



Challenges of Site Development

The story of Clarkrange Regional Business Park

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I. Introduction

Fentress County was formed in 1823 and covers an area of 499 square miles in the Upper Cumberland Region of Tennessee, seven miles south of the Kentucky border on its northern edge, and ten miles from Interstate 40 at its southernmost edge. The county was once the site of several saltpeter mines used to manufacture gunpowder during the Civil War and today is well known for its numerous natural features such as Big South Fork National River and Recreation Area. If you ask anyone from Fentress County, their most famous resident is World War I hero Alvin C. York who founded the Alvin C. York Agricultural Institute, now referred to as “York Institute” which is still in operation today.

According to the most recent census over 18,000 people call Fentress County home, with thirteen percent of its population employed in manufacturing, followed closely by those in construction and retail trade. Like that of other rural counties in Tennessee, manufacturers have come and gone over the years, the oldest remaining operation being Micro Metals, Inc. which employs roughly 110 people and has been doing business in the county seat of Jamestown since 1976.

Fentress County’s Industrial Development Board (IDB) was established in 1978 and remains very active today, meeting on the first Friday of the month at eight a.m. sharp. The IDB has made strategic decisions over the years, purchasing, and developing property for industrial use, and leasing or selling those properties depending on the circumstances. With 65% of the community’s workforce leaving the county for work each day, the IDB’s goal is to bring high quality jobs back to Fentress County to retain their existing and future workforce.

II. History of the Park

The Clarkrange Regional Business Park (CRBP) is a total of 240 acres in Clarkrange, Tennessee, eighteen miles south of Jamestown. The land was donated to the IDB in March 2007 for the establishment of the park and was estimated at the time to be valued at \$750,000. Since taking ownership of the property, it has been transformed from an unused and heavily wooded lot to a 60+ acre expanse of relatively flat land that is primed for development.

Transforming the park has been no small task. The IDB, with assistance from the United States Department of Agriculture (USDA), invested in a land application wastewater system operated by Adenus, LLC. The IDB also spent \$380,000 on the installation of a water line, signage, and an access road, which has since been upgraded to industrial grade made possible by a grant through the Tennessee Department of Transportation (TDOT). The park has undergone numerous phases of master planning that include lots ranging from six to thirty-one acres. Four of those lots have been cleared and 176 acres remain wooded. Environmental and technical due diligence were originally completed to include a Phase 1 Environmental Site Assessment (ESA) in 2007, Phase 1 ESA Update in 2013, and a Geotechnical Exploration of lot 6 in 2010. Additional exploration of lots 2, 3 and 4 concluded in 2012, as well as a Wetland Delineation Study and Cultural Resources Review in 2014.

Target industries for Fentress County include light and general manufacturing, which consists of consumer goods and assembly, machining, agricultural processing, automotive parts and electric vehicle manufacturing. Fentress County's target markets were identified based on a review of Requests for Information (RFI) received from the Tennessee Department of Economic and Community Development (TNECD) and Tennessee Valley Authority (TVA) over a 15-

month period, identifying instances when the park satisfied all project requirements such as lot size, expansion projections and infrastructure needs.

Additional target markets were determined based on existing industries and their suppliers. Nine of the County's twelve largest industrial employers fall into agricultural processing, an industry that has seen significant growth in the Upper Cumberland region in recent years. Due to the absence of neighbors, sensitive production and research have also been identified as a target market, appealing to industries with specific privacy needs such as firearms manufacturing and non-pharmaceutical research and development.

III. Site Development Project (2020-2022)



In early 2020 the Fentress County Industrial Development Board applied for a Site Development Grant through the TNECD to begin the next phase of development at CRBP. An engineering firm was procured, and preliminary engineering report drafted for the application. The goal of the project was

to rough grade two adjacent lots so that each could accommodate a 30k to 70k sq ft facility. The initial cost estimate from the preliminary engineering report was \$474,663 but by the time the project was presented as part-two of the application two months later, the cost had increased by 14% to \$541,383. The proposed project was expected to last a total of fifteen months but unknown to anyone at the time, a global pandemic was about to grind this project to a halt and change lives forever.

