

NATIONAL ASSOCIATION OF COUNTIES

# CAPITAL INVESTMENTS:

COUNTIES DRIVE  
ECONOMIC GROWTH  
WITH TRANSPORTATION  
AND INFRASTRUCTURE  
INNOVATIONS



## INTRODUCTION

America's counties play an essential role in developing transportation and infrastructure networks. Counties are responsible for building and maintaining 45 percent of public roads and nearly 40 percent of bridges, and are involved in the operations of 30 percent of public airports and nearly one-third of public transportation systems. Counties invest over \$100 billion each year building and maintaining public infrastructure, ranging from water and sewer systems to telecommunications and public utilities.

These investments drive local and regional economic growth. An efficient, reliable and cost-effective transportation system is critical to the health of America's local, regional and national economies, and allows America's communities to compete in the global marketplace. Transportation and logistics, along with workforce supply, are major drivers in business site location decisions. Additionally, a functional, dependable infrastructure network is a critical foundation for businesses seeking to access new markets, create jobs and reinvest in the local community.

This report describes how six counties in the U.S. are investing in transportation and infrastructure projects to drive economic growth. These examples include:

- **Martin County (Fla.)** invested in water, stormwater and road projects to revitalize an underserved neighborhood, enabling business expansion, new private investment and community growth;
- To accommodate increased freight traffic, improve safety and reduce congestion, **Will County (Ill.)** worked with state and private-sector partners to improve access to the county's inland port, one of the largest multi-modal transportation hubs in the country;
- **Buchanan County (Iowa)** used innovative technology and creative partnerships to repair county-owned bridges while saving money and reusing materials;
- To expand access to jobs, services, education and other opportunities for residents, **Muskegon County (Mich.)** leveraged federal funding to expand transit service into rural communities;
- **Morris County (N.J.)** acquired and rehabilitated a freight rail line to keep long-standing businesses operating in the county and to attract new firms and jobs to the community; and
- Taking advantage of the existing 911 system, **Sherman County (Ore.)** expanded broadband infrastructure to rural parts of the county, allowing residents to access affordable Internet service.

Many more examples abound of how counties make important capital investments to improve goods movement, expand mobility options and provide cost-effective services to businesses and residents. By building and improving infrastructure that serves resident and business needs, America's counties connect communities and strengthen local economies.

**BY BUILDING AND IMPROVING INFRASTRUCTURE THAT SERVES RESIDENT AND BUSINESS NEEDS, AMERICA'S COUNTIES CONNECT COMMUNITIES AND STRENGTHEN LOCAL ECONOMIES.**

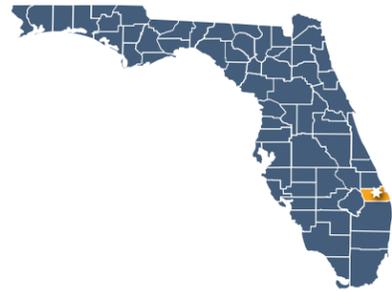
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\*Note: all population statistics are based on the 2013 Census.

# UPGRADES IN ROAD AND SEWER INFRASTRUCTURE REVITALIZE COMMUNITY



MARTIN COUNTY, FLA. | POPULATION: 151,263

Located on the Atlantic Coast, Martin County is Florida's fifth-largest county by land area. The county's Community Redevelopment Agency (CRA), authorized by Florida state statute and governed by the Martin County Board of County Commissioners, is responsible for overseeing redevelopment and community revitalization in designated areas within the county, funded through tax increment financing (TIF).<sup>1</sup> Martin County has designated seven Community Development Areas as locations with unfulfilled potential in need of investments to improve infrastructure, housing, community services and other interventions aimed at creating jobs, growing businesses, increasing property values and facilitating community empowerment.

One such area is the Golden Gate neighborhood, a 375-acre area just south of the city of Stuart. Originally built in the 1910s and 1920s, development of the neighborhood slowed after two devastating hurricanes in the 1920s, and over the next 20 years, continued development was limited due to the effects of the Great Depression and World War II. Despite some new construction in the latter half of the 20th century, by the early 2000s, Martin County leaders saw that Golden Gate's inadequate infrastructure was hindering outside investment, and as a result the neighborhood was not growing as fast as other parts of the county. After the county identified several infrastructure needs—including better sewer and stormwater management, road paving and improved pedestrian access—the CRA adopted the Golden Gate Community Redevelopment Plan in 2002 to address the infrastructure issues.<sup>2</sup>

