

**The Power of Road Infrastructure:
Understanding TDOT's State Industrial Access (SIA)
Program's Vital Role on the Economic
Growth of Tennessee**

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Introduction

Road infrastructure is globally recognized as a key asset for economic and community growth. Industries must distribute their products to appropriate markets promptly and efficiently and people must travel to work and to conduct business. The effective movement of goods and people are indicators of a well-connected road infrastructure of a community, city or state. Statistics from the World Economic Forum show that every 10-percent increase in road connectivity leads to a 0.9-percent increase in regional gross domestic product (GDP), highlighting the strong correlation between infrastructure development and economic prosperity.

As Tennessee communities flourish in this highly competitive market, road development represents a key driver in this economic growth. Tennessee lawmakers recognized the importance of transportation infrastructure investments in enhancing the state's economy and boosting global competitiveness by enacting The Industrial Highway Act of 1959 (T.C.A. 54-5-403), now known as the State Industrial Access (SIA) program.

Despite the availability of funding and technical assistance for road infrastructure through the SIA program, current data suggests that its potential is not fully realized. This may stem from communities and economic development professionals' limited knowledge and understanding of the program's requirements and guidelines. Additionally, challenges arise from the availability of local government's funding resources for the program's required cost share and the long-term maintenance of completed road projects. The extended lead time for road infrastructure poses another challenge, particularly when companies or communities require expedited access sooner than the Tennessee Department of Transportation (TDOT) can deliver. Moreover, certain development projects face resistance and some communities do not fully welcome these projects.

As economic developers strive to attract new industries and facilitate the expansion of existing companies, it is imperative to take advantage of opportunities like the partnership that TDOT offers to local governments. This paper seeks to serve as a source of information and raise awareness among communities of the availability of funding and technical assistance for road infrastructure through the SIA program. Additionally, it aims to foster a deeper understanding of the lasting impact of a well-planned transportation system on economic development.

About the SIA Program

The SIA program authorizes TDOT to contract with cities and counties for the development of “Industrial Highways” to provide access to industrial areas and to facilitate the improvement and expansion of industries within Tennessee. Projects are considered and approved based on eligibility, economic criteria, physical constraints, and available funding.

The guidelines and requirements for project consideration are:

- The proposed project is required to be eligible as an industrial highway. An “Industrial Highway” is defined as, “any road or street designated and located to provide access to an industry site or industrial park.” The road cannot be constructed on private property and must always be a public road open to traffic.
 - The program is limited to facilities for the manufacture of goods or for the production or processing of commodities; ports or other distribution centers for the storage and shipment of goods; corporate or administrative headquarters of business firms; and any facility of a business which the Tennessee Department of Economic and Community Development (TNECD) has determined to be eligible for a FastTrack industrial infrastructure and industrial site preparation grant or loan.
- FastTrack Infrastructure Development Program (FIDP) is designed to support local

communities for public infrastructure improvements. The grant must be for specific infrastructure projects benefiting one or more companies committed to creating new jobs and/or making new capital investments; requires local matching funds based on a community's ability to pay.

- Applicant must be the local government (city and/or county), not the industry. The application must be signed by Mayor/s, with resolution/s supporting the project.
- The program is not a grant – the agreement between TDOT and the local government will be based on an agreed upon scope of work.
- The typical section for an industrial road is two 12-foot-wide lanes with 4-foot-wide paved shoulders. Although not specified in the statute, approved added design features (i.e., turn lanes, traffic signal) may be funded through the program. If additional features are not recommended by TDOT, the work may be included in the construction contract as “non-participating items” and will not be paid for by the program.
- The program requires TDOT and the local government to be responsible for 50% of the right-of-way (ROW), utility relocation costs and railroad crossings, if any. The local government will also be responsible for submitting the required deposit of 50% match of the ROW estimated amount before acquisition. This deposit is applied toward the local government's share of the actual cost, and any amount over the actual cost is refunded to the local government. If the actual cost is higher than the estimated cost, then the local government will be responsible for 50% of the additional required funds.

