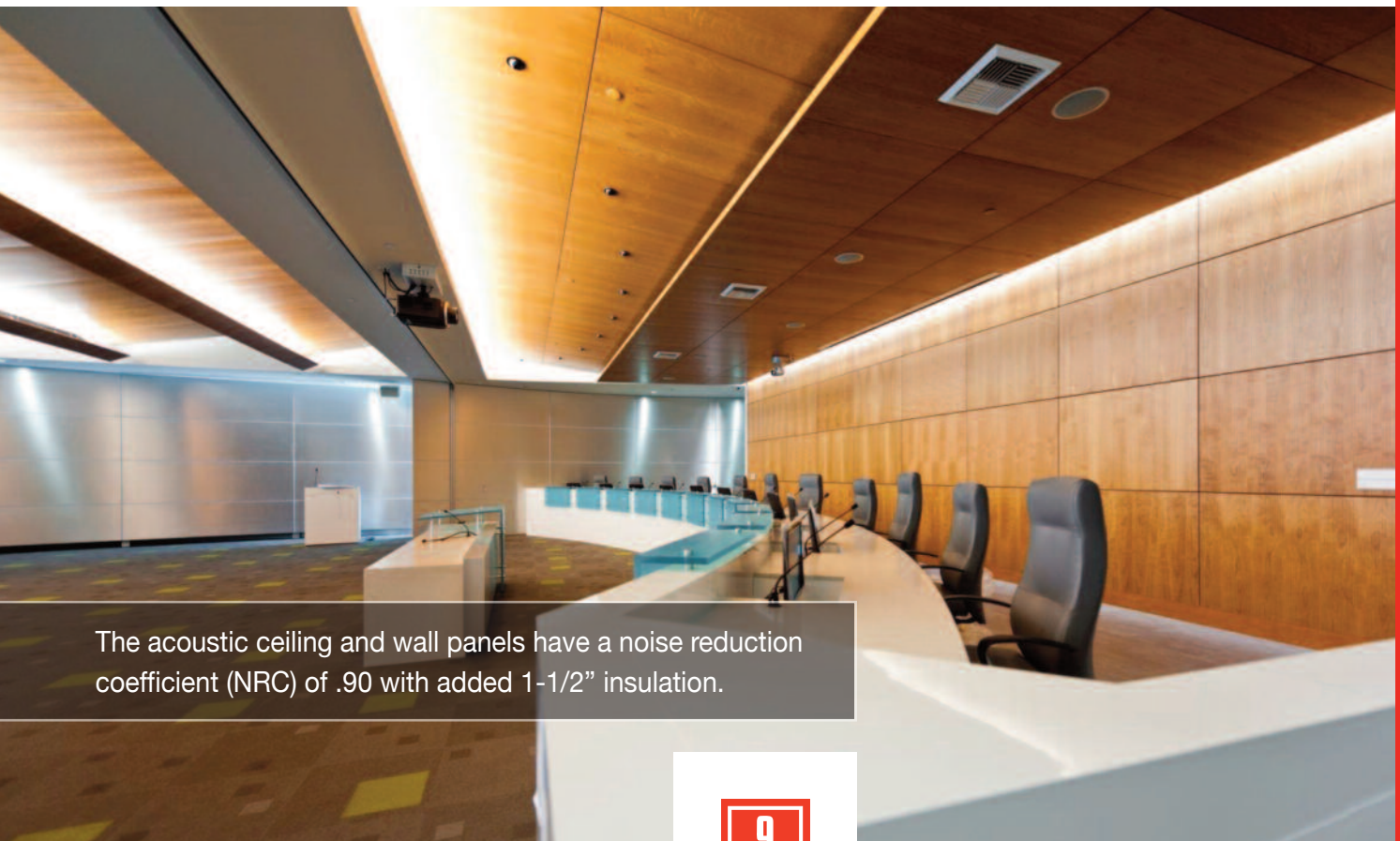
The main space is the Pavilion. It’s a multi-purpose, flexible-use chamber mainly for lottery commission hearings. Shaped like a football, the room features six ceiling bays at heights ranging from 14’ to 16’. The bays feature angled 48” by 48” panel tiles combined with 24” by 48” fascia boards — a 4’ by 6’ “checkmark” panel. From the side, the panel assemblies look like checkmarks.