The redevelopment plan for Golden Gate outlined several necessary improvements to provide infrastructure, revitalize the neighborhood, spur investment and encourage job creation. After releasing the plan, Martin County spent the next few years conducting preliminary work, finalizing design standards, addressing environmental issues and conferring with residents—since addressing residents' needs was a county priority. In 2010 the county released the NOW Visioning report, a document that incorporates community input and specifies two priority areas for redevelopment: renovating Railroad Avenue and retrofitting Bonita, Clayton and Delmar (BCD) streets, two areas in Golden Gate that had 60 to 80 percent commercial vacancy at the time.<sup>3</sup>

Railroad Avenue, a road in Golden Gate that runs parallel to a local highway, was unpaved, prone to flooding and was even used for illegal trash dumping. While it had the potential to serve as an important access point for businesses located between the avenue and the highway, because of its poor condition, delivery trucks regularly had to use the highway instead. The large trucks often blocked the highway or parked on the sidewalk, which in turn forced pedestrians to walk on the street. To address these issues, the CRA pursued the Railroad Avenue Revitalization project in 2010, funded through a \$700,000 Community Development Block Grant from the Florida Department of Economic Opportunity and a \$186,000 Water Quality Total Maximum Daily Load Grant from the Florida Department of Environmental Protection, plus contributions from utilities located on Railroad Avenue.<sup>4</sup>

Work to reconstruct and pave the road began in 2012, and since the project's completion in 2013, trucks have been able to rely on Railroad Avenue to access businesses, thereby removing unnecessary traffic from the nearby highway. Additional improvements, such as installing curbs, sidewalks, on-street parking and stormwater infrastructure, have made the road more easily accessible for cars and pedestrians as well. Furthermore, before the construction only one business had an entryway on its Railroad Avenue-facing façade; since the project's completion, at least five businesses have installed entryways on the Railroad Avenue side. "Now, they take pride in that section of roadway and see it as additional real estate to market themselves," noted Edward Erfurt, the county's Urban Designer.

The other major component of Martin County's Golden Gate redevelopment was the Bonita, Clayton and Delmar (BCD) Complete Street Retrofit project, financed with \$622,000 of Disaster Recovery grant funds from the Florida Department of Economic Opportunity.<sup>5</sup> Updating sewer infrastructure was essential to the BCD Retrofit because the area previously relied on a failure-prone septic tank system. To facilitate the sewer upgrades, the CRA partnered with Martin County's Utility Department to take advantage of existing infrastructure as they replaced septic tanks with a combination of gravity sewers and low-pressure force mains. In addition to the sewer upgrades, the BCD Retrofit included stormwater management, new on-street parking, street-side trees and sidewalks.

**FROM THE GET-GO, WE SEEK COMMUNITY INPUT AND MAKE SURE THAT THE PROJECT AND END RESULT WILL ACCOMMODATE THE COMMUNITY'S NEEDS AND IMPROVE RESIDENTS' QUALITY OF LIFE. RATHER THAN ONLY BENEFITING THE PROPERTY OWNERS ADJACENT TO A PROJECT, WE MAKE THE PROCESS HOLISTIC SO THAT IT BENEFITS THE WHOLE COMMUNITY AND THE WHOLE NEIGHBORHOOD."**

- Nancy Johnson,  
Community Development Specialist, Martin County

Before and after of Railroad Avenue, part of the Golden Gate Community Redevelopment Plan. Source: Martin County





Before and after of Bonita Street, part of the Bonita, Clayton and Delmar (BCD) Complete Street Retrofit Project.

Source: Martin County

Furthermore, the CRA allocated TIF funds to establish a grant program that would be used to help residents pay for new utility connections between their properties and the upgraded sewer system: the grant funds were paid directly to the utilities department and credited towards individual property owners' sewer connection fees. Additional funding was allocated on a reimbursable basis to offset project-related costs such as fees for septic tank abandonment, plumbing and grinder pumps. Thanks to these opportunities, 63 percent of adjacent properties connected to the sewer system. One major result of the BCD Retrofit is that many businesses, bolstered by the upgraded sewer infrastructure, are now able to support expansions. Two non-profits located on Bonita Street, Habitat for Humanity and House of Hope, have embarked on major expansion projects since the county-led retrofit was completed.

Together, the Railroad Avenue and BCD Retrofit projects have helped revitalize the entire Golden Gate neighborhood. Both projects have resulted in better access for pedestrians and drivers, a more walkable community and an overall improved appearance of the district. The county's efforts are paying off in other ways, too. "The county's public investment served as a catalyst for private investment," explained Nancy Johnson, Martin County's Community Development Specialist. "Once you have better infrastructure, businesses start to think that they need to make their properties look as good as the roads." Erfurt added, "We've also seen an increase in building permits and home ownership. Our tax base in Golden Gate is stronger now and the value per acre is continuing to grow."

