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Machinery and Equipment Cluster Report

TexAmericas Center – Texarkana MSA – Texas

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3.9 MACHINERY & EQUIPMENT MANUFACTURING CLUSTER OF INDUSTRIES

- Alternative, Traditional Energy Creation / Oil & Gas Equipment Manufacturing
- Automotive, Rail, and Other Transportation Equipment Manufacturing
- Defense Equipment Manufacturing
- Medical Device and Equipment Manufacturing
- Construction, Mining, Farming and Equipment Manufacturing
- Other Industrial Machinery and Equipment Manufacturing

Texarkana was founded as a railroad town in the late 1870's, so has a long history of manufacturing, particularly in industries such as base materials, building materials, wood, paper and steel. Many equipment manufacturers may have been established to support these legacy industries and have since diversified their product offerings to serve other sectors as well.

The Texarkana area now serves as a hub for various industries that require equipment, including forestry, agriculture, construction, petrochemical, transportation, defense, metals, and energy. The presence of a diverse customer base provides equipment manufacturers and their vendors with opportunities to meet the demand for specialized equipment and machinery.

The Texarkana region has well-developed industrial infrastructure, including industrial parks, manufacturing facilities, business services, and warehousing space. This infrastructure supports the efficient operation of equipment manufacturing businesses and facilitates collaboration and synergy among industry players.

TexAmericas Center and the Texarkana area is an advantageous location for a metals, machinery, and equipment manufacturers to set up a business for several reasons:

- **Skilled Workforce**: Texarkana has access to an available skilled workforce with experience in manufacturing, engineering, welding, machining, and other relevant fields. The region boasts excellent access to low cost, low skill and semi-skilled talent. Local educational institutions, such as technical schools, community colleges and universities, offer industry focused training programs tailored to the manufacturing of Machinery & Equipment industries, providing a pipeline of talent for businesses in the area.
- **Cost Competitiveness:** The Texarkana region offers a lower cost of doing business compared to larger metropolitan areas, including lower operating costs, logistics costs, affordable real estate, and competitive wages. Access to local input resources as well as vendors reduces transportation costs for manufacturers. Thess cost advantage enhances the profitability and competitiveness of metals, machinery, and equipment manufacturing facilities located in the area offering a strong comparative advantage.

- **Strategic Location**: Texarkana's location at the border of Texas and Arkansas places it within a transportation hub, in the central time zone, with access to three major interstate highways, railways, airports, and waterways. This strategic location facilitates the movement of raw materials, finished products, and equipment, reducing transportation costs and enhancing supply chain efficiency, in a right-to-work state.
- **Multimodal Transportation HUB Connectivity:** Texarkana has multimodal transportation facilities, including rail yards and transload facilities, which enable the seamless transfer of goods between different modes of transportation. This enhances logistics efficiency and reduces transit times for shipments moving through the area.
- Market Access: Texarkana's central location provides easy access to regional and national markets, allowing manufacturers to reach customers efficiently. Additionally, the region's proximity to major cities such as Dallas, Houston, Little Rock and others provides opportunities for business expansion and growth.
- Access to Raw Materials: The region surrounding Texarkana is rich in natural resources, including timber, minerals, and metals. This access to raw materials can be beneficial for metals and machinery manufacturers, reducing procurement costs, and ensuring a stable supply chain.
- Access to Utilities: Texarkana offers access to reliable utilities with excess capacity such as water, sewer, electricity, fiber and natural gas, essential for metals, machinery, and equipment manufacturing facilities. Access to these utilities ensures consistent production and reduces operational risks.
- **Supporting Industries**: Texarkana has an "Instant Supply Chain" of supporting industries and suppliers in sectors such as transportation, logistics, engineering services, and metal fabrication, providing additional resources and support for manufacturers in this sector.
- Access to Diverse Energy Resources: The Texarkana region benefits from access to various energy resources, including electricity, natural gas, biomass, and renewable energy sources such as wind and solar. This access to an assorted array of energy resources provides opportunities for different energy production methods, reducing reliance on imported energy and promoting energy independence.
- Innovation Ecosystem: Texarkana is increasingly fostering an Innovation Ecosystem conducive to advanced and traditional manufacturing, with initiatives aimed at supporting research, development, and technology commercialization. Collaboration with local universities, research institutions and colleges can further drive innovation within manufacturing processes, existing product lines and for new product development.
- **Business-Friendly Environment**: Texarkana offers a business-friendly environment with supportive local and state governments, favorable tax policies and incentives, grants, financing programs, infrastructure support, and access to resources for business development. Additionally, the region's business-friendly

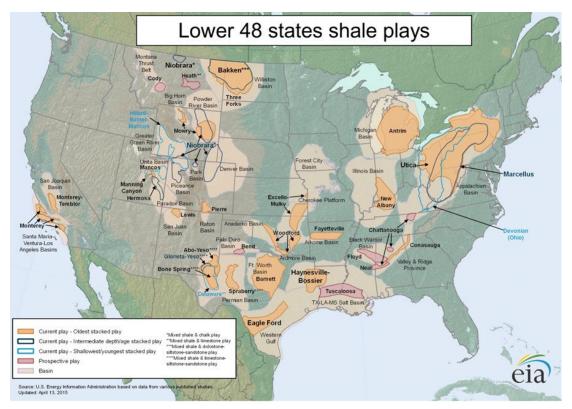
regulatory environment and low cost of living make it an attractive destination for equipment manufacturers. This supportive ecosystem encourages the establishment and growth of Machinery & Equipment manufacturing businesses in the area.

