PROXXI BY GRACE

Mitigating Electrical Risks at Hensel Phelps

ABOUT HENSEL PHELPS

Hensel Phelps maintains an unwavering commitment to the safety of their people, trade partners, and communities. As one of the nation's largest employee-owned general contractors, Hensel Phelps has built a reputation for delivering complex projects with a "safety-first" mindset that is embedded into every phase of construction. Their industry-leading safety culture is reinforced through a comprehensive corporate safety program, detailed site-specific safety planning, extensive training initiatives, proactive project coordination, and strong stakeholder engagement across every jobsite.

Founded in 1937, Hensel Phelps has grown into a nationally recognized leader in construction, development, and facility services, supporting projects across aviation, mission critical/data centers, healthcare, advanced manufacturing, government, transportation, higher education, hospitality, and industrial markets. Hensel Phelps manages some of the industry's most demanding environments where operational continuity and worker protection are critical.

THE CHALLENGE

The construction industry faces significant risks from electrical hazards, and while standard protocols like Lockout/Tagout (LOTO) are effective, human error and unforeseen back-feed still present life-threatening dangers Recognizing this, Hensel Phelps' corporate safety director discovered the Proxxi by Grace wristband at a trade show and initiated a pilot program for the company's data center projects.

The Proxxi wristband is designed to act as a passive, additional layer of safety that detects the strength of AC electric fields. It warns wearers through visual, haptic and audio alerts if they approach an energized source, serving as a critical backup to standard isolation procedures

IMPLEMENTATION AND USAGE

The pilot was managed by a top Hensel Phelps Data Center Safety Manager in the Phoenix area, with wristbands distributed to a team of field QA/QC inspectors. The devices were primarily worn during electrical inspections on equipment that was believed to be locked and tagged out, ensuring that no residual or unexpected voltage was present.

THE HIGH-STAKES RISKS IN DATA CENTER CONSTRUCTION

For **construction workers** and **electricians**, interacting with **energized equipment** presents **severe and potentially fatal hazards**. While standard safety protocols like Lockout/Tagout (LOTO) are critical, workers still face **life-threatening dangers** primarily due to **human error** and **complex site conditions.**

In data center environments, these risks are magnified because data center systems are intentionally designed with redundancies to prevent failure, shutting off power in

one location does not guarantee the area is safe; energy can easily back-feed into the system from another source. Furthermore, as-built documentation rarely matches the actual, real-time reality of a complex site, meaning workers can be exposed to unexpected voltage.

The catastrophic reality of these risks was recently highlighted at a nearby, unaffiliated data center. A worker was severely electrocuted after walking into 480V gear that was mistakenly energized—a situation where the worker believed the area was safe. It is highly common for electricians to experience lower-voltage shocks on the job, but these near-misses can quickly turn into fatal contacts if a worker slips up.

The Proxxi Mitigation Strategy To combat these inherent risks, Hensel Phelps deployed the Proxxi by Grace wristband among its field QA/QC inspectors. The device is not a replacement for LOTO, but rather an active, secondary layer of defense that detects the ambient electric field and alerts the wearer if they approach an energized source.

Successful Field Use Cases During the pilot, the Hensel Phelps team identified several highly successful use cases where the wristbands directly mitigated the risks faced by their workers:

- **QA/QC Inspections on Presumed De-Energized Gear:** The primary successful use case for the Hensel Phelps team has been wearing the bands during electrical inspections. Skilled datacenter QA / QC inspectors successfully utilized the wristbands while examining equipment that was locked and tagged out, providing an active safeguard in case the LOTO procedure failed or was improperly executed.
- **Protection During Multi-Team Outages:** The wristbands proved highly relevant for maintenance outages involving multiple people or teams, or in environments where the client—rather than the worker—controls the LOTO and clearing of equipment. This protects the worker from miscommunications between teams.
- **Maintaining Safe Distances from Known Live Gear:** The wristbands successfully served as a physical warning system when workers operated near known energized sources (such as a 4160V source five feet away). Because physical barriers are not always present, the wristband successfully alerts workers if they accidentally crept too close to the live gear while maneuvering for a better angle.
- **Approaching Switchgear with Hidden Locks:** The wristband is successfully used as a precaution when workers must enter medium voltage switchgear where they cannot physically see the switches or locks to visually verify isolation.

Worker Reception and Safety Impact By focusing on these specific, high-risk use cases, the pilot successfully provided workers with a safety net against the unpredictable nature of electrical back-feeds and human error.

When reviewing a tragic electrocution incident at a neighboring data center, the Hensel Phelps team noted that if that **worker had been wearing a Proxxi wristband**, the device likely **would have alerted him to the mistakenly energized gear and saved him from the severe injuries.**

Because of this life-saving potential, the Hensel Phelps QA/QC team has embraced the technology.The inspectors reported that they felt significantly safer and explicitly preferred wearing the wristbands during their field inspections rather than going without them.

PG-PB-CS5-EN 2605