

2017 AGC ACE Awards

Category 2: Meeting the Challenge of a Difficult Job

Specialty Contractor: Sturgeon Electric Company, Inc.

Project Name: Rocky Mountain Regional VA Medical Center

The American spirit is a vibrant fireworks show; when faced with adversity, our will to persevere ignites the fuse. Throughout history, this spirited vibrance has been on perpetual display through the heroic acts of our military veterans, who have selflessly risked life and limb to protect the American way of life. No doubt, America's veterans are worthy of a world-class facility in which they can receive the highest standard of care. For that reason, Sturgeon Electric Company, Inc. accepted a massive challenge nearly two years ago with an emboldened sense of duty and patriotism: the Rocky Mountain Regional VA Medical Center in Aurora, Colorado.

A replacement effort for the former Denver VA hospital (erected in 1950), the new campus encompasses 1.5 million square feet of new hospital space traversing 35 acres. The site bears 11 large, independent buildings – most of them rising six stories – interconnected by a central concourse which spans over two city blocks. In terms of size, scope and financial risk, this project is among the largest, most complex, and nail-biting endeavors Sturgeon Electric has encountered in its 105-year history.

At the time (early 2016), the project was already four years into construction and 50% electrically complete by a dismissed electrical firm. Joint-venture general contractor Kiewit/Turner (KT) and the US Corps of Engineers invited Sturgeon Electric to assess the VA campus for cost to complete the project. After the assessment, Sturgeon's executive leadership debated to exhaustion over whether to take on the monumental challenge. The risk of failing to successfully deliver the colossal project carried a sobering potential to financially cripple Sturgeon Electric; the plethora of uncertain conditions and a daunting labor shortage posed a legitimate threat to project success.

However, overcoming challenges has fortified the reputation of Sturgeon Electric since 1912. Finding confidence in this, Sturgeon's executive leadership embodied the philosophy of US

Army General George S. Patton: “*Accept the challenges, so that you may feel the exhilaration of victory.*”

The Sturgeon team mobilized to the site with a resound determination to support Kiewit/Turner and other trade partners in an enthusiastic, unified effort to dramatically improve the schedule. This refreshed VA team shared a common goal of ratcheting up efforts to deliver the world-class facility our veterans deserve and so desperately need.

Solutions of Special Projects:

Issue: A weeks-long, fully detailed, intensive assessment of current electrical systems and quality verifications were necessary to develop a detailed plan for successful path to completion and simultaneously validate and establish a quality control program.

Solution: Sturgeon Electric implemented a system of communication unlike anything we have amassed before, emphasizing quality and clarity between management, field and project partners. Sturgeon Electric designed its management team to mimic the structure of Kiewit-Turner, the Corps, and Jacobs Engineering teams, which fostered multiple benefits:

- Teams of General Foremen, Project Engineers and QA/QC foremen were assigned to each of the 12 buildings. This layering of management optimized communication and controls on the project, essentially breaking the massive site down to 12 smaller, more manageable projects. In addition, this facilitated fluidity between overall site construction and integration efforts.
- Leveraged technology and embraced paperless processes: a cloud-based document control platform was shared by the entire project team to optimize document management, real-time communication and quality tracking.

Result: This unprecedented level of communication was crucial to reducing the anticipated electrical schedule by nearly 18 months!

Excellence in Project Execution and Management/Team Approach:

Upon arrival, Sturgeon Electric was determined to shine a new light on a project blighted by negative media attention; simply finishing the job would not suffice. The project team was

determined to be the *catalyst of positive change*. Field leadership worked to instill a dynamic mental attitude within the field crews, impressing a universal, voluntary sense of initiative, and commitment to quality and safety. Ingraining a shared sense of personal pride and patriotism about the project, the management effectively carved 18 months from the schedule, providing a sense of redemption to the story of the VA Medical Center:

- Field leadership impressed upon the team an attitude of “doing this for the veterans, not just for a paycheck.”
- Sturgeon Electric created new VA-specific patriotic logos and visual displays, posting them site-wide as a reminder for *why* we were committed to excellence on this project. For example, email signatures, hard hats, and safety posters were inscribed with the adopted mantra, “*Proudly Serving Those Who Have Served.*”

The resulting comradery and buy-in to this approach fostered a greater sense of purpose among the ranks, increasing efficiency and safety culture. Joe Badaracco, Director of Field Operations, stated of the effort “In 35 years of this industry, I have never seen such a unified attitude of personal pride in a project. People we hired for the job bought into what we were doing from a pride and safety standpoint, and that personal connection is why many of them are still with us.”