“The angled panels were hard to install,” says Pat Baird, president, Pat Baird Acoustics. “They’re wide and heavy. Each panel weighed about 100 lbs. To install them, (continued on page 4)





The acoustic tile wood ceilings appear as folded planes of wood.



The acoustic ceiling and wall panels have a noise reduction coefficient (NRC) of .90 with added 1-1/2" insulation.

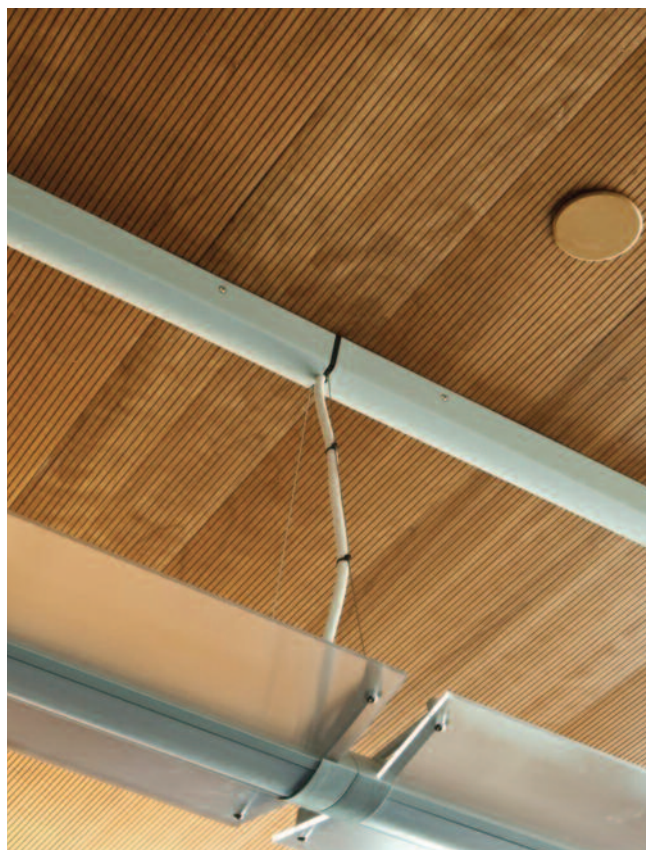


the subcontractor hung “scaffold picks” topped with painters’ planks. Hydraulic lifts raised the panels to workers laying on the planks. In a trapeze-like act, four workers placed the panels in position and tied them while being suspended.

“It’s rare that we do ‘checkmark’ panels with their peaks and valleys,” said Leo Batenhorst, 9Wood project manager. “It’s rarer still that they’re integrated with so many systems.”

The ceilings integrate with closed-circuit camera, lighting and sound systems. Owyang says this serves an aesthetic role. Light fixtures, for example, are part of the building’s exterior skin, and so they were integrated into the ceiling plane.

The Pavilion ceilings attenuate sound. Whereas standard acoustic tile is usually flat and available in 2’ by 2’ and 2’ by 4’ sizes, the architect wanted acoustic performance in angled 4’ by 6’ panels. This stretched the manufacturer’s capabilities, but certainly didn’t exceed them.



## Project Details

**California State Lottery**  
Sacramento, CA

Total Scope: 12,403 SF

Products: 3200 Acoustic Tiles, 3100  
Acoustic Planks, 2700 Kerf Reveal Linears

Architect: LPAS

Contractor: Pat Baird Acoustics



DIVISION 9 ENGINEERED-TO-ORDER WOOD CEILINGS

California State Lottery



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