Now that the Railroad Avenue and BCD rehabilitations are complete, Martin County is developing new projects for Golden Gate. The county plans to continue improving stormwater and sewer infrastructure and will work with private property owners to upgrade building façades throughout the neighborhood. Johnson stressed that involving residents in the process since the beginning has been central to the project's success. "From the get-go, we seek community input and make sure that the project and end result will accommodate the community's needs and improve residents' quality of life. Rather than only benefiting the property owners adjacent to a project, we make the process holistic so that it benefits the whole community and the whole neighborhood."



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**WILL COUNTY, ILLINOIS | POPULATION: 682,829**

In the last decade, Will County, Ill. has become one of the nation's most significant centers for the transportation and logistics industries. Located 35 miles southwest of Chicago, the county is home to an important inland port on the Des Plaines River, a massive multi-modal transportation facility that includes six Class I freight railroads, four major interstates and an active inland waterway.<sup>6</sup> Unlike most maritime ports, Will County's inland port is not governed by a port authority or owned by a single entity, but rather operates as a collection of intermodal facilities and the rail and road networks that connect them.

In the southwestern part of the county, two intermodal facilities anchor the inland port. These facilities, operated by BNSF Railway and Union Pacific Railroad, are two of the largest intermodal rail yards in the country: BNSF's 770-acre facility opened in 2002, and Union Pacific opened its 785-acre facility in 2010. These facilities significantly reduce rail transit time to and from Chicago, helping to lower transportation costs for goods due to increased delivery efficiency. The inland port is also critical to the county's economy—in 2014, Will County had 12,528 jobs in the transportation and logistics sector, many of which were provided by the port.<sup>7</sup> As the inland port sees continued growth and investment, it is expected to provide more than \$13 billion in local economic benefits from wages, investment in local infrastructure and taxes.<sup>8</sup> Additionally, construction projects for infrastructure enhancements in Will County have the potential to create up to 500 new jobs per year over the next 30 years.<sup>9</sup>

With this anticipated growth, however, the county will face a number of transportation challenges. The most immediate concern is increased traffic along county roads that provide access to the inland port; as the port and its operations expand, a growing number of heavy trucks will need to access the area. Additional traffic

The I-55/Arsenal Road interchange will improve access to and from the inland port.

Source: Will County



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is anticipated to damage county roads and cause more congestion in local communities. To make things even more complicated, while the county owns the access roads to the port, the roads in the surrounding area traverse a mix of private, state and federally owned land, each ruled by different funding and regulatory processes for road maintenance and improvements.<sup>10</sup> Broad improvements to the transportation network surrounding the port require multi-jurisdictional coordination, which can take time and negatively impact port activities.

Despite the challenging nature of port-related infrastructure projects, Will County is committed to improving the port's access routes. One of the first projects the county undertook was upgrading the interchange that connects I-55, a major north-south highway that runs from Chicago to Louisiana, and Arsenal Road, the county-owned access road to the inland port facilities. The interchange was originally built in 1959, decades before the community anticipated building an inland port. As a result, the interchange was not capable of handling the freight traffic coming to the port from Chicago and St. Louis and posed a number of safety problems for drivers: short exit ramps from the interstate to Arsenal Road meant trucks needed to quickly decelerate, causing backups and crashes along I-55.

In summer 2009, in collaboration with the State of Illinois, county engineers began to completely redesign and rebuild the I-55/ Arsenal Road interchange. Still under construction with expected completion by the end of 2014, the new interchange will be located about one mile south of its previous location. The interchange's new features, which include a two-lane flyover ramp for trucks exiting I-55 and a two-lane loop ramp for trucks entering I-55, will be better equipped to accommodate trucks entering and exiting the inland port, significantly reducing congestion and delays and improving safety. The \$78 million project is funded

as part of the *Illinois Jobs Now!* program, which provides \$31 billion in capital construction for projects state-wide.<sup>11</sup> When completed, the improved interchange will be critical to handling the estimated 35,900 vehicles per day that will travel along Arsenal Road by 2030, up from 5,800 per day in 2001.<sup>12</sup> In addition to improved service, the project created and retained 900 construction jobs in the county.<sup>13</sup>

