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Case Study

SOUTHEASTERN UTILITY TRANSFORMS CONTROL ROOM SYSTEM VISIBILITY WITH CURVED LCD VIDEO WALL

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ABOUT

When leaders at a Southeastern public utility began planning their new Systems Operations Center, the vision went far beyond new technology. They wanted to create a resilient, human-centered space where operators could manage the region's electric, water, and gas systems that serve more than 200,000 residents.

At 25,000 square feet, the new facility centralizes those functions for the first time. The building itself is hardened to withstand severe weather and maintain power through storm events. Inside, the control room is built around a curved video wall that improves comfort, visibility and speed to decision.

"Control rooms operate at a different standard," said Mike Scott, Executive Account Manager at FORTÉ. "You need specialized engineering, tight coordination, and technology you can depend on without hesitation. That's the standard our Mission Critical Group brings to every project."

CHALLENGE

The utility's former operations center had served the community well for decades, but as infrastructure expanded, so did the demands on its technology. Separate systems for electric, gas, and water meant operators were constantly toggling between multiple screens and stations to keep pace with real-time events.

Robert E. Lamb, Inc., a nationally recognized architect and engineering firm specializing in control-room environments, was hired to design the new facility. They recommended a sweeping curved LCD video wall to anchor the main room, supported by a secondary LCD video wall for additional operations.

The curve wasn't for looks. In a space where operators monitor information 24/7, curvature brings the entire field of data into natural view. It reduces eye strain, improves collaboration, and eliminates blind spots, which is especially useful during an outage or an emergency response.

Global technology pioneer Peerless-AV, known for its custom SEAMLESS Bespoke mounting systems, engineered a concave structure tailored to the project's precise curved radius. Fine three-axis adjustment supported tight tolerances and clean seams across the wall.

The team's challenge was to translate that design into reality, without compromising reliability or service continuity.

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SOLUTION

RE Lamb brought FORTÉ onto the team to make the design buildable, reliable, and ready for round-the-clock operation. Having partnered on multiple command-and-control projects before, RE Lamb knew FORTÉ could handle the level of detail required.

Working alongside Barco and Peerless-AV, the team transformed the design into a finished system that defines the new facility:

Primary Wall: A Barco UniSee II LCD platform provides the main visualization surface. Built on a precise architectural curve, the wall spans 18 panels wide by 4 panels high, measuring just over 70 feet.

Secondary Wall: A Barco UniSee II 8 by 2 video wall configuration for gas and water systems.

Mounting: A Peerless-AV SEAMLESS Bespoke mounting system – engineered as a concave structure built to the project's precise curved radius – enables convenient service access to individual LCD panels without any downtime.

Processing: A distributed Barco CTRL platform with redundant servers and network paths, supports two standalone visualization systems.

Integration & Support: Full installation, calibration, and operator training delivered by FORTÉ's Control Room Group.

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"We went with Barco UniSee 2 because it's the world's only bezel-less LCD," said Lee Pagnan, National Sales Manager at Barco. "For SCADA and large-map visualization, the mini LED technology really makes the content pop, with true blacks and excellent visual acuity."

FORTÉ coordinated with RE Lamb, the general contractor, and Peerless-AV from early design through construction sequencing to ensure the mounting infrastructure matched the building's geometry exactly. Before deployment, the team pre-tested every configuration in FORTÉ's Kansas City lab to confirm compatibility and eliminate field surprises.

"While the equipment is important, integration is where control room projects succeed or fail," said Scott. "We're the bridge between what's designed and what operators depend on every day."

Once onsite, FORTÉ technicians and Peerless-AV engineers worked in tandem to achieve pixel-perfect alignment across the curved span, an effort measured in millimeters. The result was a seamless, continuous image across both walls, ensuring SCADA and mapping data appear without distortion or visual interruption.

"You work together for months on a project like this. Close collaboration at all stages is vital, and we know from our years of working with FORTÉ that it is a phenomenal company — from

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> **Lee Pagnan**
> National Sales Manager
> Barco

the sales team and their presentation to their leadership and executive levels, to project managers and engagement with the client," said Wolfe.

Barco engineers supported final calibration and visualization tuning, ensuring consistent brightness and color uniformity across the full display.

"With this deployment, we showcased how BARCO UniSee II and CTRL work together to create a unified, mission-critical visualization ecosystem," said Lee Pagnan, National Sales Manager at Barco. "The utility's operators now benefit from precise situational awareness, simplified control, and 24/7 reliability. At Barco, we are committed to empowering utility teams with tools that enhance decision-making and strengthen the resilience of their network."

RESULT AND HUMAN IMPACT

The new control center is one of the most advanced municipal facilities in the country and when operators moved in, the difference was immediate. Instead of jumping between stations, teams now monitor electric, gas, and water systems together on a single, panoramic wall, allowing them to spot trends, coordinate crews, and respond faster when issues arise. For example:

Unified visibility: Operators can view SCADA, mapping, and data feeds together for the first time, eliminating the need to toggle between stations.

Reduced fatigue: The curved, seamless video wall minimizes eye strain and cognitive load during long shifts.

Quicker response: Teams spot anomalies sooner and coordinate more effectively during outages, storms, or maintenance events.

Reliability and confidence: The system's precision and redundancy ensure critical information stays visible and accurate when it matters most.

Community impact: Faster insight and response translate to more reliable utility service for Huntsville residents.

"The new environment has transformed how they operate," said Scott. "It's faster, calmer, and more connected. Achieving that kind of precision and reliability takes real collaboration between design, engineering, and integration – and this team delivered."

Partners:

Architect/Engineering: RE Lamb

Visualization & Processing: Barco

Mounting: Peerless-AV

Systems Integrator: FORTÉ