The IDB received their executed grant contract at the end of June 2020 and three months later lost their lead engineer to COVID-19. By November 2020 a new lead engineer had been assigned and after a five-month pause, the design phase began again. By February 2021 the project had been passed off to a Senior Project Manager formally trained as a professional landscape architect, under the supervision of a civil engineer from the same firm. Within three months the plans had shifted from two separate pads to a single 7.1-acre pad; the IDB hoping to reduce costs by balancing cut and fill between the two sites.

Eleven months into the project, the plans and specs were approved by TNECD, and the project went out for bid. The Senior Project Manager received numerous inquiries regarding the bid documents, ultimately having to seek approval for and issue three addendums. The first bid opening took place at the county courthouse in June 2021; however, no bid packets were submitted. In an attempt to address concerns, a pre-bid conference was held at a community college close to the property, followed by an on-site walk-through in early August 2021. Both events were well attended and preceded a second bid opening later that month.

At the second bid opening the lowest construction bid came in 70% higher than the engineering team had anticipated, forcing the IDB to make a quick decision on how and if they should move forward. The increase in project cost meant that the community's match would go from just over \$41,000 to \$328,000. The decision was made to move forward, award the project to the lowest bidder and to use IDB funds to make up the difference.

The 120-day construction period began at the end of November 2021, one month prior to the end date of their grant contract with TNECD. A contract revision was requested and granted, extending the end of the contract by one year. The first four months of construction were plagued with above average rainfall which slowed earthwork on the site, so much so that it

became obvious that a change order to extend the construction period was going to be necessary. In late March 2022 the first of five change orders was submitted, requesting 100 additional days be added to the construction timeline. The 100-day request addressed 86 calendar days lost due to weather, 4 days for a drone survey to solidify rock quantities before blasting and 10 days to replace unsuitable soil that was found during excavation. That change order was approved however adding additional days wasn't without associated cost. Each day that work continued, construction inspection would continue as well.

In May 2022 the senior project manager, contractor and project administrator met with members of the IDB to discuss the mitigation measures for two major obstacles, unsuitable soil and a stream running through the sandstone from one end of the site to the other, made visible



Unsuitable soil found during grading; photo taken by the construction team March 2022

by the above average rainfall. It was at this meeting that the IDB learned that addressing these two problems would increase the budget by an estimated 120k. The decision to push on was unavoidable, it had been two years, the IDB had a half-finished project, mountains of dirt had been scraped away exposing the sandstone base that lay beneath and \$144,000 in grant funds had already been drawn down. Not addressing the stream would mean that the middle of the site could never withstand a building being built upon it. The IDBs only point of optimism was that they still had \$54,000 in contingency funds.

Thankfully this was the last major financial hit that the IDB would face during this project. New soil would be brought in to replace the unsuitable soil and the contractor would create something similar to a French drain to address the stream; replacing the porous sandstone with limestone, wrapping it in geotextile fabric to allow the natural feature to exist while making it strong enough to build on. Replacing the soil and addressing the stream would end up adding \$111,000 to the overall project cost, forcing the IDB to look elsewhere for funds.

In August 2021, IDB Chairman wrote a letter to the Fentress County Commission requesting \$100,000 to bring the project to fruition, stating “As many of you know, 3,194 Fentress County residents commute out of the county each day for work, the majority of them driving past the Clarkrange Regional Business Park. Once finished, this project will increase the marketability of the park, helping us to attract industrial prospects who will provide employment opportunities for the citizens of Fentress County”. The Chairman’s request was granted, and every dime of additional funds were used to bring this project over the finish line. Two subsequent change orders were added to extend the construction timeline to a total of 276 days; more than double the original estimation. Construction ended on the last day of August 2022. In the end, the total project cost was \$886,089, 43% of that fell to the community.