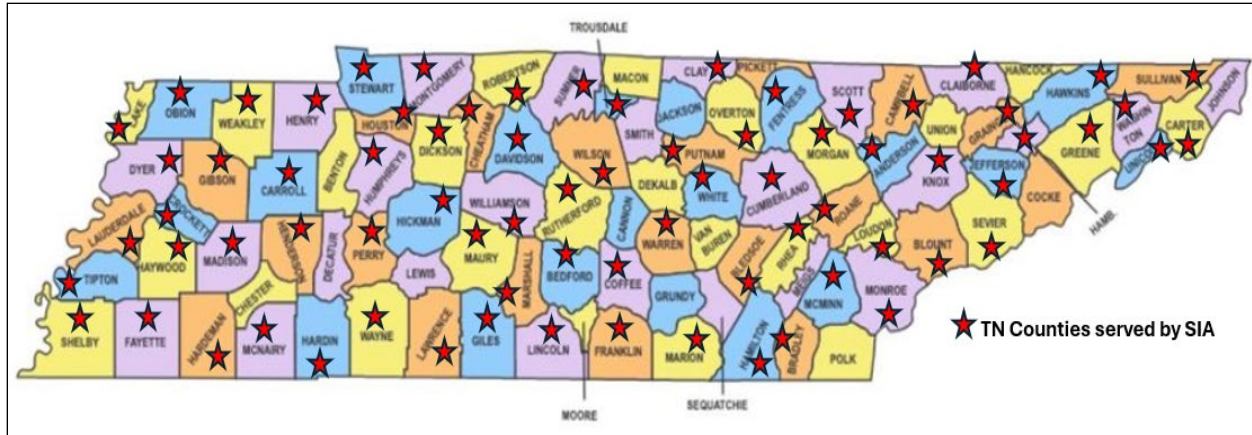
- The Industrial Highway becomes a public city street/county road, and the local government assumes full responsibility for the maintenance after construction is completed.

Typical projects funded by the SIA program are completed between 30 to 48 months upon approval but vary depending on the final approved scope of work. If the completion timeline does not meet the timeline of the community and/or the industry, the local government can elect to manage the project locally within the parameters set by TDOT's Local Program Development Office (LPDO). The local government will be reimbursed for the construction costs under the guidelines and terms set by LPDO and the SIA program. LPDO assists local governments with administering state and federal aid projects.

Data and Methodology

The SIA program is a source for funding and technical assistance available to local governments. Since 2015, the program has funded 134 projects in 54 counties, including six distressed counties – Bledsoe, Clay, Cocke, Hardeman, Lake, and Perry. Communities have utilized this program to secure projects that facilitated the creation of 39,498 new jobs with an annual payroll of \$1.88 billion and a capital investment of \$12.64 billion since 2015.

On average, a typical one-mile-long, standard SIA road is estimated to cost \$4.5 million. The cost-benefit analysis on the next page shows the benefits that the state received from this program, which outweigh the costs with a 5.21 benefit-cost ratio. Cost benefit analysis is a well-established method for economic appraisal and allows for comparisons of projects and project alternatives using summary measures such as benefit-cost ratio. To date, the program has successfully assisted communities with road projects in 75 of 95 counties.

