

Schluter Systems: Reno Office & Distribution Center

THE PROJECT

Schluter Systems: Reno Office & Distribution Center

ARCHITECTS

Cathexes Architecture

BUILT BY

Miles Construction

CERTIFICATIONS

LEED Gold

DATE

2018

LOCATION

McCarran, NV



OBJECTIVE

To accommodate the growing needs of our western customers, we constructed a state-of-the-art, 172,500 sq. ft. facility in McCarran, Nevada, just east of Reno. The facility includes a two-story, 22,500 sq. ft. office space and training center, along with a 150,000 sq. ft. warehouse and distribution center. Our goal was to integrate sustainable building technologies that maximize energy efficiency and minimize environmental impact while providing a comfortable and ergonomic workspace.

To achieve this, we collaborated with a multidisciplinary team of architects, engineers, and consultants specializing in green building technologies, ensuring that the facility would serve as a benchmark for sustainable corporate construction.



CHALLENGE

Conscious of our environmental footprint, we implemented measures to significantly reduce energy and water consumption. We also prioritized employee well-being by designing a workspace where every workstation benefits from natural light and fresh air circulation.

Throughout construction, we employed controlled-site practices to maintain sustainability, including tire washing stations to prevent debris spread, on-site water filtration and reuse, and extensive recycling of construction materials. Additionally, we ensured that all materials—sealants, tiles, and finishes—were free from volatile organic compounds (VOCs) and inspected for off-gassing prior to use.



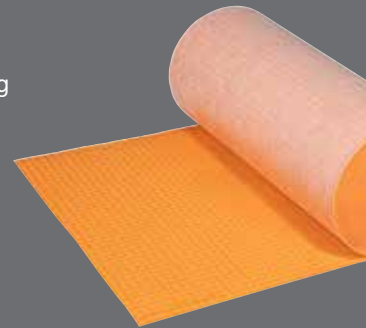
PRODUCTS USED



Schluter®-BEKOTEC - Modular screed system for efficient in-floor radiant heating



Schluter®-DITRA - Uncoupling membrane to provide load support and prevent tile cracking



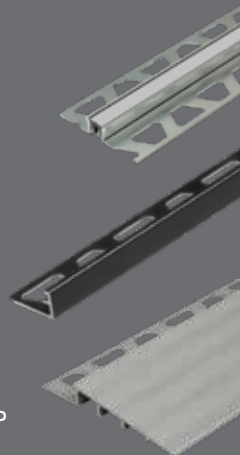
Schluter®-KERDI - Waterproofing membrane for wet areas



Schluter®-KERDI-BOARD - Lightweight building panels used for walls, countertops, and features



Schluter®-KERDI-DRAIN - Drainage system for optimal water management



Schluter®-PROFILES - Movement joints and transitions, including DILEX, SCHIENE, and RENO-RAMP

SOLUTION

Sustainable Heating & Cooling

- **Geothermal System:** The building is heated and cooled entirely by a geothermal system consisting of 36 underground wells. This system transfers energy between the earth and the facility via hydronic heating and cooling, dramatically reducing energy demand.
- **Earth Heat Exchanger:** A 200-ft long, 3-ft diameter “Canadian tunnel” preconditions fresh air before it enters the facility, reducing the workload on HVAC systems.
- **Schluter®-BEKOTEC Modular Screed System:** Provides highly efficient in-floor radiant heating. The system reacts four times faster than traditional systems, operating at lower temperatures for reduced energy consumption.

Energy Efficiency & Cost Savings

- Traditional office buildings in the region typically incur energy costs of \$1.35–\$1.55 per sq. ft. Our facility operates at approximately **\$0.44 per sq. ft.**, a 70–75% savings.
- **Energy Usage (6-month period):**
 - **Electricity:** 220,048 kWh
 - **Gas:** 201 Therms
 - **Water:** 247,302 gallons

Natural Lighting & Air Quality

- **High-performance skylights** maximize natural daylight in warehouses and work areas.
- **Automated lighting** activates only as needed, reducing energy waste.
- **Living wall with 200+ plants** enhances indoor air quality by absorbing CO₂, adding oxygen, and filtering VOCs.
- **CO₂-controlled ventilation system** maintains a comfortable indoor air quality at 650 ppm (well below regulatory limits).

Water & Resource Management

- **Solar water heating panels** provide hot water for the facility.
- **Rainwater and construction water reuse** reduced initial water demand and long-term consumption.
- **White reflective roof** mitigates heat absorption, reducing cooling demands.



CONCLUSION

The Reno Office & Distribution Center exemplifies Schluter's commitment to sustainable building practices. By integrating geothermal energy, solar heating, advanced ventilation, and extensive tile applications, we have created a highly efficient, environmentally responsible facility that benefits both the company and the community.



MEET THE TEAM

- **Architect:** Cathexes Architecture
- **Construction:** Miles Construction
- **Engineering & Consulting:**
 - Harris Consulting Engineers
 - Bender Engineering
 - Gabbart & Woods BCS Inc.
 - Hanson Landscape Architect
 - Reno Engineering Corp.
 - DCYSA
- **Mechanical & Electrical:**
 - Applied Mechanical Inc.
 - Savage & Sons
 - Scott Fire Protection
- **Tiling & Interiors:**
 - Quality Tile & Marble
 - Stiltz Tile
 - Joy Meeuwig Design
 - Kahl Commercial Interiors
- **Landscaping & Drilling:**
 - Moana Nursery
 - McKay Drilling
 - Atlas Construction
 - Dahlton Enterprises Inc.

By combining modern sustainability initiatives with Schluter's innovative building materials, our Reno facility stands as a testament to how corporations can balance environmental responsibility with operational efficiency.