One might ask, how could this have happened? In one respect, Fentress County was an unfortunate victim of bad timing. Covid 19 took the life of the engineer who from the first meeting at a local bank over pizza had championed the project. Once that relationship was gone, the project at CRBP didn’t feel like a priority, as they were passed around at the engineering firm like a hot potato. The global pandemic also caused the cost of construction materials and labor to spike to unprecedented levels. TNECD responded to changes in the market by increasing the maximum grant award from \$1,000,000 to \$5,000,000 for future projects.

Even before the project went to bid, the geotechnical report from 2012 hinted to the problems that were faced during the project. Although some of the lots had changed numerically due to multiple iterations of master planning, there were twelve bore holes in the area of lots 3 and 4. Even a novice review reveals a trend of sand, roots and very soft material. In addition, the geotechnical exploration was done prior to mass tree removal, which would have added to the amount of organic material found in the soil.

Replacing soil was always anticipated, however each iteration of cost estimates from engineers reduced the amount of imported structural material, from 3,000 cubic yards (CY) in the March 2020 preliminary engineering report, then 2,500 CY in May 2020 and ultimately down to 500 CY in the April 2021 bid documents. Another contributing factor was that the engineering firm opted to conduct a unit price bid versus a lump sum bid process. Instead of the contractors estimating their own quantities for materials, the engineers provided the estimated quantities of each item, which is theorized to be a reason behind the hesitation from local contractors during the bid process. This concern is evident by the question below that was addressed in addendum one:

Question: How does the contractor get compensated if there are discrepancies in the Engineer's estimated quantities on the unit price bid form vs/ actual construction?

Answer: Contractor shall notify engineering firm of any quantity discrepancies. Upon verification of actual quantities, additional payment will be submitted for approval to the IDB and State.

At the completion of this project, the amount of structural fill was 2,675 CY, half-way between the first two estimates that were created but discarded. Underestimation of the soil conditions added \$43,500 in structural fill and over \$28,000 in additional cost to remove unsuitable soil, above and beyond the material and earthwork that was budgeted for.

In retrospect, the water issues on site would have been difficult to predict. Although the geotechnical borings were close to the location of the stream running through the sandstone on lots 3 and 4, there's no way to know if it would have been detected at the time of exploration. A map of the borehole locations shows three in the general proximity of the natural feature which was roughly 4 feet wide and could have been dry at the time due to weather conditions. This unexpected obstacle is a perfect example of why contingency funds are so important.

IV. Subsequent Activity

In 2021 the IDB applied for an InvestPrep Grant through TVA to update due diligence at the park as well as erect a sitemap billboard to communicate the site master plan to prospects in the absence of the economic development team, in response to a post-pandemic trend of prospects visiting sites unannounced and unaccompanied. The IDB had hoped to obtain architectural renderings to aid in visually communicating site build-out potential both in person and for use during virtual site visits as well as add them to their marketing materials, allowing the community to proactively recruit their ideal prospect instead of waiting to be found. Unfortunately, this project was not funded. TVA tech services did work with the IDB to create renderings of the property which they use today as part of their marketing materials and to show during prospect visits.

In 2023 the IDB was awarded a second Site Development Grant through TNECD to update due diligence in the park. Obtaining comprehensive sitewide due diligence based on the

most up to date master plan enables the community to market the site fully and effectively, no longer allowing themselves to be easily eliminated by confusing or outdated information. This will also aid in the informed development of the rest of the property, hopefully avoiding a repeat of the 2020 grading project.

V. Plans for Future Development

The IDB was recently awarded a grant through the Appalachian Regional Commission (ARC) to clear approximately sixty acres of land on the northwest end of the property. Currently undergoing environmental review, this project will open up the lots towards the back of the property and enable prospects to envision how their project might fit best on the land. There are no current tenants at the park, but the community has found itself on the short list for three projects in the last five years. The IDB continues to market the site and is considering entering into a three-and-a-half-year lease allowing the park to be a staging area for a natural gas pipeline project in exchange for wetland mitigation. To date, over four million dollars have been invested in the park and additional grading is desired, not only from a marketing standpoint, but also so that new wetlands don't form as additional land is cleared.