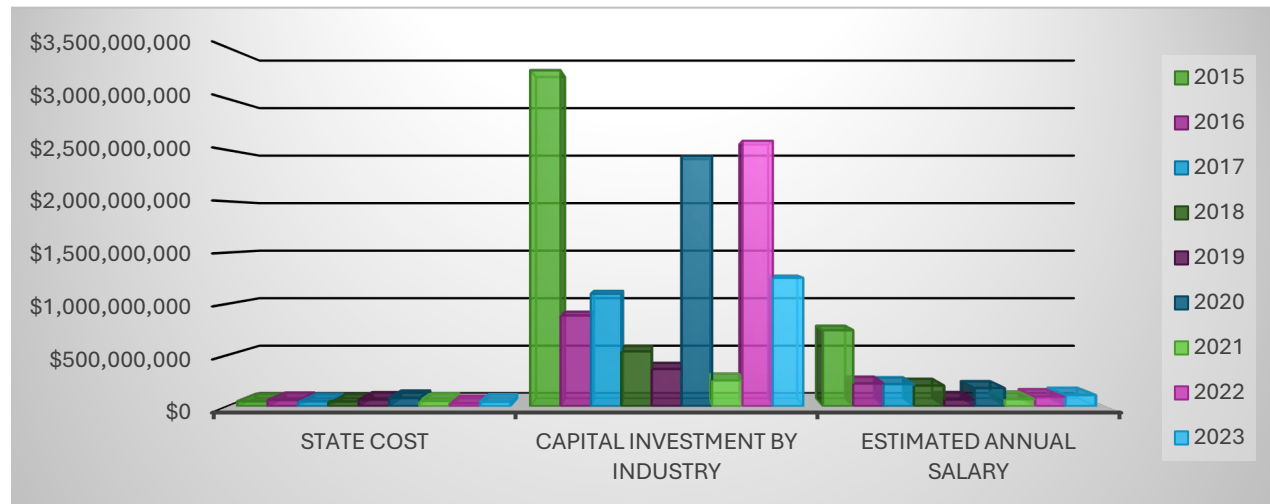


TN County Map

Number of SIA Projects Advanced to Construction		Actual Costs of Projects paid for the SIA Program	Industries Capital Investments	Estimated Annual Salary	New Jobs Created
FY2015	19	\$48,591,104	\$3,277,137,317	\$736,958,491	10,326
FY2016	22	\$58,796,796	\$867,498,570	\$221,455,266	5,313
FY2017	15	\$40,336,423	\$1,072,423,986	\$213,490,662	5,237
FY2018	9	\$45,698,278	\$535,168,758	\$201,215,657	3,818
FY2019	16	\$64,003,924	\$357,802,111	\$64,575,077	1,714
FY2020	17	\$80,822,813	\$2,442,455,042	\$176,628,753	4,895
FY2021	9	\$50,938,964	\$253,060,400	\$69,948,352	3,094
FY2022	9	\$27,616,200	\$2,589,709,292	\$94,964,709	2,328
FY2023	18	\$43,097,064	\$1,252,700,000	\$109,351,341	2,773
Total	134	\$459,901,566	\$12,647,955,476	\$1,888,588,308	39,498

*FY (Fiscal Year – July 1 – June 30)

State Cost vs Benefit Comparison



Tennessee is actively pursuing a long-term goal of reducing the number of economically distressed counties to 10 by the year 2025, along with seeking annual improvements in the economic status ranking in 70% of its rural counties. As of 2024, the state's progress is promising, with only eight counties still classified as economically distressed.

This paper draws upon case studies that highlight the pivotal role of road projects in fostering efficiency and enhancing connectivity among industries and communities in rural and distressed areas, particularly in relation to interstate highways. These case studies further demonstrate the diverse benefits that communities can derive from a well-designed transportation system, including the ability to attract new businesses, facilitate expansion, create job opportunities, shorten travel times, enhance safety, and ultimately contribute to an improved quality of life.

Case Studies

As economic development strategies evolve, the demands placed on transportation infrastructure have grown more varied, particularly in the effort to attract new and expanding industries to local communities. There are cases in which industries do not qualify for a typical SIA road project as the capital investments and new jobs do not meet the benefit-cost ratio, especially in rural areas where projects tend to be smaller in scale. Additionally, there are instances where industries or communities require expedited road construction beyond the typical project timeline of TDOT. Moreover, there are cases where access to an industrial park via road infrastructure is essential prior to securing new industry investments.

The SIA program team considers numerous factors when evaluating project eligibility. The following case studies highlight how counties and cities have effectively leveraged the program to attract new industries and enhance road infrastructure as existing businesses

expanded. These cases highlight the flexibility of SIA assistance, with funding opportunities tailored to specific community needs.

Towns of Jasper and Kimball, Marion County – Northeast Wood Products, Valmont Industries and Mueller Water Products

In May 2015, Northeast Wood Products announced the commencement of the initial phase of installation and retrofitting for its third factory in the Jasper Industrial Park. Northeast Wood Products manufactures wood pellets which are used as an alternative fuel source. The company planned to create 25-50 new jobs with an annual payroll projection of \$1.8 million and invest \$5 million in this expansion. Following this announcement, the Southeast Tennessee Development District approached TDOT to assist in enhancing the current state of Industrial Boulevard to handle the anticipated increase in traffic volume, including approximately 90 trucks daily.

