

Projet: STCH Inc.  
Chateauguay, QC, phase #1, #2 et #3



Specialized in Transportation's Logistics, STCH is a company that has been growing steadily since its founding. In 2005, anticipating and constantly adapting to the rapid transformations of the industry, STCH decided to expand in a brand-new head quarter. Located in Chateauguay, QC, the 3-phase construction includes 700 m<sup>2</sup> of offices and 10 500m<sup>2</sup> of warehouse, all fully heated and air conditioned by geothermal energy.

All premises are served by three partially independent systems totalizing 78 tons (275 kW). Geothermal fields comprise 3 000 m of boreholes. Warehouse areas are fully heated by radiant floors. These radiant floors allow, in summer, passive thermal recharge of the field while providing, at no extra cost, a more comfortable working environment and a temperate warehouse space. Moreover, radiant floor strategy paid off by offering less than 2°C difference between floor and ceiling level, 12 meters above. This significant benefit allows more storage flexibility for temperature-sensitive products.

Office spaces combine radiant floor heating with hydronic fan coil systems for heating, cooling and dehumidifying. Three heat recovery air exchangers maintain the air quality of the workspaces while allowing significant energy savings. The control system is fully centralized and allows the user a user-friendly access. The integration of the geothermal systems serving the various phases of expansion of the premises was carried out in such a way as to minimize the duplication of the additional heating equipment while optimizing the energy saving. On its own, the third phase of expansion has allowed the homeowner to save 184,000 kWh per year, or about 55% savings compared to a standard storage area.

Geo-Energie was repeatedly mandated by STCH to design every mechanical element of the project. **The exceptional design performance and quality of this project was recognized in 2013, by the Canadian GeoExchange Coalition prize for Excellence Achievement.**



**Geo-Energie** inc.  
*Ingénierie, design*