



Toronto Pearson Airport GTAA Next Generation Distributed Antenna Systems

CLIENT

Bell Mobility

LOCATION

Mississauga, Ontario

PROJECT DESCRIPTION

Black & McDonald (B&M) was hired as the construction partner by Ericsson Canada who had a design-build contract with Bell Mobility for GTAA Next Generation Distributed Antenna Systems (DAS) at Toronto Pearson International Airport. Design, material procurement, and efforts related to launching the commercial carriers (Bell, Rogers, Telus) and cutover to the upgraded public safety / essential services were part of Ericsson's scope of work. GWI was hired by B&M as a subcontractor to perform cable sweep testing and PIM testing for the project.

B&M SCOPE OF WORK

- Installation and testing of DAS antennas, cabling & splitters in Terminal 1, Terminal 3 and the GTAA Administration Building.
- Installation and testing of Uninterrupted Power Systems (UPS) and remote units in 43 telecom rooms in Terminal 1, 24 telecom rooms in Terminal 3, and 3 telecom rooms in the administration building.
- Installation of racks and equipment in the head end room for Commercial Services.
- The equipment included two large units and the related electrical, mechanical, and plumbing work including the commissioning of the units.
- Public safety / essential services upgrade, including installation of new BTI equipment in 48 telecom rooms in Terminal 1, 28 telecom rooms in Terminal 3, and 29 telecom rooms in other GTAA groundside buildings.
- Installation of racks and equipment in the head end room for public safety / essential services.

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B&M was responsible for the communications/cabling portion including installation and testing of DAS antennas, cabling, and splitters in Terminal 1, Terminal 3, and the GTAA Administration Building. B&M made use of:

- Cable trays & supports
- Coaxial horizontal cabling
- Corning
- Cabinets & accessories
- Distributed Antenna System (DAS)
- Grounding & bonding
- Panduit
- Power Distribution Units (PDU)
- Racking & accessories
- Uninterrupted Power Systems (UPS)

BENEFITS TO CLIENT OR PROBLEMS SOLVED

B&M faced several challenges that the team had to address. The work was carried out in Toronto's busiest airport in a 24/7 active operating environment with significant public interface. There were also many stakeholders that required coordination for access, such as airlines, Canada Border Services Agency (CBSA), US Customs and Border Patrol (USCBP), GTAA offices, and other commercial tenants. Proper planning with GTAA stakeholders ensured successful completion of work without impacting airport operations.

With all trade technicians and project staff requiring special access to areas of work they obtained Transport Canada Security Clearance and training. To maintain safety for the public, B&M ensured proper isolation of work areas with appropriate barricades, fencing, hoarding and signs.

INNOVATIVE PROCESS

This was B&M's first project with Ericsson. With an aggressive schedule that did not allow for any interruptions to airport operation the project was completed on time and on budget. A total of 107 electrical shutdowns were performed without any major impact/interruptions to airlines and other GTAA stakeholders. Compliance with all the GTAA and Transport Canada security requirements were maintained throughout the project.