During the review process, it was determined that the project, spanning one mile in length, did not meet the cost-benefit ratio required by the SIA program. However, after TDOT's assessment of the current condition of Industrial Boulevard, it was determined that only about a quarter-mile section toward the Interstate-24 underpass required full-depth paving. The remaining sections of the road were deemed to be in good condition, requiring only new pavement markings and installation of safety signs and features.

Furthermore, it was decided to maintain the road's existing width due to its proximity to the railroad tracks, requiring a minimum of one year for coordination with the railroad company. Additionally, the limited space between existing bridge piers under the interstate prohibited widening the road to meet standard SIA road specifications, as it would entail relocating the bridge piers and necessitate cost-sharing from the local government as stipulated by the program guidelines.

The community was pleased that the SIA program funded the entire project without any cost to the local government. The project was awarded to construction in February 2021 and successfully completed during the fall of the same year.



*TDOT Design Concept –Improvements on Industrial Blvd. (Marion County)
Image shows the scope of the work for Phase 1 to support the Town of Jasper and Northeast Wood Products*



BEFORE – Image of intersection of Industrial Blvd. & Godsey Drive (Google - June 2018)



AFTER - Image of intersection of Industrial Blvd. & Godsey Drive (Google – August 2023)



BEFORE - Image of Industrial Blvd. at railroad crossing (Google - June 2018)



AFTER – Image of Industrial Blvd. at railroad crossing (Google – August 2023)

In 2020, on behalf of the Town of Jasper and Town of Kimball, then-TNECD business development consultant Taylor Belcher, reached out to the SIA coordinator to explore further road improvements along Industrial Road, extending all the way to Kimball Lane at Main Street. These proposed improvements would support the arrival of Valmont Industries and Mueller Water Products in Marion County. Valmont Industries’ facility would support its existing nearby Chattanooga operation while Mueller Water Products would expand its Tennessee presence with this new location. Both companies collectively invested \$72 million in capital investment and anticipated creating 475 new jobs that would generate an annual payroll of \$20.3 million to residents of Marion County and surrounding communities.

However, this growth phase for these companies posed a potential financial challenge for the SIA program due to the significant scope that would involve 2.5 miles of road improvements, possible bridge rehabilitation or replacement and guardrail extensions. After further assessment, it was determined to implement the typical SIA standard road design only on portions of the road that were in the worst condition. The remaining sections of the road would undergo mill and

overlay treatment, which is a widely utilized method to rejuvenate asphalt roads and provide a new, smooth surface for motorists. This phase of the project is currently under construction.

These recommended design modifications enabled the SIA program to fund these projects, aiding in the expansion of local industries while minimizing cost requirements to the local governments.



