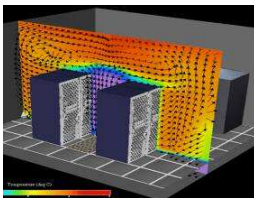


Critical Facilities



To maintain the experience necessary to stay at the forefront of this fast-moving industry, Morrison Hershfield's integrated, in-house, multi-disciplinary teams are fully dedicated to critical facility projects and contribute to industry activities. The range of projects undertaken includes data centers, switches/central offices, head-ends/hubs, control rooms and emergency operations centers. Our clients have come to rely on us for our expertise in a variety of areas, including:

- **Facility Evaluation**
 - Pre-purchase assessment
 - Thermal airflow analysis & management
 - Risk mitigation/reliability studies
 - Current performance & power quality audits
 - Future preparedness assessments
 - Life cycle analysis
 - Seismic assessments
- **Facility Planning & Pre-Design**
 - Feasibility studies
 - Requirements development
 - Detailed cost estimates
 - Life cycle management
 - Facility evaluation & site selection
 - Relocation, consolidation & migration management
 - Achievement of LEED® certification
- **Facility Design & Engineering**
 - Architectural design & space planning
 - Raised floor design
 - Civil & structural engineering
 - Mechanical & electrical engineering
 - Fire protection engineering
 - Structured cabling design
 - State-of-the-art security and monitoring
 - Network operations center (NOC) design
 - Pre-construction budgets & scheduling
- **Facility construction**
 - Program delivery (project management, construction management, design-build, owner's representative)
 - Value engineering
 - Field supervision
 - Record drawings
 - Quality management
 - Vendor-neutral equipment procurement
 - Commissioning



Airflow Evaluation of Data Center



Airport Operations Control Center



Management of Data Center Migration



Data Center Independent Design Review



Greenfield Data Center for Fortune 100 Company



Internet Data Center for a Major Telco

We were retained as prime consultant to convert an old warehouse to an 80,000 sq ft high tech facility. The facility was designed for uninterrupted, easy upgrading to an ultimate capacity of 10 MVA main power, five 1,500 kW standby generators and 1,400 tons of cooling. Services provided included lease negotiation support, environmental assessment through a partner firm and full A/S/M/E and fire and life safety design. Our depth of resources and close working relationship with the contractor had the facility in revenue service within seven months.



National Network Expansion

This major network build involved a main 13,000 sq ft central office and data switch and 2,000 sq ft remote switches in a further twenty markets. To quickly deploy the network, our client required a partner that could effectively handle a large project and mobilize construction management resources to numerous cities simultaneously. We provided pre-lease feasibility studies, engineering and architectural design and project management. In addition, we designed diverse fiber routes into the facilities and arranged for the procurement and installation of dark fiber.