Several Safety results were developed from the VA management team’s efforts:

- Created a program to trend safety issues and implemented early mitigation. For example: an increase in eye incidents due to airborne particles triggered a foam-gasketed glasses policy, garnering a sharp decline in occurrence.
- Sturgeon implemented a Safety Observation Report (SOR) program. This program incentivizes employees to take immediate action in correcting unsafe behaviors or conditions; immediately afterwards, the employee documents their observation and corrective actions taken. The cards are then submitted for review by their foremen, project managers, and senior-level management, who select multiple \$100 winners and distribute the reports to raise awareness throughout the company.

Sturgeon Electric completed the project with zero lost-time injuries; an amazing feat considering the level of work installed:

- 791,481 feet of overhead conduit installed
- 38,700 electrical devices (outlets, switches, etc.)
- 27,915 Light Fixtures
- 784 Miles of wiring pulled

Construction Innovations/State-of-the-Art Advancement:

Replenishing the Thirsty Labor Pool: In order to meet commitments, Sturgeon needed to add approximately 200 new electricians to its team of 126, *within a six-week period*. The degree of training, trust in competency, and safety behaviors of unfamiliar employees carried a degree of uncertainty. To address this, Sturgeon implemented a hiring agenda to collect craftsmen and craftswomen who were experienced with the VA project from prior employment at the site. Concurrently, Sturgeon's home-based safety training classes were brought on-site for several consecutive weeks in an effort to raise safety performance as rapidly as possible. The results were palpable:

- Garnered new employees at the leadership and field level with intimate knowledge of the facility.
- Provided new employees with opportunities for training and education, such as Sturgeon's full-day START training (Supervisor Training in Accident Reduction Techniques). Originally designed for supervision, START training was provided to all classes of workers in an effort to improve safety culture across the project.

A Modern, Sustainable Facility: The 1.5 million square-foot campus boasts state-of-the-art healthcare technologies and is pursuing LEED-NC Silver status; an accreditation which certifies that the design incorporated solutions to support public health, the environment, and provide savings throughout the facility's life cycle.

Environmental and Safety:

Raising the Bar of Safety Awareness: Project Management adopted a site-specific safety performance system to track incidents and reveal rising safety trends. This data was reviewed daily by all field personnel. As a result, crews were able to anticipate trending safety hazards and implement mitigation plans to ward off injuries and promote safe behaviors. Requirements

for safety communication were pushed to new heights; in lieu of the standard weekly safety meeting, all crews were required to have daily, weekly and monthly safety topic discussions.

Advocating a Passion for Safety: As a result of significant reward and recognition through the SOR program, participation swelled as each new crew member was added to the VA project. In turn, field personnel increasingly engaged in safe behaviors, ultimately reducing or eliminating hundreds of hazards without pressure from safety management. Eventually, the program gained such popularity that Kiewit-Turner adopted a similar safety incentive program.

Excellence in Client Service and/or Contribution to Community:

With an estimated 400,000 veterans in need of care throughout the Rocky Mountain region, delivery of the colossal project comes at an urgent time of need. As U.S. Representative Mike Coffman stated, *“The long anticipated and much needed facility will provide enhanced care to the hundreds of thousands of veterans who live in Montana, Wyoming, Colorado, Utah and portions of other states across the Rocky Mountain West.”*

Answering the call to revive a project hanging in the balance is no easy task. For Sturgeon Electric however, rising to such challenges has shaped our legacy since 1912. We salute America’s Veterans, and are proud to have played a role in delivering to them Colorado’s most amazing healthcare campus. For the challenges met, complications conquered, and financial risk resolved, we believe the Rocky Mountain Regional VA Medical Center is worthy of selection as AGC’s ACE award for *Meeting the Challenge of a Difficult Job*.



