

## **AGC ACE AWARDS 2021 SUBMISSION**

### **CHILDREN'S HOSPITAL COLORADO: PEDIATRIC MENTAL HEALTH INSTITUTE**

#### **Impacting Children, Equipping Growth**

Delivering thoughtful, high-quality behavioral health care for children and making a positive impact in the lives of children and adolescents through mental health care is what transpires within the walls of the Pediatric Mental Health Institute at Children's Hospital Colorado.

The institute, located in Aurora, Colorado, is a model for building a state-of-the-art behavioral health destination that will surely be toured by owners and design teams for years to come.

#### **Multiple Levels and Phases**

Guarantee Electric's role entailed working closely with the owner and design team to equip the nearly 50,000-square-foot build-out and renovation of three floors through a multi-phased project that accommodates future growth in serving young behavioral health patients.

Guarantee's scope of work included planning and installation of electrical infrastructure and low voltage system in all active construction spaces on levels three, five and six and in some instances requiring installation outside of construction in the occupied areas. Guarantee was also responsible for the supervision of fire alarm, nurse call, audio/visual, and digital antenna systems contractors.

Guarantee began performing in a design-assist capacity in April 2020 and construction commenced in June 2020 on the following phases:

- Phase 1 consists of the entire third level of Children's Hospital.
- Phase 2A consists of the west and north sides of level five.
- Phase 2B consists of the east and south sides of level six.
- Phase 4A consists of the southwest area of level six.
- A future phase of work on Children's Hospital is phase 3B, the north and northeast areas of level six, beginning in November 2021 and is scheduled to complete in March 2022.

Guarantee's completed work included a 17,800-square foot build-out of shell space on level three of the facility and a 31,500-square-foot, multi-phased renovation of levels five and six.

Work on level three encompassed construction and build-out of shell space into group patient rooms, a sensory room, activity rooms, conference center, dining area, exam rooms, and staff offices.

The project scope on levels five and six included: a multi-phased renovation of two high-acuity patient bedrooms; three ADA-compliant medical patient bedrooms; a standard medical patient bedroom; an ADA-compliant patient room; 25 standard patient bedrooms; occupational therapy gross motor rooms; three observation rooms; six therapy rooms, two seclusion rooms, noisy and quiet activity rooms; consultation rooms, classrooms and group rooms; a gym; dining rooms; support staff rooms and offices; five nurse stations; medical rooms and a staff lounge.

Guarantee's \$3.5 million design-assist contract also included work alongside the owner and design team in recommending, procuring and installing high-impact, anti-ligature lighting fixtures with design that mitigated hard edges and corners, such as mirrored light fixtures in the patient restrooms, that were chosen to reduce the opportunity for self-harm by young patients. The lighting systems and fixtures that Guarantee and the owner specified are sufficiently robust to withstand abuse, while still providing maximum visibility, wayfinding, glare reduction and the use of controls to support mental health and wellness, all while reducing the look of an institutionalized facility. The specialized tamper-proof light fixtures selected are a critical component of the facility's design to ensure the safety and security of patients and staff.

Due to the nature of this state-of-the-art facility, access control, and video surveillance was a key component with some floors requiring more than 30 new badge readers. The installation of this security infrastructure and the architectural design aspects of the spaces created substantial challenges specific to managing the installation of multiple systems within the limited interior wall and ceiling space. Constant communication between the trades and design team proved essential.

### **Soothing Lighting, Bubbles, Fiber Optic Curtain**

Lighting systems installed by Guarantee are all LED except for a sensory room on level three that features fiber optics and color-changing light fixtures. Fiber optic, ceiling-mounted light fixtures give the appearance of a starry night while power installed by Guarantee illuminated a "bubble tube" that provides ascending, mesmerizing, color-changing bubbles to both stimulate

and relax patients. A fiber-optic “curtain corner shower,” also powered by Guarantee, creates the effect of gazing up some 30 feet into the air when standing within the curtain.

### **Challenges: Metal Ceiling System, Working Amidst Patients and Covid**

The corridors on levels five and six required the use of metal ceiling systems that provided protection from patients gaining access to spaces above the ceiling. This created challenges for Guarantee in installing ceiling-mounted lighting and systems such as those for fire alarms, nurse call signals, and cameras.

Perhaps Guarantee’s steepest challenge lay in performing electrical work in various locations of a 24/7 operational facility inhabited by at-risk youth with mental and behavioral health issues. Logistics and workflow also proved a sizable challenge. Guarantee and project partners met daily throughout the project, strategizing the best means of shifting and crossing over to various locations to perform necessary work in areas that weren’t immediately occupied by medical staff or patients.

Guarantee received specialized training in how to thoroughly examine and reexamine each workspace to safeguard that no stray construction materials were left on the floor, in elevators, restrooms, and anywhere else where they could prove harmful to troubled young patients.

Working as quietly and cautiously as possible, often adjacent to active treatment areas, was often a challenge set before the team. Being mindful of gear being worn or carried while passing patients in the hallways was an additional precaution. The project included three large phases and six smaller phases, with multiple phases occurring at the same time.

Due to limited elevator access and the small size of the elevators required conduit, unistrut and all-thread to be hoisted through windows on levels five and six and demanded that the project team use ingenuity and the utmost safety precautions with as minimal noise as possible so as not to disturb behavioral health patients and staff.

Covid added workflow, workforce, and occupant-specific challenges to the job. In addition, a series of manufacturer supply chain delays spurred additional related challenges.

### **Maximizing Safe Work Practices**

Guarantee worked more than 23,600 hours accident-free on this project. Safety has always been the number-one priority, not only for the well-being of Guarantee personnel but for the safety of Children's Hospital patients and staff. Guarantee worked diligently and cautiously so as not to jeopardize the safety of those working and being cared for within the walls of Children's Hospital.

### **Expanding Care, Continuing Compassion**

The expansion and renovation of the Pediatric Mental Health Institute at Children's Hospital Colorado reflects sophisticated, patient-centric technology, electrical infrastructure, state-of-the-art sensory-nurturing lighting, ultimate security access control, and additional built-ins. This project stands as a shining example of the highest quality, safest, most advanced, evidence-based, family-focused outpatient and psychiatric inpatient therapy for children. Guarantee was proud to serve as a project partner.



*A Guarantee electrician making sense of existing infrastructure above the ceiling grid*



*Calming cloud fixtures found in common spaces*



*One of a kind "bubble fixture"*



*Guarantee electrician installs specialty tamper-proof light fixtures in a common space*



*Patient reception and consultation space*