

ACE Submission for Douglass Colony Lakehouse

The new 12-story condo tower, Lakehouse Denver is set to be the crown jewel of the ever-desirable Sloan's Lake area. Offering a lakefront residence just miles away from downtown Denver and walking distance to the popular LoHi neighborhood, Lakehouse Denver is one of the first high-end luxury condos to be built in Denver in many years. What's more, Lakehouse is also the first residential project in Colorado to pilot the WELL Building Standard™ — a “performance-based system for measuring, certifying, and monitoring features of the built environment that impact human health and well-being, through air, water, nourishment, light, fitness, comfort and mind.”

In order to become the first-of-its-kind, Lakehouse recognized the need for a company that could accomplish everything it takes to get there. With hopes for a 50,000 square foot pool amenity deck, outdoor terraces at the townhouses, private condo terraces on floors three to nine, and unique composite metal panels in wood grain vs. white, there was a clear need for a partner such as Douglass Colony to help with design and implementation.

As the industry leader in outdoor amenity space construction with over a million square feet of garden, amenity, and livable outdoor gathering spaces completed in our 70-year history, Douglass Colony was able to provide multiple services needed to deliver all the high-end custom finishes and building envelope components. These services included:

- Waterproofing at terraces and pool deck
- Waterproofing in garden planters
- Concrete roof pavers
- Thermal insulation behind metal panel system
- Metal composite panels

Solutions of Special Challenges/Problems

As a 12-story condo tower with high design, upscale finishes, and built in accordance to the design of WELL Building practices, the Lakehouse project had unique challenges. Douglass Colony was part of the solution from the design phase through completion.

First, water tightness of the Lakehouse project was paramount to protect high-end interior finishes; water infiltration into this building was not an option. Douglass Colony recommended and installed a premium, American Hydrotech 215 mil Hot Rubber reinforced waterproofing system on the large outdoor amenity deck, the private terraces of the townhomes, and terraces of the condos to protect the building and the living spaces below. Douglass Colony is among a very select group of applicators able to install this system. Although it is more difficult and expensive than other systems, Douglass Colony knew this was the best system for Lakehouse's needs.

The waterproofing in this system requires being heated by a specialized Melter at the installation location, to heat the waterproofing membrane to the accurate application temperatures. This Melter had to be placed on over thirty separate locations during the waterproofing application and had to be safely moved from decks to terraces all over the building. After the decks were waterproofed — to assure that they would remain leak free before any gardens or pavers were installed — each individual location was tested by for leaks by Electronic Vector Mapping, which ensures the watertight integrity of the system.

Once Douglass Colony confirmed the waterproofing was properly installed, the decks received multiple layers of insulation for proper drainage. Then, Douglass Colony meticulously installed concrete and/or porcelain pavers in varying patterns and colors, on twenty different areas throughout four levels of the project. These pavers were placed on adjustable screw pedestals to create a perfectly level surface. Lakehouse has a pool deck garden element which required the pavers to be manually cut to fit around radius planter walls and light posts to create a walk path. During this tedious process, each paver was set, marked, removed, and cut to match the adjoining surface.

The second major set of challenges for Douglass Colony on the project came from the design and installation of nearly 40,000 square feet of custom metal panels. The design for Lakehouse featured mostly woodgrain panels but also a banded element of metallic white panels. The installation of the woodgrain panels required incredible attention to architectural details. Douglass Colony installed each one in incredibly tight spaces with tight tolerances. What's more,

some panels were tapered, some were installed on soffits, and all panels had to be coordinated so the woodgrain patterns were aesthetically pleasing.

In addition to the overall challenges of complexity and design, Douglass Colony worked extensively with the general contractor to continuously coordinate its installation with other trades and execute the project under a tight schedule. Douglass Colony used numerous methods to load the panels throughout the nine stories of the building, via boom lifts, pump jacks and shared scaffolding. Measuring for panels was also a challenge, and required working around the work of masons, glazers and other trades. Lastly, due to the tight timeline, Douglass Colony utilized multiple crews at different times to complete the panel work at a faster pace.

Excellence in Project Execution and Management

In order to accomplish and overcome many of the special challenges the Lakehouse project presented, teamwork was paramount. Douglass Colony recognized the major challenges this project would present early in the process and assigned one of its top project managers and top superintendents. Communication and proactive planning were vital to execute the work in a safe and timely fashion. Douglass Colony constantly relayed critical path items to the general contractor so that measuring and lead times for panels would not delay the schedule. Creativity and an open mind assisted with coordination of trades, to perform as much simultaneous work as possible. Douglass Colony added extra crews to the project to facilitate the tight schedule and used its attention to detail to achieve execution and management success for this project.

Construction Innovation

To bring the holistic and conscious design goals of the WELL Building Standard™ to life at Lakehouse, Douglass Colony strived to create what will be considered the best, well-designed outdoor living space in the Denver area. With a full-size pool and hot tub on the 2nd floor of the tower, large beautifully raised planters, concrete walk paths, dining areas, and a location for the residences to be outside with amazing views of the Front Range, Downtown and Slone's Lake, we feel strongly that we've accomplished this goal.

What's more, our 30,000 square feet of composite metal panels and 9,500 square feet of simulated wood grain metal panels feature the following construction innovations:

- System included fire resistant mineral wool insulation and rigid sub girt system at all panel areas
- DCG 2300 dry joint rainscreen system
- Fire retardant core that pass NFPA 285 testing
- Flexibility in design to meet the unique features of the building
- Charcoal panels are interspersed between window areas
- Large prominent horizontal and vertical bands of metallic white panels used on the project as part of the architectural design
- Upper level tapered soffit panels with woodgrain finish
- Unique geometry with various angles and shapes
- Numerous balconies utilizing panel cladding and integration around custom handrail system
- Sheet metal coping that matches and ties directly into the composite panel system on upper levels.

Environmental/Safety

Safety is a top priority on every project Douglass Colony works on, and the Lakehouse was no exception. Douglass Colony operated under one hundred percent tie off rules for all panel installers. Panels were lifted up to nine stories one at a time, using extreme caution and suction cups were used for added security when lifting the panels.

On the 50,000 square foot amenity deck, Douglass Colony worked hand-in-hand with the Lakehouse developers to create a safe and effective solution for the large trees and gardens that would live there. The green space created a welcome addition of nature on the large building.

Excellence in Client Services

Providing a one-stop-shop opportunity, high-end custom finishes, innovative design and craftsmanship, as well as successful project execution and management, all contributed to the satisfaction of the client on this project.

The Lakehouse Denver's unique design and amenities will provide residents a safe and enjoyable connection to nature and close proximity to water that the WELL Building Standard is based upon.









