

Metro Nashville Emergency Communications Center, Data Center Relocation and Space Reuse Nashville, TN



Due to IT equipment becoming more compact over the years and therefore requiring a smaller footprint in the Metro ECC data center and the need for additional office space for IT personnel, the Metro ECC decided to relocate their data center equipment to the radio room and convert the data center into office space. This required a multi-phase project for first relocating the data center equipment and then renovating the data center and adjacent offices. Puckett Engineering's solutions for implementing this project included the following:

- Provide circuits from the existing Power Distribution Units (PDUs) in the radio room for supplying the relocated IT racks. Supplied the equipment redundant power supplies from UPS system "A" or UPS system "B," as applicable for redundancy. The existing UPS systems that supply the PDUs are configured for 2N redundancy.
- Demolition of the existing data center space and adjacent offices.
- Architectural design for replacing the raised floor, ceiling, doors, ramp, and other architectural features.
- Lighting for the office spaces.
- Receptacles for general-use and specific I.T. equipment.
- Power for office furniture. Coordinated specification of the furniture's internal wiring with the interior designer for compatibility with harmonic currents.
- The design incorporated wiring methods for compatibility with power system harmonics caused by nonlinear electronic loads.
- Identification of devices with circuit I.D. in order to readily identify equipment and circuit numbers. In addition, color coding of nameplates were utilized to quickly identify whether a circuit is supplied from emergency or UPS power.

PROBLEM OR NEED

Data Center space was underutilized due to smaller footprint of new equipment. Data Center needed to be relocated and space reused for office needs.

PUCKETT SOLUTIONS

Multi-phase project to relocate data center equipment and renovate data center

Provided circuits off the radio room's PDUs for supplying relocated IT racks

Architectural design to replace raised floor and reconfigure space for office use

Power for office spaces.

Water source heat pumps for offices.

Year Completed: 2011

Metro Nashville Emergency Communications Center, Data Center
Relocation and Space Reuse
Page 2



Relocated data equipment

- Water source heat pumps for the offices, with cooling water provided from the building's existing liquid cooler. Carbon dioxide sensors for controlling outside air dampers.
- Construction administration services, including commissioning. The final commissioning and closeout documentation is currently underway.

**“When I get a set of
plans from Puckett
Engineering, I know it’s
going to be right.”**

- Rickey McWright, Assistant Director