

# MAKING BUILDINGS BETTER

DATA CENTER

## NORTHERN TRUST DATA CENTER

**Owner:** Northern Trust

**Mechanical Contractor:** Hill Mechanical

### **Customer Challenges:**

Energy efficiency, reliability, and flexibility are the major concerns for the design of data centers. Northern Trust's global operations depend on the information technology infrastructure for their new data center. The data center cooling system needs to meet the current energy density, but also the expected future increase in energy usage.

### **Trane Solutions to the Challenges of the Project:**

Trane has the expertise and solutions for cooling data centers – solutions that enable sustainable, cost effective operations and satisfy ever increasing size, complexity and heat density requirements. The Northern Trust Data center was a critical cooling application.

The Trane equipment and controls provide reliable operation for Northern Trust's centralized data management. The Trane Tracer Summit control system carefully monitors the equipment, and also trends data to alert the user of any drift in performance. The facility was designed for 24/7 operation and therefore energy efficiency was also a large consideration. The control system conserves building energy usage by intelligently coordinating the entire system. The ice storage design provided partial redundancy for critical cooling application. The ice tanks also allow the chillers to work at night when they are more efficient, and power can be distributed more efficiently. Another benefit is that more ice tanks could be added if the data center expands. The Trane cooling system was flexible, scalable, and redundant.

### **General Description of the Building:**

Northern Trust is a global company delivering investment management, asset administration, and banking solutions to companies and individuals. In 2008 the Chicago-based firm decided to build an 80,000 square foot data center in Rochelle, IL.

**Trane Equipment/Controls:** Trane Air-cooled Chillers, Calmac Ice Storage tanks, Tracer Summit Building Automation System.



**Northern Trust**

