L3 Wescam AC-4, 10 & 13 Rooftop Unit + UPS A/C Replacement

CLIENT

L3 Wescam

LOCATION

Burlington, Ontario

PROJECT DESCRIPTION

L3 Wescam is a leading provider of broad range communication and electronic systems, and products used on military, homeland security, and commercial platforms. L3 is also a prime contractor in aerospace systems, security and detection systems, and pilot training. The AC-4, 10 & 13 was original to the facility build, about 1990 vintage (two 30 ton and one 20 ton). The system was having frequent performance and repair issues, the equipment used R22 refrigerant, the existing VVT controls were Carrier Generation 2, and the UPS 2 ton A/C regularly failed. The equipment was well beyond the accepted useful life of 20 years. As operation and maintenance costs continued to increase and Carrier Generation 2 controls were obsolete and not supported, the equipment performance was declining. The R22 refrigerant was phased out by 2020 and the existing UPS A/C was not designed to operate year round, even though it did. It was also undersized for its current application and load. When L3 Wescam needed an overhaul of its HVAC system, it called Black & McDonald (B&M) to provide the skill and professionalism needed to ensure the job was successful.

B&M SCOPE OF WORK

B&M's team of skilled technicians conducted the equipment replacement of the AC-4, 10 & 13 (80t), the equipment replacement and upgrade of the UPS a/c (3t + low ambient) and the controls renewal and upgrade. The team also conducted the air balancing, commissioning of controls and the VVT distribution system. B&M selected the best high efficiency equipment and employed utility rebates and incentives (e.g. high EER, VFD, carbon dioxide demand ventilation, controls & scheduling, and so on.

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BENEFITS TO CLIENT AND PROBLEM SOLVED

As a result of B&M's work, L3 Wescam's system experienced improved reliability and reduced risk of system failures (UPS). The remaining equipment received 20 years of new equipment life and it improved IAQ and the work environment. B&M was also able to maximize the $20,000/year production costs with better comfort, environmental control, productivity, and reduced complaints. The new system improved performance efficiency by 10 per cent on the replaced units (approximately $5,000/ year) and the facility took advantage of $19,000 in utility incentives. Overall more than $330,000/year was saved in avoided risk.