- **Community Support:** The Texarkana region has a long-standing and strong sense of community and local support for manufacturing businesses. This support manifests itself through partnerships with local organizations, workforce development initiatives, public entities and networking opportunities within the business and civic community.
- **Cost of Living**: Texarkana has a lower cost of living compared to larger metropolitan areas, which can result in lower operating expenses for manufacturers. This affordability can be advantageous for startups, privately owned, and small-to-medium-sized firms looking to establish themselves in the market.
- Quality of Life: Texarkana offers a relatively high quality of life, with access to amenities such as parks, recreational facilities, excellent educational resources, and cultural attractions. This can be appealing to employees working in the manufacturing industry, contributing to employee satisfaction, retention, and productivity.
- Overall, the combination of strategic location, access to raw materials, skilled workforce, business environment, cost of living, market access, quality of life, and supporting industries makes Texarkana a potentially favorable location for metals, machinery, and equipment manufacturers to set up a business.

3.9.1 Alternative, Traditional Energy Creation / Oil & Gas Equipment Manufacturing

- Power and Energy equipment includes equipment and machinery for generating, transmitting, and distributing electric power as well as machinery used for oil and gas exploration and production. Major categories include turbines, power transmission equipment and internal combustion engines (except automotive gasoline and aircraft) for electric utility and industrial applications. This group also includes oil and gas field machinery. The greater Texarkana has a particularly high concentration of Industrial Machinery Manufacturing specifically in the Pumps & Compressors area, refractory linings and equipment, and HVAC and Refrigeration Equipment Manufacturing including Air Conditioning Equipment.
- Ollson & Associates ranked the Texarkana Region and specifically TexAmericas Center as a 7 out of 10 for the attraction and long-term success of this sector specifically in the area of Pump & Compressor Manufacturing in their 2017 Market Viability study.
- Oil & Gas Equipment Manufacturing

- Ollson & Associates ranked the Texarkana Region and specifically TexAmericas Center as an 8 out of 10 for the attraction and long-term success of this sector in their 2017 Market Viability study.
- The Texas side of the greater Texarkana has a particularly high concentration of Machinery Manufacturing, specifically in the Oil & Gas Field Equipment Manufacturing sector. The region is also notable in Industrial Machinery Manufacturing, specifically in the Pipes, Pumps & Compressors area and refractory linings and equipment.
- Texarkana is strategically located between about 1/3 of the US oil and gas plays, and centrally located to all the Lower 48 states Oil & Gas Plays. See attached.



- TexAmericas Center and Texarkana's overall proximity to local Oil and Gas operations and the much larger operations surrounding the region makes this industry an obvious target.
- In down times the expanse of TexAmericas Center with its large tracts of cleared land with road and rail access make it an obvious choose for storage and repair of equipment. Our property would be suitable for storing rigs, derricks, etc.... as the rigs do not need buildings or facilities...just land. TexAmericas Center can provided value-added services through its TACRail and TAC3PL operating divisions.

- Given the region's background in MRO, we would be an obvious choice for reconditioning, repair and reset prior to being redeployed. Once engaged here we would be an obvious choice for expansions involving new equipment manufacturing.
- Quail tools already has a drill pipe manufacturing and distribution operation located on our property. As well, Kelly Instrument and Machine is located in the Texarkana area. Other companies operating in the area include: Kelly Instruments and Machine Inc., and others.
- Alternative/Renewable/Recyclable Energy Creation & Equipment

The alternative energy equipment manufacturing industry is essentially in its infancy. The winning states will be those that place the greatest emphasis (policy, taxes/incentives, and education/training) on the underlying foundation supporting the industry.