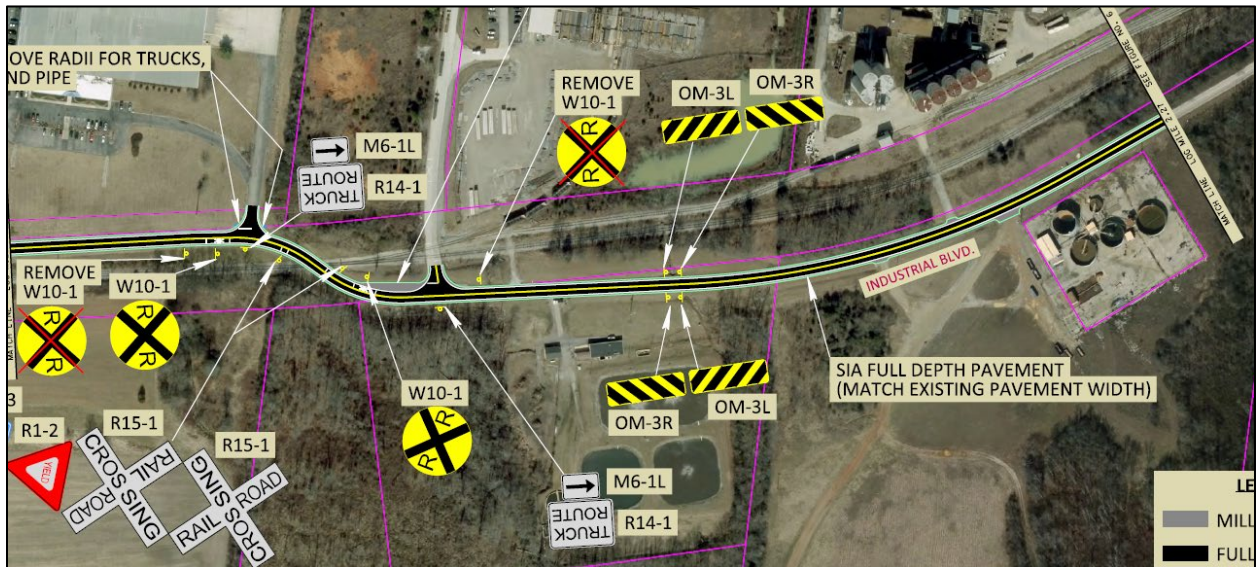
TDOT Design Concept (Marion County) – Phase 2 Improvements on Kimball Lane and Industrial Blvd. to support Valmont Industries and Mueller Water Products



TDOT Design Concept (Marion County) – Phase 2 Improvements on Industrial Blvd.



TDOT Design Concept (Marion County) – Phase 2 Improvements on Industrial Blvd.



TDOT Design Concept (Marion County) – Phase 2 Improvements on Industrial Blvd. near railroad crossing



TDOT Design Concept (Marion County) – Phase 2 Improvements on Industrial Blvd. near I-24 underpass

City of Humboldt, Gibson County – Project Fisher (FedEx Ground)

In 2021, Kingsley Brock, Director of Economic Development for Gibson County, reached out to TDOT on behalf of the City of Humboldt to assist in providing adequate access to the site for FedEx Ground, which was then the confidential client known as Project Fisher, in Gibson County Industrial Park. FedEx Ground, a subsidiary of the FedEx Corporation, specializes in ground transportation. FedEx Corporation currently has a 40,000 square feet distribution center in Humboldt Industrial Park. The new proposed facility would be 330,000 square feet. The company planned to invest \$52 million in this facility and create 160 new full-time jobs with an annual payroll of \$3.4 million, with a projection of 200 trucks daily.

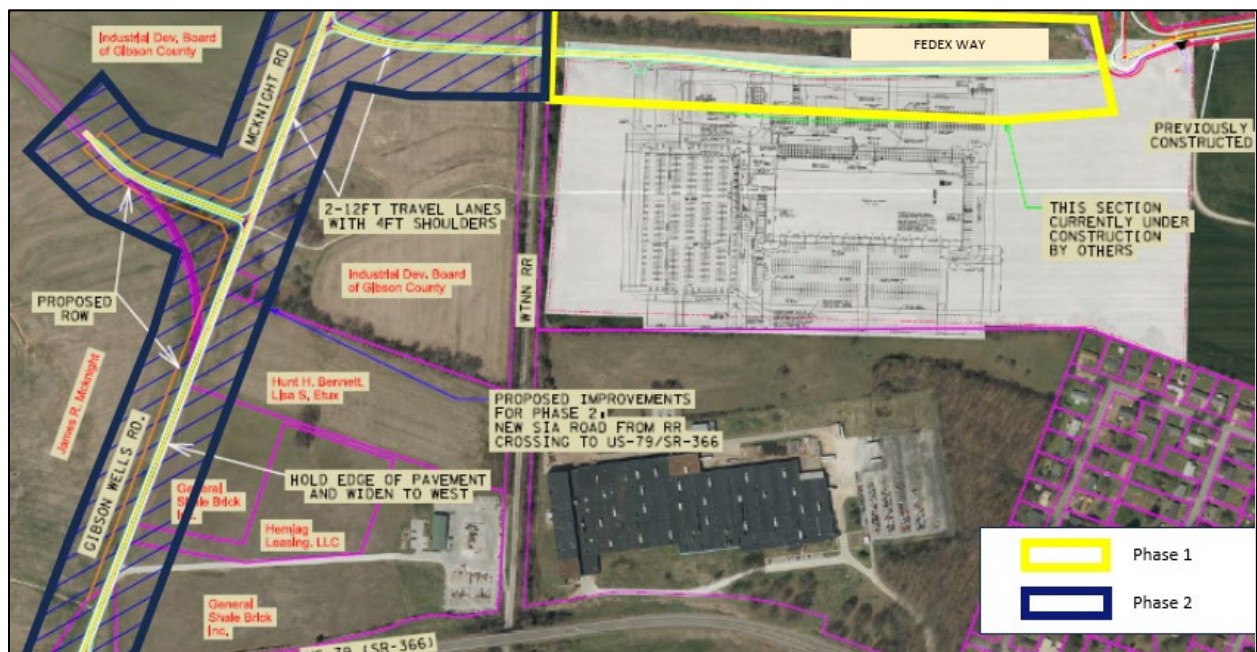
The project scope involved extending FedEx Way by approximately half a mile from the existing cul-de-sac to intersect with McKnight Road, crossing West Tennessee railroad tracks, and continuing all the way to US-79 (State Route 366). In addition, McKnight Road would be upgraded to the standard SIA road design specifications to accommodate the traffic generated by FedEx Ground, including employee and truck traffic. This road project also aimed to offer alternative access to other existing and prospective industries located within the industrial park.

