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Case Study

DataBank's DFW11 Data Center in Red Oak, Texas

Introduction

DataBank, a leading provider of enterprise-class edge colocation, interconnection, and managed services, has been at the forefront of addressing the surging demand for High-Performance Computing (HPC) and AI-driven infrastructure. The DFW11 Data Center, located at 3320 Batchler Road in Red Oak, Texas, represents a pivotal expansion in the Dallas-Fort Worth (DFW) metro area. As the third facility in DataBank's Red Oak Campus, DFW11 is designed to support hyperscale workloads, offering robust power, advanced cooling, and scalable connectivity. This Case Study explores the background, challenges, solutions, and outcomes of developing DFW11, highlighting its role in meeting the evolving needs of enterprises and cloud providers.

Background

The Red Oak Campus was announced in September 2024 as a 292-acre master-planned development in Ellis County, approximately 21 miles south of downtown Dallas. This strategic location leverages the DFW region's status as a major Data Center hub, attracting global cloud and technology providers due to its connectivity, talent pool, and economic incentives. The campus is engineered to accommodate up to eight two-story Data Centers, with a total potential of 3.4 million gross square feet and 480MW of critical IT power across all phases.

Ted J. Pappas, Director of Operations Nov 15th, 2025

DFW11, part of Phase 1 alongside DFW9, DFW10, and DFW12, was filed for development in mid-2025 with the Texas Department of Licensing and Regulation. The Project involves a $325 million investment and is constructed by Rogers-O'Brien Construction (DFW 9 and 11). Construction timelines span from December 2025 to January 2028, with initial readiness targeted for Q2 2026. This expansion builds on DataBank's existing portfolio of nine (9) Data Centers in the DFW market, responding to the exponential growth in AI applications that require massive computational resources.

The decision to develop DFW11 stems from market trends: AI and machine learning workloads have driven a 50-100% increase in Data Center power demands over the past few years. DataBank aimed to create an AI-ready facility that could handle high-density deployments while maintaining sustainability and operational efficiency.

Challenges

Developing a Hyperscale Data Center like DFW11 presented several key challenges:

- ✓ Power Scalability and Reliability: Ensuring access to sufficient, redundant power for 60MW of critical IT load per building, amid regional grid constraints and rising energy costs.
- ✓ Advanced Cooling for High-Density Computing: Traditional air cooling is insufficient for AI servers exceeding 45kW per cabinet; liquid cooling solutions were needed to support densities up to 130kW+.
- ✓ Sustainability Goals: Achieving 100% renewable energy usage while minimizing water consumption in a water-stressed region like Texas.
- ✓ Construction Timeline and Supply Chain: Accelerating build-out to meet Q2 2026 readiness amid global supply chain disruptions for critical components like transformers and cooling systems.
- ✓ Security and Compliance: Providing tiered physical and digital security to meet enterprise and government standards, including FedRAMP (Federal Risk and Authorization Management Program) for cloud services.

These challenges were compounded by the need to future-proof the facility for evolving technologies, such as direct-to-chip liquid cooling and hybrid air-liquid systems.

Solution

DataBank addressed these challenges through innovative design and strategic partnerships:

- Power Infrastructure: A dedicated 400MW on-site substation from Oncor, expandable to 800MW, provides N+1 redundancy with 120/208V and 240/415V AC options. This ensures reliable, scalable power delivery, with commitments to 100% renewable sources.
- Cooling Technology: The facility employs DataBank's Universal Data Hall Design (UDHD), which supports both air and liquid cooling. It accommodates rear-door heat exchangers and coolent-to-chip systems, enabling cabinet densities of 45kW+ for air and 100kW+ for liquid cooling, while optimizing for efficiency and low PUE (Power Usage Effectiveness).
- Sustainability Features: Emphasis on energy-efficient systems and renewable energy integration reduces environmental impact. The design minimizes water use through closed-loop cooling where possible.
- Security and Operations: Tiered physical security includes biometric access, 24/7 monitoring, and modern workspace amenities like offices, conference rooms, Wi-Fi, and kitchens. Operational support offers 100% uptime SLA, 7x24x365 on-site engineers, remote hands, and smart hands services.
- Connectivity and Platforms: While onsite carriers are TBD as of 2026, the facility integrates with DataBank's in-metro cloud and FedRAMP-authorized services. Colocation options include cabinets and cages, with HPC compatibility for AI workloads.

The two-story structure spans 425,170 gross square feet, with 200,000 square feet of raised-floor data hall space, allowing for flexible deployments.

Implementation

Construction will commence in late 2025, with JHET Architects overseeing design and Rogers-O'Brien handling build-out. Key milestones included site preparation on the 292-acre campus, installation of the substation, and integration of cooling infrastructure. By early 2026, foundational elements are in place as of this Case Study, allowing for phased commissioning. DataBank's experience from prior DFW facilities ensured smooth execution, with ongoing adjustments for supply chain resilience.

Results and Benefits

DFW11 is progressing toward operational status, contributing to the campus's Phase 1 capacity of 240MW. Early benefits include:

- Scalability for AI: Supports high-density racks, enabling clients to deploy AI models efficiently.
- Economic Impact: The $325 million investment boosts local employment and positions Red Oak as a tech hub.
- Reliability and Efficiency: N+1 designs and renewable energy ensure cost savings and compliance.
- Market Expansion: Enhances DataBank's DFW footprint, attracting hyperscalers and enterprises.

Projected full-campus completion will deliver 1.6 million square feet of raised space and 480MW, solidifying DataBank's leadership in AI infrastructure.

Conclusion

The development of DFW11 exemplifies DataBank's commitment to innovation in the face of AI-driven demand. By overcoming power, cooling, and sustainability challenges with cutting-edge design, DFW11 not only expands capacity but also sets a benchmark for future Data Centers. As the Red Oak Campus evolves, it will continue to empower businesses with reliable, scalable infrastructure in one of the world's fastest-growing tech markets.