- Access to Renewable Resources: The Texarkana region benefits from access to renewable energy resources such as biomass, solar, and wind. This proximity to renewable resources makes it an ideal location for manufacturing equipment related to these energy sources, such as solar panels, biomass processing equipment, and wind turbines.
- Access to Recyclable Resources: The Texarkana region benefits from access to recyclable energy resources such as plastics, rubber, animal waste and other substances. This proximity to these recyclable resources and infrastructure in place move it here economically makes TexAmericas Center an ideal location for production of byproducts like diesel fuel, naphtha, carbon black, and other byproducts. As well, the region is an excellent location for the manufacturing equipment related to these energy sources, such as reactors, tanks, piping, and other required equipment.
- TexAmericas Center has plans to reopen the landfills on its property, establish a rail-served waste transfer station and launch a material recovery facility. This would create an additional supply of low-cost input materials for both types of operations.
- **Solar Equipment Manufacturing Industry:** The solar equipment industry is divided into four primary segments:
 - Casting
 - Raw material for cell manufacturing
 - Polycrystalline Silicon to make wafers.
 - Cell manufacturing (two types)
 - Crystalline Silicon Wafers (most prevalent today c. 2010)
 - Photovoltaic Thin Film Material (emerging)

- Module assembly
 - Essentially an assembly process
 - PV Cells
 - Glass
 - Frames usually applied for mounting.
- System assembly of Cell Modules
 - Completed on-site at Customers Solar Farm
 - Two main functions
 - Electrical integration
 - Mechanical integration
- Skillsets for the industry embrace process control operators, assemblers, electronics technicians, electrical engineers, welders, and mechanics.
- In the modern day, photovoltaic (PV) systems are viewed as a
 possible replacement for fossil fuels as a clean energy source. The
 installation of solar PV power plants requires vast land and huge
 investment. Therefore, it is necessary to select a suitable site to
 achieve maximum efficiency and low cost. A feasible location of
 photovoltaic (PV) system must consider certain criteria including
 land restrictions, access to roads, and transmission lines. Typically,
 there are about ten factors grouped into four categories:
 Geographic, Technical, Economic, and Flood susceptibility criterion
 that are analyzed.
- The greatest solar energy capability lies in the Southwest, which includes Texas, and portions of the Intermountain West. Secondary potentials exist in the Pacific Time Zone, Midwest and Southeast.
- o Biomass Processing and Equipment Manufacturing
 - Biomass is a renewable energy source derived from living or recently living organisms. It may also include biodegradable waste that can be burned as fuel.
 - Biomass conversion into fuel is similar to chemical manufacturing. The process can involve one of three conversion methods: thermal, chemical, biochemical.
 - An emerging production technology is known as cellulosic. This basically involves drawing inedible material from a plant (e.g., cornhusk) but leaving the edible part of the plant intact.
 - Biomass fuel can be made from multiple sources including: algae, crops (Corn, Sugar Cane, Barley, Switchgrass, Sorghum), grasses, Timber (Bark, Thinning's, Wood Chips, and other unused items), Landfill gas, and waste (animal, food process, municipal, manufacturing and commercial kitchen).

- Typical Outputs include: Methane Gas, Ethanol, Biodiesel, and Cogeneration of electricity, heat, and steam.
- Regions with the largest biomass resource base include the Southeast, South Central including Texas, and Midwest.
- Biomass operations tend to be situated near the pertinent raw material base.

3.9.2 Automotive, Rail, And Other Transportation Equipment Manufacturing

• Transportation Equipment Manufacturing:

- Ollson & Associates ranked the Texarkana Region and specifically TexAmericas Center as a 7 out of 10 for the attraction and long-term success of this sector, specifically Motor Vehicle Parts Manufacturing in their 2017 Market Viability study.
- Manufacturing machinery is used to manufacture a wide range of goods out of metal and plastic and consists of technologies that find application in many other manufacturing industries, such as automotive, aerospace, and medical devices. It includes machine tools for cutting, stamping, and forming metal; plastics and rubber manufacturing machinery; and a wide range of cutting tools, dies and accessories. Automotive machinery and related systems, including machine tools, material handling equipment, welding equipment, and process control technology make up this industry. The automotive manufacturing industry is made up of three subsectors: motor vehicle manufacturing; motor vehicle body and trailer manufacturing; and motor vehicle parts manufacturing.
- The Transportation Equipment Manufacturing sector shows good labor availability except for industrial engineers, but this would be less relevant for assembly projects which would focus more on machinists and mechanics. Texas A&M-Texarkana has an engineering school with degrees in Electrical and Mechanical Engineering. Texas A&M University will soon announce a dedicated industrial engineering program.
- The Texarkana region boasts a well-established automotive manufacturing sector; however, the greater Texarkana region is likely the largest Transportation Manufacturing community that you have never heard of. It has the highest concentration of Motor Vehicle Body (3.2%) and Travel Trailer & Camper Manufacturing (35.6%) in the State of Texas. The region also boasts considerable expertise in Semi-Trailers, Utility Trailers, Railcar, Heavy Truck, and Tire Manufacturing.