Due to slated opening date of FedEx Ground, as well as the construction timeline of TDOT's road projects, plus the added time of up to one year to coordinate with West Tennessee Railroad about the grade crossing, all parties agreed to complete the project in two phases. "Grade crossing" refers to crossings at which the highway and railroad are at the same level. Anytime a roadway crosses railroad tracks, there is a risk of a collision and the greatest objective of the coordination between TDOT and the railroad company is to improve safety and reduce crash risk.

In the first phase, the focus was to extend FedEx Way up to the railroad crossing. To meet the required target completion date, the city assumed the responsibility of managing this

phase locally. This involved completing and funding all ROW acquisitions, utility relocations, grading work, and the placement of the base stone. TDOT's role was to complete and fund the costs associated with placing the binder and top asphalt for the entire length of the extension. A binder, also known as the base coat, acts as a glue that holds the road together and distributes the load from the top asphalt into the base course, strengthening the pavement. FedEx Ground opened its doors simultaneously with the completion of this phase of the road project in early fall of 2022.

For the second phase, which began design development in early 2022, TDOT will oversee the entire scope of the project, including ROW acquisitions and utility and railroad coordination. The City of Humboldt would be responsible for 50% of the ROW, utility relocations and railroad coordination costs, as outlined by the SIA program. This phase would include completing the remaining section of FedEx Way that crosses the railroad and connects to McKnight Road up to US-79/SR-366. This portion of the project spans approximately one mile long and is expected to begin construction in late 2025.



TDOT Design Concept (Gibson County) - Improvements on FedEx Way and McKnight Road to support FedEx

Lake County – Project Sonic (Sinova Global)



Map sourced from TNECD.com

Lake County, situated on the northwestern boundary of Tennessee and bordered by Missouri and Kentucky, is located approximately 30 miles from Interstate-155. It has a population of 6,347, as reported by the July 2023 US Census, with an unemployment rate of 4.6%. and 27.8% of the population is in poverty status. Lake County is considered the most economically distressed county in Tennessee.

In 2021, Sinova Global announced the establishment of its first manufacturing operations in Lake County Industrial Park in Tiptonville, a Select Tennessee Certified Site. Established by TNECD, the Select Tennessee Certified Sites program assists communities by providing reimbursable grants to prepare publicly owned sites deemed eligible for certification. This determination is made by Austin Consulting, a firm contracted by TNECD to evaluate site readiness for industrial development. This effort demonstrated the community’s high-level of commitment to collaborate with the state to attract an industry.

