

# Hard Rock International Leverages VIVE Virtual Reality For \$1.5 Billion AEC Project



## Background

Hard Rock International is the world's premiere experience-driven music lifestyle brand. They are committed to celebrating a rock star lifestyle each day with high-energy concerts, quality food, and iconic merchandise, memorabilia, and destinations.

The Seminole Hard Rock Hotel & Casino, located in Hollywood, Florida, is the brand's flagship destination. This AAA Four Diamond-rated resort is home to more than 450 suites, a 3,500-seat event center, a 4.5-acre tropical pool oasis, and a host of world-class amenities to complete their guest's rock star experience.

And if you can believe it, the resort is only going to get bigger and better in the coming years.

## Expansion & Development

The expansion of the Seminole Hard Rock Hotel & Casino is a *massive* undertaking. This far-reaching project includes an expanded gaming floor with 170+ table games and 3,200+ slot machines, a redesigned and rebuilt 6,500-seat event center, and a 10-acre pool complex complete with waterfalls and private villas. Most visibly, the expansion is centered around the design and creation of a **450-foot guitar-shaped tower**—a first-of-its-kind-design—that will hold an additional 630+ luxury guest suites.

Suffolk-Yates, a boundary-pushing construction firm, was awarded the contract to lead this \$1.5 billion expansion. Fully prepared for the large and

complicated task before them, they approached the project with strong collaborators, an innovative strategy, and the latest in architecture-engineering-construction (AEC) technology.

## Building Smarter With Commercial-Grade VR

*“High visual fidelity VR reveals true scale and a better sense of what the entire team is trying to accomplish.”*

— Bill Fishkin, President, Theia Interactive

As you might imagine, projects of Seminole Hard Rock Hotel & Casino’s size, cost, and complexity come with extreme accountability. To accelerate schedules, eliminate costs, and minimize waste, Suffolk-Yates introduced their secret weapon: virtual reality.

That’s why they teamed up with Theia Interactive—a VR-based creative studio for enterprise—to visualize the construction and design of the hotel rooms in the guitar-shaped tower.

To visualize the rooms in the highest fidelity possible and provide Hard Rock International and Suffolk-Yates with a true sense of understanding about the space, Theia needed to leverage VR at its highest level. They deployed: **NVIDIA Quadro® P4000** graphic cards for high-quality textures for more realistic designs, **Silverdraft Demon VR** workstations powered by **NVIDIA Quadro GV100 GPUs** for simplified, low-overhead real-time collaboration and high-performance computing, and **VIVE Pro**.

## Why VIVE Pro?

**Precise room-scale tracking** enabled the physical exploration and interaction of architectural designs in a virtual space. While other non-commercial VR systems feature room-scale tracking technology, few, if any, can offer the scale and spatial accuracy VIVE Pro can provide. With VIVE, Theia gave Hard Rock International and Suffolk-Yates **the ability to physically explore and interact with models and designs** in virtual reality in the most realistic fashion possible.

“VIVE has been and will be our go-to VR system for projects,” says Stephen Phillips, CTO/Co-Founder of Theia Interactive. “When doing architectural design review, our customers need to be able to reach up and touch the door frames and look under cabinets with the

assurance that every inch is perfect. The benefit of highly accurate spatial tracking and full coverage is invaluable.”



## The Impact

*“VR helped us get all the details just right, which is especially important for customer-facing spaces. We were able to have rich, dynamic discussions about stone ledges behind the headboards, curtain mechanisms, and even the color of soap in the bathrooms.”*

— Kyle Goebel, Senior VDC Manager, Suffolk-Yates

Thanks to the immersive power of virtual reality, Suffolk-Yates was better equipped to make decisions about furniture, fixtures, and equipment before producing physical mock-ups. With VIVE Pro, Suffolk-Yates was able to resolve **90% of the construction details** for the Seminole Hard Rock Hotel & Casino. “We had nowhere near the number of iterations we would have had without VR,” asserts Goebel. “Each iteration we didn’t do **saved the client hundreds of thousands of dollars.**”

While VR technology was initially reserved for stakeholders to visualize and design the rooms in the guitar-shaped tower, it was not long before it was opened up to key tradespeople and maintenance staff. This allowed for visualization and input on **interior details and logistics**, leading to easier hallway and bathroom cleaning, streamlined bathtub installation, and the prevention of maintenance problems. Furthermore, virtual reality also enabled a **large-scale line-of-sight study** to ensure every room’s view of the new 10-acre pool complex would be not only unimpeded, but spectacular.

“Because the client was so pleased with the results, they intend to use real-time VR as a solution for many future projects,” says Fishkin. “The entire industry is moving in this direction.”

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