- The Transportation Equipment Manufacturing sector in 2019 employed 1,656 individuals which was 9% growth (2014-2019). There are at least 17 private sector companies located here employing these individuals, there is 1.5 (LQ) times the US average of employment in this sector located in the Texarkana area. Also of note, the Texarkana region is home to over 2,500 workers employed through the federal government at the Red River Army Depot and contractors. These employees are classified as National Security therefore their transportation manufacturing skills are omitted from data sources.
- Transportation equipment manufacturing has been one of the stronger 0 growth sectors. The Texarkana region is home to 7 niche OEM automotive and railcar manufacturers, a major tire producer and an astonishing 17 trailer manufacturers. Companies in this cluster of companies include: Ledwell, Trademark Truck, Texarkana Specialty Vehicles, Emergency Service Vehicles, Advanced Global Resources (AGR), Red River Army Depot, Goodyear, Texana Tank Car, Trinity Industries, Union Tank Car, Mc Kinnen RV & Marine, Big Tex, Warren Truck & Trailer, East Texas Coatings, Innovative Trailers, Renew Truck, DFH Enterprises, LE Trailers, Utility Tri-State Inc., Top Hat Industries Inc., Diamond City Trailer Manufacturing, Rockin' S Trailer, R Mart Trailers LLC, Circle TM Trailers, LLC., Double A Trailers Inc., Texas Bragg Trailers, Traylorco Trailers, Performance Trailers, Davidson Trailers, LLC, 4 Boss Trailer Manufacturing, LLC, Texline Trailers, Lion Trailers, Rockwell American, Custom Built Gooseneck Trailers and others.
- For automotive manufacturing companies, one of the main attractions of Texarkana is the region's large, skilled, experienced, growing, and cost-effective labor pool, which has a long tradition of excellence in the industry. As well there is a steady pipeline of new talent is being created through education partnerships, with Texas A&M-Texarkana, University of Arkansas-Texarkana, and Texarkana College offering auto industry-certified training, engineering programs, supply-chain degrees and more.
- The greater Texarkana region offers unique advantages agriculture equipment manufacturing companies as the area possesses a range of businesses at every level of the value chain, which include farming inputs, specialized farming, food processing, supplement production, drug manufacturing and packaging, cold chain storage, beverage manufacturing and more.
- The Heavy Equipment Manufacturing sector, i.e. construction and mining, has very specific location needs. It is expected to see further

growth driven by demand and TexAmericas Center possesses many of the site selection characteristics desired by this industry.

- The regions strength in military vehicles MRO and existing heavy equipment manufacturing makes focusing on Heavy Equipment an easy target because of workforce skills, supply chain, industry training programs, infrastructure, and more.
- The workforce assets in fabricated metal and the skills from the federal 0 workforce at the Red River Army Depot create excellent synergies for the Heavy Equipment sector. Siting a Heavy Equipment Manufacturing operation at TexAmericas Center is a strong value proposition for anything from oil and gas, mining, farming, emergency, earth moving or other larger specialty vehicles, as well as metal and plastic components. Material handling equipment stands out as well as a growth sector and could be supported with the region's strength in welders, industrial machinery mechanics and inspectors. Due to a limited regional supply of experienced engineers, the focus would be on assembly activities. Growth segments include cranes and lifting equipment, especially for the construction and mining industries. There is also the potential to add supply chain companies to this cluster by targeting metal processing plants, such as electric arc furnace Minimills, as well as machinery parts.
- Texarkana has a long history in metals. Metals & Machinery includes competitive industries in Upstream—or primary—Metals, as well as emerging industries in Machinery Manufacturing, Advanced Manufacturing, and Aerospace & Defense. Connected by skilled workers, advanced materials, and innovation, companies in the Metals & Machinery cluster are growing in the greater Texarkana region because of our lower cost, logistics strengths, and workforce competitiveness.
- Instant Supply Chain Because of Texarkana's position about halfway between several cluster in Northern and Southeastern USA as well as Mexico we are perfectly positioned to draw upon existing supply chains. Goodyear tire has a large production facility in Texarkana. Texarkana Aluminum has produced aluminum for the automotive industry.
- Texarkana is located on the former yet growing North America Free Trade Agreement (NAFTA) 'auto corridor', which runs from Canda to Michigan/Ohio to the Gulf of Mexico and onto Mexico and accounted for nearly 90% of light vehicle production in the US in 2019. Since the establishment of NAFTA in 1992, nearly all new North

American automotive plants have been built in southern states and Mexico. Because of its location, Texas is a primary link between Mexico and the rest of the US automotive market, and billions of dollars of vehicles and parts are now transported between Mexico and Texas annually.