VI. Presenting to prospects (Lemons vs. Lemonade)

CRBP is a master planned park with flexible lot sizes, a combined pad ready lot and expansion potential. Privacy is one of CRBP's best assets, its mile long entry drive and absence of residential neighbors create a natural buffer well suited for industries with privacy needs. The site's location, less than 1 mile from the intersection of SR 52 and HW 127 is central in the traffic pattern of those who commute to neighboring counties for work. HW 127 is being widened by TDOT, a project that is currently in the construction phase. Once complete, the

efficiency of travel between the site and Interstate 40 will be vastly improved for commercial vehicles.

In order to recruit a prospect from within one of the target markets previously mentioned, the community cannot rely solely on the beauty of the property, but also need to demonstrate that they have taken necessary steps towards minimizing risk to a prospect. Outdated and incomplete due diligence, paired with multiple conflicting master plans have plagued past attempts to market the property, but significant progress has been made to change that narrative.

Fentress County leadership is unrelenting and meets each obstacle head on. In 2019 the privately owned Jamestown Regional Medical Center abruptly closed its doors, leaving staff and patients stranded. Following seven failed attempts to purchase the rural hospital, Fentress County Executive Jimmy Johnson turned to the University of Tennessee for help. Four years later the community celebrated the grand opening of the University of Tennessee Medical Center's free-standing emergency department in Jamestown. The community turned a liability in industrial recruitment into an asset they can be proud of.

In 2022 the Tennessee General Assembly approved 25 million dollars for the creation of a state-of-the-art Higher Education Center in Fentress County. This new facility will house Roane State Community College alongside the Tennessee College of Applied Technology (TCAT) Oneida. This new facility will serve students of all ages with programs in health sciences, automotive and diesel technology, welding, construction, and manufacturing technology. This facility is yet another feather in their cap, one that will serve both existing and new industries for generations.

VII. Conclusion

Rural communities often find themselves at a disadvantage when it comes to prospect recruitment. Despite having the advantage of vast acreage, competitive pricing and privacy, disadvantages like proximity to the interstate or distance to the closest international airport will never be reduced. In this context, grants can be a vital lifeline in the effort to overcome obstacles, providing essential support to drive growth and improvement. Grants through state and federal partners enable rural areas to invest in crucial projects that support local businesses and foster new industries. As a result, communities can experience increased employment opportunities, improved quality of life, and enhanced economic stability. The impact of such financial assistance is profound, empowering rural residents to build a stronger, more sustainable future.

Rural communities are by default tasked to change the narrative, overturning misconceptions about their people and their product, or risk being overlooked. Fentress County has made unprecedented strides forward in recent years, aggressively pursuing grant opportunities and partnerships along the way. The core team of people who believe in the potential of Clarkrange Regional Business Park know that its day will come, and in the meantime will continue to prepare smartly and with perseverance.

Resources

MTIDA Fentress County Community Profile: <https://www.mtida.org/regions-listings/upper-cumberland-region/fentress-county>

Weather data: <https://data.mpnnow.com/weather-data/fentress-county/47049/1925-12-01/>

Census on the Map: <https://onthemap.ces.census.gov/>

Fentress Co. IDB ltr to County Commission dtd August 14, 2021

News 6 Article: <https://www.wbir.com/article/news/local/fentress-county-new-emergency-room/51-477be5bc-1c14-427f-abf6-a8b2ec2d8c6a>

Daily Yonder: <https://dailyyonder.com/rural-tennessee-county-regains-access-to-emergency-care-after-four-years-without/2023/08/07/>

Upper Cumberland Business Journal: <https://www.ucbjournal.com/groundbreaking-plans-underway-for-new-fentress-higher-education-center/>