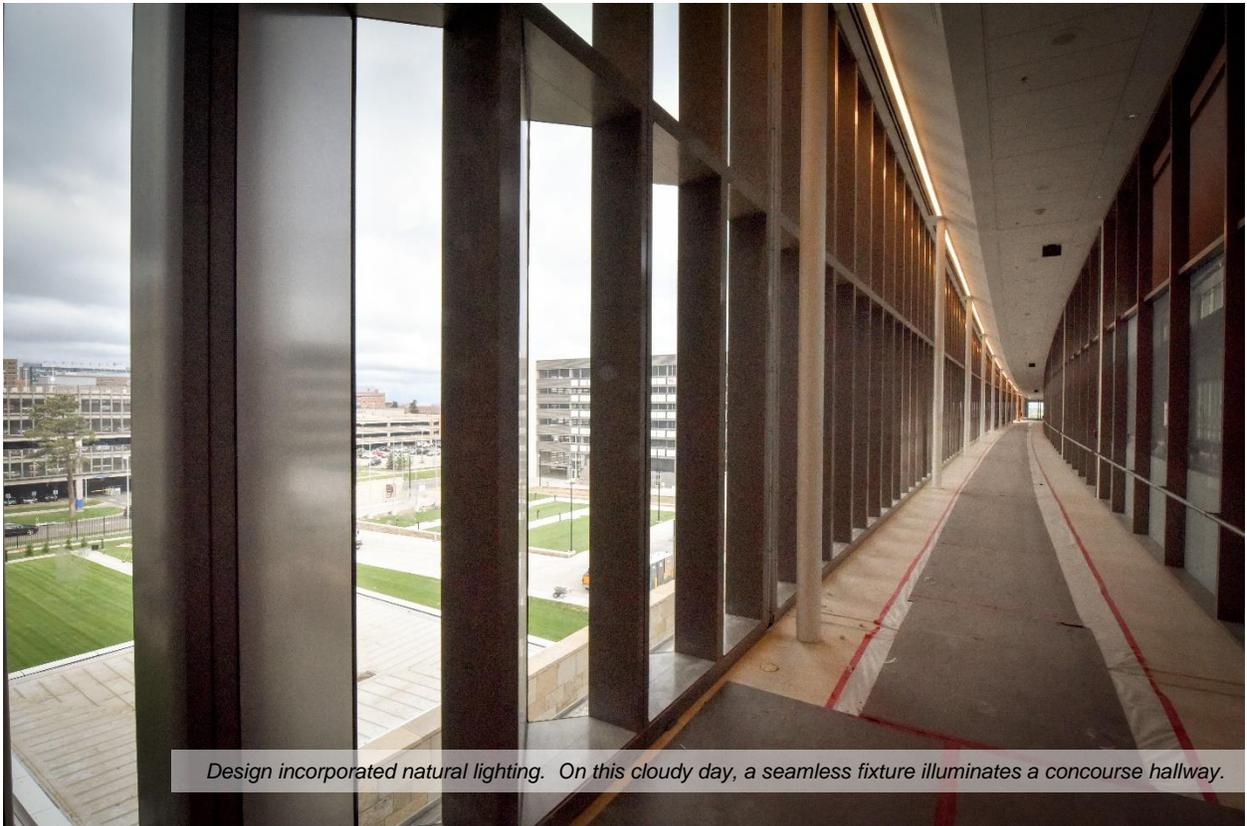
Color-highlight photo illustrating the magnitude of the 35-acre VA campus.



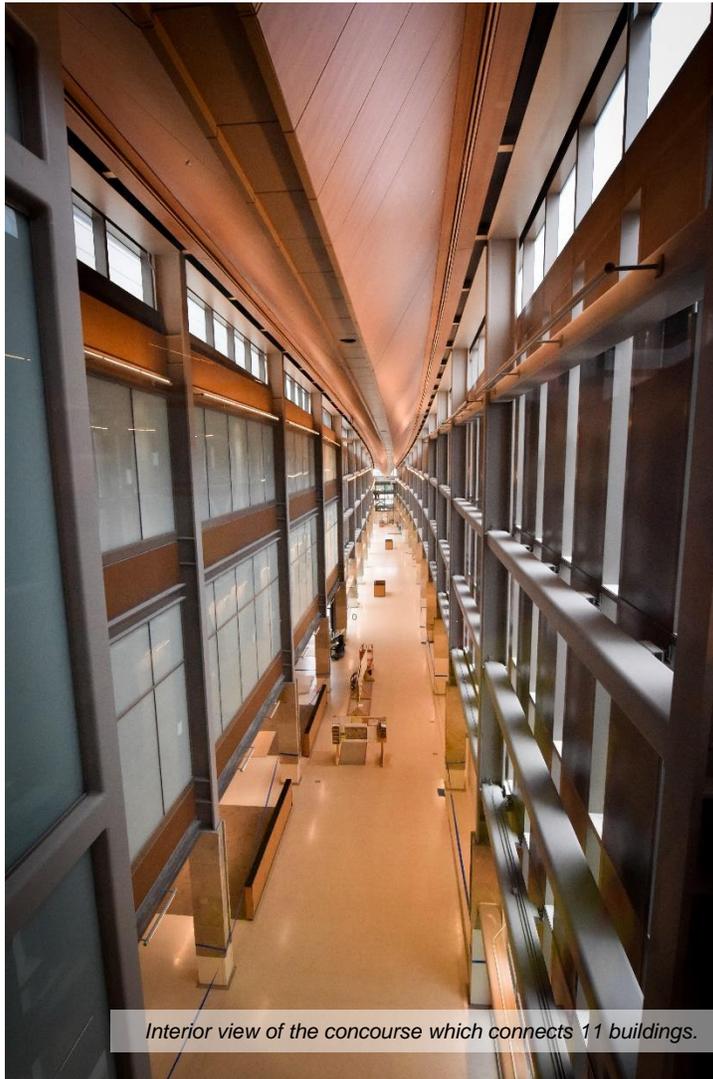
Sturgeon Electric Crew, St. Patrick's Day 2017



Switchgear lineup in the VA's massive Central Utilities Plant.