- The new USMCA includes many innovative provisions designed to incentivize new U.S. investments in the automotive sector, to promote additional purchases of U.S.-produced auto parts, to advance U.S. leadership in automotive R&D, to support additional high-paying U.S. jobs in the automotive sector, and to encourage automakers and suppliers to locate future production of electric and autonomous vehicles in the United States.
- As the south continues to develop into a powerful automotive cluster, Texarkana is well positioned between old guard locations in Canada, Michigan and Ohio as well as being in good proximity to up and coming states. Neighboring Mississippi is known as a powerhouse of the automotive industry, with nearly 200 suppliers. In nearby Alabama, new auto industry projects have been announced, and Tennessee is home to massive assembly lines for General Motors, Nissan, and Volkswagen and is a leader in the southeast for electric vehicle manufacturing. Texas has a major passenger vehicle assembly plant operated by global leader General Motors and Tesla opened its second US assembly plant in Austin in 2020.
- SETCO Solid Tire & Rim Assemblies Co.
- Headquartered in Idabel, OK, the plant covers over 100 acres, with 750,000 sq ft under roof and prides itself on making the most durable, best built and long-lasting solid rubber tires for the most intense job applications. The company is a pioneer in the market and is one of the world's largest and most capable solid rubber tire manufacturers, built on decades of top-quality product that increases our customers' up-time, and increases their profits. This international business, because of in-house abilities, can take on any job and service the largest operations in the industry. Established in 1988, the company sells tires in over 20 countries and has distribution centers in the USA and Europe.
- Specialty Services available through RRAD
 - Rubber Products Division is the only facility of its kind in the Department of Defense. As the sole source provider of the M1 road wheel, the depot has the most sophisticated, state-of-the-art track shoe and roadwheel re-build / manufacturing facility in the world.

The Rubber Products Division can produce multiple types of track shoes and road wheels simultaneously to meet the Army's demand. Equipment modernization projects such as the automated rubber denuding system and robotic road wheel material handlers have ensured that RRAD will continue to be a leading producer of track shoes and road wheels well into the future. Along with the equipment modernization program, RRAD has developed a professionally trained staff of engineers, technicians, equipment specialists, rubber workers, systems operators, and inspectors in its Rubber Products Operations.

- The depot's multiskilled workforce possesses a wide range of technical resources including the capability to design, fabricate and manufacture a wide range of items, from specialty parts to unique prototype weapon systems and vehicles.
- The depot has both a concrete and a dirt obstacle proving ground areas. There is also a banked oval track for endurance testing.
- The DLA has multiple car spot vehicle transload facility.
- The dedicated RRAD workforce provides continuous on-site support throughout the world.
 - Depot overhauls and repairs of combat and tactical vehicles and their components
 - 10/20 maintenance
 - Inspect/repair programs.
 - Overhaul of fire suppression bottles
 - Design/fabrication and manufacturing of items.
 - Deployable workforce
- Industry Specific Skill sets found at the Red River Army Depot (RRAD)
 - The Red River Army Depot (RRAD) attracts quality employees, provides excellent training and these employees have good skills. The RRAD plays an important role in the Texarkana Region's economy, but its labor force has diminished significantly. The RRAD employed about 10,000 people during Americas conflicts in the middle east in the early 2000's. RRAD employment dropped to just under 3,200 workers by 2014 and is about 2,500 in 2024.
 - Data on workforce capabilities of the majority of RRAD's civilian workforce are classified:
 - General Schedule (GS) for salaried, white-collar workers
 - Federal Wage System (FWS) for hourly, craft and trade workers.

- If these federal classifications were translated in to the commonly used Standard Occupational Classification (SOC) system, the breakdown would be about:
 - 45% Installation, Maintenance & Repair
 - 11% Production
 - 11% Business & Financial Operations
 - 10% Office & Administrative Support
- Unfortunately, companies and site selection consultants looking for data regarding skills will not find the above numbers listed, and details regarding further occupation skills will not be provided, again this is due to National Security issues and risks.
- The key is to break down this data further to determine real skills and transferability. In the 2014 TIP Strategies, Inc. study, they provided the below breakdown in their Regional Talent Retention & Economic Growth Strategy report. The following depicts the occupation skills of the listed workers about January 2013:
 - Heavy Mobile Equipment Repairers/Mechanics 832
 - Painters 103
 - Production Controllers 92
 - Administrative Support 77
 - Rubber Workers 42
 - IT Specialists 35
 - Maintenance Manufacturing/Parts/Production Specialists –
 31
 - Welder 23
 - Machinist/Machine Tool Operator 20
 - Sandblaster 20
 - Materials Examiner & Identifier 19
 - Electroplater 13
 - Forklift/Tractor Operator 13
 - Pneudraulic Systems Mechanic 10
- This information will help companies and site selection consultants understand the types of skills available at RRAD and displaced into the local workforce as the RRAD continues to shed employees.
- TexAmericas Center can provide updated information around this topic on a per request basis.

For automotive manufacturers looking to take advantage of the thriving industry cluster in southern America, Texarkana is a site of huge opportunity.

