

SCAFFOLD & ACCESS INDUSTRY ASSOCIATION (SAIA) 2018 COMMERCIAL COLLABORATIVE PROJECT OF THE YEAR

A WINNING COLLABORATION

The 2018 Scaffold & Access Industry Association (SAIA) Commercial Collaborative Project of the Year award was presented to SkyLine Scaffold, Inc., in collaboration with Direct Scaffold Supply (DSS) and D.H. Charles Engineering, Inc. for the safe access they provided during the renovation of the Thunder Valley Casino Resort.

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BY AMY JOHNSON AND DAVE JOHNSON

The full-height scaffold for halo soffit access was 123 to 140 feet tall.



hen the Thunder Valley Casino Resort in Lincoln, California, needed

to undergo renovations and expansions - all while continuing to serve their everyday patrons - the team at SkyLine Scaffold was faced with several unique challenges.

SkyLine Scaffold was tasked with providing complete building wall and soffit access for exterior insulation finishing system (EFIS) removal, window removal, and the installation of a new metal building skin and a new building plastic wrap with specially designed silk-screen graphics. Overall, the project utilized several scaffolding and access solutions, including: frame scaffold access; system ramps; cantilever scaffold; system and frame stair towers; system work platforms; aluminum planking; building re-shoring; parking

garage re-shoring; and man lift re-shoring.

Gaining access to the scaffolding installation area itself required bringing all equipment up and down seven levels of a parking garage and over a 6-foot block wall. A 123-foot-tall scaffold was built around the functioning casino and required approximately 2,800 scaffold frames and 5,200 scaffold planks. The scaffold was constantly changing, with the guardrail





and platforms moving from one place to another as 24 inches of foam was removed from the entire exterior of the building.

The team also had to contend with the risks associated with the scaffold's significant height and 75-mph wind loads. To address these concerns, steel beams were cut into the roof for placement on the pan decking. Several shoring configurations were used to support the steel structure from within the hotel, while holes were cut in walls to provide access to locations outside of occupied areas. Several anchor holes were also cored through the EFIS to reach the metal studs, where an additional hole was drilled to place needed backing at each leg on every level. Up to 28 inches of foam roofing material was also removed to support re-shore

beams. The team also needed to re-shore the building structure to support loads from scaffolding, man-lift and office trailers.

Despite the many logistical challenges involved in reshoring the building, work on renovating the building's exterior skin was able to continue without delay, thanks to these safety-minded installations. The project began in April 2016 and was successfully completed in December 2017.

About the Authors

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Scaffold install in process on the northwest roof. All scaffold had to be crane lifted to the southeast roof and then moved to the north roof by carts.



SCAFFOLD & ACCESS INDUSTRY ASSOCIATION (SAIA) 2018 INDUSTRIAL COLLABORATIVE PROJECT OF THE YEAR

TEAMWORK OVERCOMES ENVIRONMENTAL CHALLENGES

The 2018 Scaffold & Access Industry Association (SAIA) Industrial Collaborative Project of the Year award was presented to SkyLine Scaffold, Inc., in collaboration with Direct Scaffold Supply (DSS) and D.H. Charles Engineering, Inc. for the access they provided during the installation of sensors beneath the Caribou penstock at the Butt Creek Tributary in California.

BY DAVE JOHNSON AND AMY JOHNSON

The view from the top of the 2,322-foot-long penstock. All of the scaffold had to be moved up and down these stairs from the helicopter landing area.



14-foot diameter main water pipe or "penstock." This would have been an easy task except that the penstock at Caribou drops severely as it comes down the hill into the powerhouse. The hillside slope measures nearly 80 percent, which is great for water flow but hard for placing scaffold and footings. Skyline Scaffold was contracted to provide three 20-foot-by-20foot system-scaffold platforms at support blocks 4, 5 and 6 that could support 20,000 pounds of drilling equipment and drill steel. The platforms also had to support a 5,300-pound drill rig in drilling configuration, its power supply, and all the 

workers and drill tenders. Additionally, Skyline Scaffold was requested to place stair towers and inspection platforms along the blocks.

DH Charles Engineering provided engineering support and provided the final design of the platforms. Their attention to detail and solid communication ensured that the design they provided was buildable in an austere and difficult environment.

The first part of the project involved training for Skyline's rope team. All members of the erection crew had to be certified to use rope access. This involved a 16-hour course taught by rope rescue technicians. Skyline crew members had to use high-angle rope access on all phases of this project.

All the scaffold and deck components had to be weighed, bundled and prepared for the helicopter that was to deliver them to a location near the actual build site. The foundations had to be cut out of the granite hillside with a diamond cutoff saw, removing enough granite to get to the correct elevation so the drill was at the right height. Once the foundation was set, the support foundation was built, beams laid and decked, and a fall protection system placed.

The helicopter placed the drill rig and started to drill block 4, as Skyline built blocks 5 and 6. It was critical that all gear was accounted for because access to the blocks required a halfmile hike in followed by several flights of penstock stairs. Additionally, finding a flat spot to land the bundles proved to be a challenge. The gear for blocks 5 and 6 was landed between the blocks. and all materials had to be packed up or down the stairs to the appropriate block.

The penstock was about an hour's drive from the nearest accommodations, which also proved challenging for the workers. The remote location required the crew to camp at a nearby campsite that offered few amenities.

The excellent support provided by the contractor, Syblon Reid, and Pacific Gas and Electric aided in the project completion and allowed the drillers to accomplish their task, improving the safety and reliability of this essential utility. The project began in July 2017 and was completed by November.

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Drill in place at block 5. The steep slope meant that Skyline Scaffold had to install a 20-foot stair tower at this platform to get

down to the main penstock stair.