

Electrical Engineering – Buildings



Morrison Hershfield has extensive experience in electrical systems for various types of buildings and facilities, and for a wide spectrum of applications. We work independently on stand alone electrical projects or together with architects and engineers of other specialties on multi-disciplinary projects to provide integrated solutions that address the particular requirements of our clients. Our professional services in electrical engineering cover needs and condition assessment, feasibility studies, conceptual and detail design, engineering specifications, field reviews and project management. We have played various roles on projects, including designers, trusted advisors, third-party reviewers, Owner's Engineer/Independent Agent, project managers and contract administrators.

While our competencies and experience cover most aspects of electrical distribution for commercial, institutional and industrial applications, we specialize in the design of systems for mission-critical facilities in the government, telecommunications, financial, education and health care sectors. Some of the applications delivered by our in-house technical professionals include:

- **Low and medium-voltage power distribution for new and retrofit projects**
- **Stand-by and emergency power systems**
- **Uninterruptible power supplies**
- **Electrical/Utilities master plans**
- **Energy audits and retrofits**
- **Cogeneration and renewable energy systems**
- **Illumination and lighting controls**
- **Fire alarm systems**
- **Communication systems (voice, data, security, access)**
- **Electrical asset management**
- **Electrical safety and code compliance**



Internet Data Centre for National Telecommunications Company



Pharmaceutical Company - Cogeneration Plant and High Voltage System Upgrade



Provincial Government – Standby Diesel Generator Installation for Data Centre



High Voltage Power Distribution for an Educational Institution



Municipal Government, Emergency Medical Services (EMS) – Critical Infrastructure Upgrade



Emergency Medical Services (EMS) Headquarters – Critical Infrastructure Upgrade

We carried out an engineering audit of the critical infrastructure followed by the detailed design of redundant electrical on-site power generation, distribution, precision cooling and fire suppression systems. This mission-critical facility provides public safety services, and the reliability of its electrical systems is vital to its 24/7 operation. We developed and subsequently implemented a power transition strategy for maintaining uninterrupted service to the EMS, Fire and Police Call Centres during the change-over from the old to the new systems.



44 kV Cogeneration Plant Substation, Lester B. Pearson Airport, Toronto

We were retained by the Greater Toronto Airport Authority (GTAA) as the Owner's Engineer for the electrical interconnect component of a 117 MW cogeneration plant. We were also responsible for the detailed design and implementation of the 44 kV substation on the plant's site. The assignment involved planning, coordination and oversight of all work related to connecting the generation plant to both the utility distribution grid and to the airport power distribution system. This project has allowed the GTAA to become self sufficient for electricity requirements as well as become a participant in Ontario's open electricity market.