3.9.3 Defense Equipment Manufacturing

TexAmericas Center and the Texarkana region is an attractive location for a defense to locate a facility for several reasons:

- **Proximity to Military Installations**: The Texarkana region is strategically located near several military installations, such as Red River Army Depot in Texas and Camp Minden in Louisiana. Proximity to these installations can provide opportunities for collaboration, subcontracting, and support services for defense projects.
- Proximity to the Texarkana Area Defense Cluster: A large number of defense contractors are located in the greater Texarkana area, most with ties to the DOD installations found there. Military installations often require security clearances to interact with senior DOD civilians and uniformed personnel. Access to talent with these clearances and connections makes the Texarkana rea an attractive location to serve the needs of these bases and related government agencies.
- **Supporting Industries**: Texarkana has an "Instant Supply Chain" of supporting industries and suppliers in sectors such as transportation, logistics, engineering services, metal fabrication, and more providing additional resources and support for manufacturers in this sector.
- **Skilled Workforce**: The region benefits from a skilled workforce with experience in manufacturing, logistics, and other industries relevant to defense contracting in a Right-To-Work state. This workforce can provide the talent needed for specialized defense projects and manufacturing operations.
- **Community Support:** The Texarkana region has a long-standing and strong sense of community and local support for manufacturing businesses. This support manifests itself through partnerships with local organizations, workforce development initiatives, public entities and networking opportunities within the business and civic community.
- **Multimodal Transportation Infrastructure**: Texarkana is situated at the crossroads of major transportation routes, including Interstate 30 and Interstate 49, as well as railroads and the Port of Caddo-Bossier. This transportation infrastructure facilitates the efficient movement of goods and materials, making it easier to access suppliers and distribute products.
- **Cost Competitiveness:** The Texarkana region offers a lower cost of doing business compared to larger metropolitan areas, including lower operating costs, affordable real estate, and competitive wages. This cost advantage enhances the profitability and competitiveness of metals, machinery, and equipment manufacturing facilities located in the area offering a comparative advantage.
- **Business-Friendly Environment**: The Texarkana region offers a businessfriendly environment with competitive tax incentives, supportive local

governments, and access to business development resources. These factors can help defense businesses establish and grow their operations more effectively.

- Innovation Ecosystem: Texarkana is increasingly fostering an Innovation Ecosystem conducive to advanced and traditional manufacturing, with initiatives aimed at supporting research, development, and technology commercialization. Collaboration with local universities, research institutions and colleges can further drive innovation within manufacturing processes, existing product lines and for new product development.
- **Research and Education Institutions**: The presence of research institutions, such as universities or technical colleges, in the Texarkana region can provide opportunities for collaboration, workforce development, and technology transfer for defense businesses.
- **Cost of Living**: Texarkana typically has a lower cost of living compared to larger metropolitan areas, making it attractive for businesses seeking to minimize operating expenses while still accessing a skilled workforce and essential amenities.
- Quality of Life: The Texarkana region offers a relatively high quality of life, with access to outdoor recreational activities, cultural amenities, excellent educational resources, and a supportive community. This can help attract and retain employees, including those with specialized skills needed for defense-related work.

Overall, the Texarkana region's strategic location, skilled workforce, transportation infrastructure, business environment, cost of living, quality of life, and access to educational institutions make it a potentially favorable location for defense businesses seeking to establish or expand their operations.

• An Overview Of The Greater Texarkana Defense Cluster

With two munitions manufacturing depots, a tactical wheeled vehicle reset depot, the Midwest Defense Logistics Agency (DLA) facility, two air force bases, four Army National Guard Training bases (Texas, Louisiana, and two Arkansas), an Arkansas Air National Guard Training Base, two DOD, ATF and EPA approved energetics disposal facilities and three former munitions depots housing scores of defense contractors, multiple commercial airports and a world-class engineering university and junior colleges, Texarkana is at the heart of a robust and thriving defense and security cluster that has an essential, worldwide impact. Anchored by the Red River Army Depot (RRAD) and a major DLA operation, the Defense & Cybersecurity Cluster within 150-miles of Texarkana has everything from OEM's, supply chain, to

end users. Our Defense companies create highly advanced Weapons Systems, Tactical Wheeled Vehicles, Munitions (and their disposal) as well as produce and manage programs and logistics for critical parts and electronics for this industry's large global supply chain.

The 150-miles market around Texarkana is home to MRO, component parts, completion centers, and defense contractors like: Advanced Global Resources (AGR), Aerojet Rocketdyne (GenCorp Inc), Amentum, BAE, Boeing, Cherokee Nation, Day & Zimmermann, Esterline Defense Group, General Dynamics Armament & Technical Products, Lockheed Martin Missile & Fire Control, Metro Aviation, SAIC, Rheinmetall, EnviroSafe Demil, National Technical Systems, Raytheon Missile Systems, Spectra Technologies, Beako Manufacturing, Commercial Manufacturing Company, Inc., and many more. These contractors are further supplied and supported by strong, diverse groups of manufacturers, vendors, and suppliers throughout the region. Finally, the region is home to a large number of Department of Defense organizations housed at the DOD in installations.