The collective support extended to the company by various government entities and agencies, including TNECD, the Tennessee Valley Authority (TVA), Gibson Electric Membership Corporation, Reelfoot Area Chamber, the City of Tiptonville, and Lake County, played a crucial role in Sinova Global’s decision to locate in Tiptonville/Lake County. The

company, headquartered in Canada, invest \$150 million in capital, and create 140 new jobs. The facility will be adjacent to Port of Cates Landing, a barge and truck intermodal dock terminal with direct access to the Mississippi River. This strategic location will enable direct access to Sinova's wholly owned quartz deposit in Golden, British Columbia.

Lyndi Berrones, then-TNECD director of business development, approached TDOT on behalf of Lake County seeking assistance to improve the conditions of Cates Landing Road and State Route 22 that spans approximately one mile to standard SIA design specifications to accommodate the increased traffic that will be generated by Sinova. TNECD granted Lake County a FIDP grant to aid in the local cost share for ROW and utility relocation costs on Cates Landing Road required by the SIA program. Regarding the ROW and utility relocation costs along SR-22, TDOT would not require any cost share or maintenance funding as this road would remain under state jurisdiction. This road project is currently under design development and expected to start construction in late 2024.

The proposed improvements will not only serve the needs of Sinova Global, but also allow future access to the remaining available sites in the industrial park. Sinova Global's announcement represented a significant economic boost and prosperity for Tiptonville, Lake County, and the entire region. The establishment of this company will not only offer high-quality jobs but also provide much-needed employment opportunities closer to home to the residents of the City of Tiptonville and Lake County. Furthermore, Sinova's presence is expected to act as catalyst to attract more industries and additional economic development, stimulating further growth and prosperity to the part of the state which needed it the most.



Google Image of current conditions of Cates Landing Road – Lake County (September 2023)

Conclusion

The link between road infrastructure and the economic growth of Tennessee is evident as illustrated by notable job announcements and collaborative projects linked by the SIA program. Without the assistance provided by this road infrastructure program, these projects may not have been realized in these communities, local communities would have had to prioritize funding, which can be particularly challenging to rural communities that already have limited financial resources.

This paper has highlighted the importance of investing in road infrastructure that connects people and industries and how quality roads can be a tool to attract new and expanding industries. However, hesitation remains in several communities to fully investigate and explore the SIA program. Improvements to the road system can be viewed as the catalyst of growth, and not all residents want growth. For example, residents may resist road improvements or projects in very rural communities. Another factor is the limited awareness by community and economic development stakeholders of available state funding and technical sources like the SIA program, which was created to assist communities for economic growth. There is also the misconception

of non-flexible project eligibility and the concern that certain projects will not qualify due to the size - too small, not enough capital investment or not enough job creation. Communities often worry about funding shortages for required local cost share and post-project maintenance, and companies may have challenges with timelines.

Engaging stakeholders in the decision-making process about road projects and providing them with the opportunity to express their preferences regarding infrastructure development will go a long way in communicating the benefits of a quality road system and the SIA program. Community members who will be directly affected by the changes should feel involved and engaged. Ultimately, recognizing the power of road infrastructure in enhancing economic growth is vital for achieving sustainable improvements in our standard of living and securing a prosperous future.

As the case studies show, the SIA program team continues to transform its processes and make accommodations to find collaborative and creative solutions for non-standard projects to meet eligibility criteria. Economic developers must proactively seek partnership and collaboration to leverage SIA's funding and technical assistance effectively. Learning from successful projects in other communities and recognizing the importance of quality roads and infrastructure systems are essential steps toward encouraging economic growth of Tennessee.

Resources and References

Danielle Hagewood, *TDOT State Industrial Access Statewide Program Manager*

Crystal Whitaker, *TDOT State Industrial Access Program Data/Technical Coordinator*

Tennessee Department of Transportation (TDOT) State Industrial Access (SIA) Program
Website: [State Industrial Access Program \(tn.gov\)](https://www.tn.gov/state-industrial-access-program)

TDOT Local Programs Development Office (LPDO) Website:
<https://www.tn.gov/tdot/program-development-and-administration-home/local-programs.html>

Tennessee Department of Economic and Community Development (TNECD) Website:
<https://tnecd.com/>

TNECD Select Tennessee Certified Site Website: <https://tnecd.com/sites/certified-sites/>

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