BD ELECTRICAL & SOLAR

DUNKWORKS DEEPTECH INNOVATION CENTER

Commercial Electrical Construction for an Advanced Research & Prototyping Facility

Client: Woods Hole Oceanographic Institution (WHOI)
Project Type: Commercial Electrical Construction
Facility: DunkWorks DeepTech Innovation Center

Location: Woods Hole, Massachusetts
Market: Research & Development / Advanced Manufacturing

Project Overview

When research teams are developing the next generation of marine robotics, autonomous systems, and advanced manufacturing technologies, electrical infrastructure has to be as adaptable as the ideas being built.
BD Electrical was selected to complete the commercial electrical installation for the DunkWorks facility at the Woods Hole Oceanographic Institution (WHOI), helping transform the space into a modern rapid prototyping and engineering lab designed to support innovation in ocean technology.
DunkWorks provides researchers, engineers, startups, and industry partners with advanced fabrication equipment, electronics workstations, CNC machinery, metal and composite 3D printing, laser cutting, and collaborative engineering space for rapid product development.

The Challenge

Unlike a traditional office renovation, DunkWorks required electrical systems capable of supporting a constantly evolving research environment.
The facility houses:

- Industrial 3D printers
- Precision manufacturing equipment
- Electronics assembly benches
- Engineering workstations
- Research laboratories
- Flexible collaboration spaces

These environments demand reliable power distribution, carefully planned branch circuits, dedicated equipment feeds, efficient lighting, and infrastructure that can be modified as new technology is introduced.
The electrical system also needed to blend industrial functionality with an open, collaborative workspace that encourages innovation.

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Our Electrical Scope

BD Electrical completed the commercial electrical installation throughout the facility, including:

- Complete branch circuit installation
- Power distribution for research equipment
- Dedicated circuits for fabrication and manufacturing equipment
- LED lighting installation
- Specialty decorative lighting
- Electrical rough-in and finish
- Device installation
- Laboratory power infrastructure
- Workspace electrical systems
- Equipment connections
- Testing and commissioning

The result is a clean, organized electrical installation that supports both heavy-duty fabrication equipment and collaborative engineering spaces.

Supporting Advanced Manufacturing

DunkWorks serves as a rapid prototyping center where engineers move ideas from CAD models to working prototypes.

Today the facility supports advanced equipment including:

- Large-format additive manufacturing
- Metal 3D printing
- Composite 3D printing
- Laser cutting systems
- Electronics fabrication stations
- CAD workstations
- Automated wire processing equipment
- Mechanical fabrication areas

Providing dependable electrical infrastructure is essential for equipment reliability, precision manufacturing, and uninterrupted research activities.

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Lighting Designed for Productivity

The project included a combination of functional and architectural lighting.
High-output LED fixtures provide bright, even illumination throughout the fabrication areas while decorative lighting enhances the collaborative spaces and creates an environment that reflects the innovative nature of the facility.
The finished space balances industrial performance with modern aesthetics.

Results

The completed facility provides researchers and engineers with a flexible electrical infrastructure designed to support changing technologies for years to come.
Today, DunkWorks continues to serve as a hub for:

- Marine robotics
- Ocean technology development
- Product prototyping
- Engineering collaboration
- Advanced manufacturing
- Research and innovation

The facility helps accelerate the transition from concept to working prototype by providing access to advanced fabrication equipment and collaborative engineering resources.