• Opportunities at TexAmericas Center

- A TexAmericas Center facility can uniquely exploit not just the unique workforce skills and defense contracting knowledge related to the RRAD & DLA but also its supply chain both in terms of RRAD supplier recruitment and for similar companies that act as primary contractors as subcontractors as well as in the private market.
- Although the military armored vehicle segment in the US has experienced consolidation and hence a decrease in business locations (it has been increasing employment), the global market, especially Asia Pacific, Middle East, and Eastern Europe has growth potential. However, tactical vehicle assembly, subassembly, and component parts manufacturing has a clear competitive advantage operating here.
- All non-aerospace defense-related activities should be interested in learning more about TexAmericas Center, especially if energetics is involved - including the private sector. This cluster would also include private, defense and non-defense industries in firearms and ammunition that require testing facilities.
- Specifically, for the small arms and ammunition the region can offer a high concentration of key occupations, especially in welding, Cutting, Punching, and Press Machine Setters/Operators, and assembly.
 Further, there exists the potential to partner with the RRAD on use of shooting ranges, and TexAmericas Center's large sites and existing

energetics storage facilities allow for safe storage of ammunition and for companies to expand into ammunition production.

- Unmanned aerial vehicles (UAVs), vertical take-off equipment and other drones are emerging segments of the Defense and Civilian Industry. With access to large amounts of TexAmericas Center owned timber land, Texarkana Regional Airport facilities and off-property area that is sparsely populated there is ample area for flight testing. As well TexAmericas Center boasts dedicated Heli-pad sites. The Texarkana region is an optimal location for R&D, testing and production.
- Specialty Services available through RRAD
 - Rubber Products Division is the only facility of its kind in the Department of Defense. As the sole source provider of the M1 road wheel, the depot has the most sophisticated, state-of-the-art track shoe and roadwheel re-build / manufacturing facility in the world. The Rubber Products Division can produce multiple types of track shoes and road wheels simultaneously to meet the Army's demand. Equipment modernization projects such as the automated rubber denuding system and robotic road wheel material handlers have ensured that RRAD will continue to be a leading producer of track shoes and road wheels well into the future. Along with the equipment modernization program, RRAD has developed a professionally trained staff of engineers, technicians, equipment specialists, rubber workers, systems operators, and inspectors in its Rubber Products Operations.
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- Pneudraulic Systems Mechanic 10
- This information will help companies and site selection consultants understand the types of skills available at RRAD and displaced into the local workforce as the RRAD continues to shed employees.
- TexAmericas Center can provide updated information around this topic on a per request basis.

NOTE: A more comprehensive overview of the larger Defense Cluster is available in the Defense Cluster section of this report.

3.9.4 Medical Device And Equipment Manufacturing

- The Texarkana region is well known for its Architectural, Structural and Roofing Metal, Fabricated Pipe, Munitions and Ammunition Manufacturing, Aircraft Components, Defense Electronics, Military Equipment, Automotive Parts, Truck Components, Railcar Assemblies, Production Of Lightweight Materials, Carbon Fiber Composites, Specialty Polymers For Aerospace, Automotive, And Industrial Applications, Oilfield Equipment, Drilling Tools, Petrochemical Processing Equipment, Pumps, Compressors, Conveyors, Machine Tools, Plastic Components, Packaging Materials, and Specialty Polymers among other items.
- Specifically, for the Medical Device sector the Texarkana region can offer a high concentration of key occupations, especially Mechanical Skills, Design, Metal Working, Assembly, Hand-Fitting, Quality Control, Inspection, Safety and Compliance. The region's workforce also excels in problemsolving, communication and Teamwork. Certain activities can be accessed as flex work including Welding, Cutting, Punching, and Press Machine Setters/Operators, and assembly.
- The Texarkana region is also known for its Medical Equipment & Supplies Manufacturing, specifically Surgical Instrument Manufacturing. It also has a moderate concentration of Medical and Diagnostic Laboratories as well as specialized Hospitals and clinics. The region offers a vendor base and workforce that has regulatory compliance knowledge; proficiency in implementing and maintaining quality management systems; knowledge of manufacturing processes specific to medical devices, such as injection molding, CNC machining, laser cutting, and assembly techniques; understanding of materials used in medical devices, their properties, and compatibility with biological systems; ability to collaborate with product design teams to optimize medical device designs for manufacturability, scalability, cost-effectiveness, and compliance with regulatory requirements; proficiency in quality control techniques, such as statistical process control, inspection methods, and testing protocols; skills in risk

assessment, analysis, and mitigation; ability to maintain accurate and comprehensive documentation throughout the manufacturing process; experience in working within cleanroom environments and adhering to cleanroom protocols; effective communication and collaboration skills; and, a commitment to continuous improvement and a mindset of operational excellence.

- The Fabricated Metal Product Manufacturing sector employees about 1,741 individuals and employment grew by about 3% between 2104 and 2019. There are 51 companies operating in this sector with an LQ of about 1.8 this means there are about 80% more people employed in this sector than the US average. Fabricated metal will continue to grow its base in the region as Texarkana College launched a new industry specific training center called the Ledwell Advanced Manufacturing Training Center to address needs within the region a major focus is new CNC, PLC and related hands-on training programs. Graduation class sizes each year range from about 60 to 100 individuals graduating into the market with training in Precision Production. The region offers a vendor base and workforce that has metalworking skills, welding and joining expertise, measurement and inspection proficiency, and broad machining capabilities. They also have the ability to read and interpret engineering drawings, blueprints, and technical specifications; understanding of industry safety protocols and procedures; strong problem-solving abilities; depth of understanding of different types of metals, alloys, and their properties; good familiarity with quality control techniques; ability to work effectively as part of a team; and, willingness to adapt to new technologies, processes, and industry trends, as well as a commitment to continuous learning and skill development.
- Medical Device Manufacturers in the Texarkana market include: IV Tags, Global Star Medical, Durabuilt Medical Equipment, Respiratory Plus, B&W Dental Lab and others.