Design incorporated natural lighting. On this cloudy day, a seamless fixture illuminates a concourse hallway.



Interior view of the concourse which connects 11 buildings.

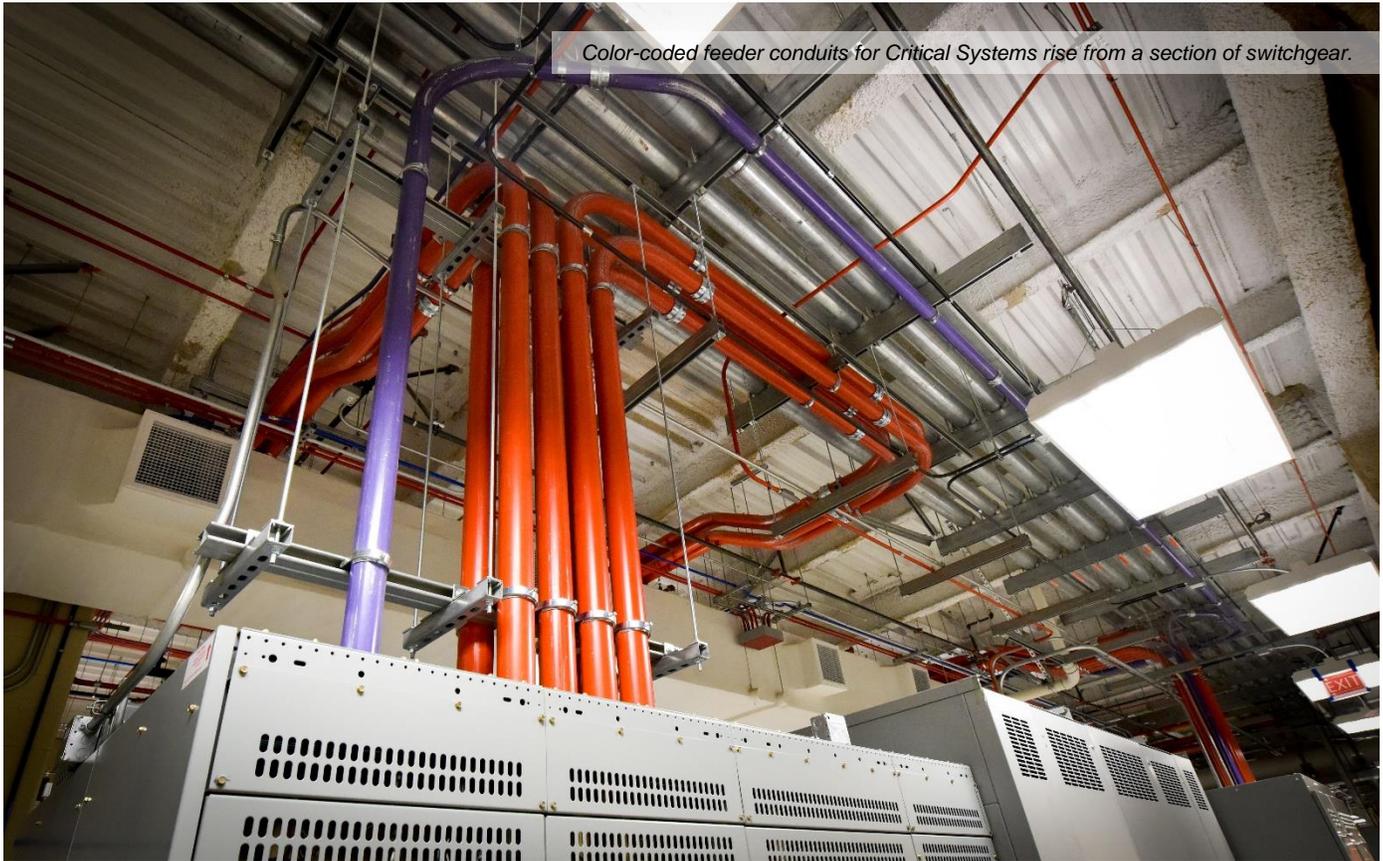


Parking Staff North (PVN) Building





View of the VA campus looking north-east.



Color-coded feeder conduits for Critical Systems rise from a section of switchgear.