3.9.5 Construction, Mining, And Farming Equipment Manufacturing

- Ollson & Associates ranked the Texarkana Region and specifically TexAmericas Center as an 8 out of 10 for the attraction and long-term success of this sector in their 2017 Market Viability study.
- The greater Texarkana area has a particularly high concentration of Agricultural, Mining, and Construction Machinery Manufacturing, specifically in the Oil & Gas Field Equipment Manufacturing sector. The region is also notable in Industrial Machinery Manufacturing specifically in the Pumps & Compressors area, refractory linings and equipment, and HVAC and Refrigeration Equipment Manufacturing including Air Conditioning Equipment.

- **Construction, Mining equipment and related systems** includes selfpropelled equipment, implements, accessories and components for use in construction, forestry, mining, and utilities. Equipment and machinery used to mine and extract natural resources including mining and materials handling equipment and process controls, pumps, electric motors, and fluid power. Off-road diesel engines and fluid-power technology are also important components of off-road equipment.
 - Proximity to Markets: Texarkana's central location provides access to major markets in the United States, including regions with significant construction, mining, and oil & gas activities. This proximity reduces transportation costs and allows manufacturers to efficiently reach customers and distribution channels.
 - Texarkana's existing predominance in Tactical Wheeled Vehicle Re-Manufacturing Heavy Truck Manufacturing and Emergency Service Vehicle manufacturing make the region an attractive location for Construction and Mining equipment manufacturing.
- Agricultural and Food Processing machinery includes equipment used to grow, process, package, transport, and distribute food and beverages. Agricultural and Food Machinery and Equipment includes agricultural equipment, food processing and packaging machinery, commercial and industrial refrigeration equipment, and commercial food service equipment.
 - Value-Added Agriculture: The Texarkana area offers unique advantages to food and beverage processors as the sphere possesses a range of businesses at every level of the value chain, which include farming inputs, specialized farming, food processing, supplement production, drug manufacturing, packaging, trucking operations, beverage manufacturing, wholesale, and more.
 - Proximity to Agricultural Resources: Texarkana's location in a region known for agriculture provides proximity to key agricultural resources, such as farms, ranches, and food processing facilities. This proximity facilitates collaboration, supply chain management, and access to raw materials for manufacturing agricultural and food processing machinery.
 - **Food & Beverage Processing**: The Texarkana region is a known cluster of diverse Food, Beverage and related Processing activity.
 - Agricultural Equipment Manufacturing & Wholesale:
 - While Texarkana is not widely known as a major hub for farm equipment manufacturing, there are smaller-scale manufacturers in

the area catering to the agricultural community. Among them are Priefert Manufacturing which has grown into one of the largest farm, ranch and rodeo equipment manufacturers in the world. Also, in the region are 17 specialty trailer manufacturers, many focused on the need of farms and ranches.

 The wholesale industries for Farm Supplies, Farm & Garden Equipment, and Construction & Mining Machinery are strong and growing in the Texarkana region. Jobs in the Farm Supplies Merchant Wholesalers sector have an LQ of 3.3 times higher than the US average. Jobs in the Farm and Garden Machinery and Equipment Merchant Wholesalers sector have an LQ of 2.1 time the US average, and Jobs in the Farm and Garden Machinery and Construction and Mining (except Oil Well) Machinery and Equipment Merchant Wholesalers sector have an LQI of 2.0 time the US average.

3.9.6 Other Industrial Machinery And Equipment Manufacturing

- Manufacturing machinery is used to manufacture a wide range of goods out of metal and plastic and consists of technologies that find application in many other manufacturing industries, such as automotive, aerospace, and medical devices. It includes machine tools for cutting, stamping, and forming metal; plastics and rubber manufacturing machinery; and a wide range of cutting tools, dies and accessories.
- Industrial process machinery is used in a wide range of industries to operate and automate industrial processes. It includes basic products such as electric motors, pumps, valves and compressors and industrial controls, as well as material handling equipment. Process control systems are especially important to achieving the greatest productivity from industrial plants and equipment. The greater Texarkana has a particularly high concentration of Industrial Machinery Manufacturing specifically in the Pumps & Compressors area, refractory linings and equipment, and HVAC and Refrigeration Equipment Manufacturing including Air Conditioning Equipment.



Whether you are looking to expand your business, your current lease is expiring, you are planning a move to Texas, or you have considered leaving the mid-south region, talk to us first!

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