The I-55/Arsenal Road interchange project is one of Will County's many infrastructure projects aimed at improving access to and from the inland port. In 2012, the county released the Will County Inland Port Analysis, which examined local economic impacts, infrastructure challenges and opportunities resulting from the port's expected growth, and proposed a number of potential projects to address the growth.<sup>14</sup> Based on the port analysis report, the county is currently working with the State of Illinois to approve a project that would build a new bridge to directly connect I-80, another major highway, to the inland port. This proposed Houbolt Road Bridge would eliminate the need for trucks to travel along smaller county roads as they currently must do, a practice that negatively impacts local communities by damaging roads and causing congestion. Currently, Will County leaders are exploring public-private partnership opportunities for the construction of the Houbolt Road Bridge and working to determine who would eventually take ownership of the road, as the state has expressed interest in having another party take control after 40 years.<sup>15</sup>

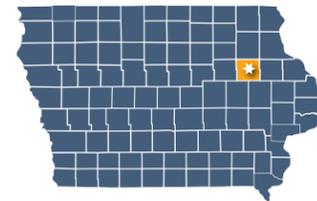
Will County's inland port is one of the largest multi-modal transportation hubs in the country. Its location at the crossroads of multiple interstate and freight rail shipping lines and its close proximity to Chicago—a major transportation hub for the Great Lakes region—establishes the inland port as a major driver of economic activity for Will County. As port activity continues to grow, the county is taking the lead to work collaboratively with the State of Illinois and private organizations to ensure that its local infrastructure is prepared to handle the influx of heavier trucks and equipment—improvements that will benefit its local economy while reducing the burden on local roads and communities. As Alicia Hanlon, a senior transportation planner at Will County notes, "Planning for future transportation needs remains a challenge that will require new approaches to funding freight infrastructure and increased multi-jurisdictional cooperation," but that despite these challenges, "Will County continues to upgrade and modernize the roads under its jurisdiction in the area of the inland port."

**“ PLANNING FOR FUTURE TRANSPORTATION NEEDS REMAINS A CHALLENGE THAT WILL REQUIRE NEW APPROACHES TO FUNDING FREIGHT INFRASTRUCTURE AND INCREASED MULTI-JURISDICTIONAL COOPERATION.”**

- Alicia Hanlon,  
Senior Transportation Planner, Will County



## BRIDGE UPGRADES BUILD UPON PARTNERSHIPS AND TECHNOLOGY INNOVATIONS



**BUCHANAN COUNTY, IOWA | POPULATION: 20,976**

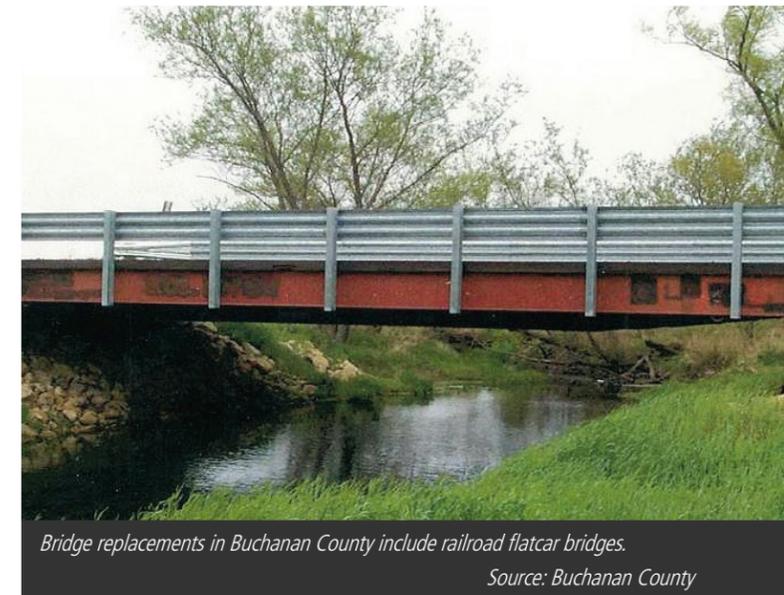
Covering an area of 573 square miles in eastern Iowa, Buchanan County is responsible for maintaining 259 county-owned bridges, 57 of which are structurally deficient. Bridges form some of the county's most critical infrastructure, providing access between communities and linking producers with markets. Not only has

Buchanan County provided essential upgrades to many of these bridges, but county leaders also stress the importance of identifying and developing new, more cost-efficient technologies for bridge replacements. Under the leadership of County Engineer Brian Keierleber, the county has worked to improve Buchanan's infrastructure using cost-effective strategies and innovative technology.

In 2013, county leaders identified the aging Jesup Bridge as a prime candidate for replacement. Built in 1947, the bridge provides an important conduit for local farmers and growers, and by 2013 around 4,360 vehicles crossed the bridge each day—a striking number for a 22-foot wide bridge in a rural county. The bridge's small width was a major problem: some large vehicles turned the bridge into a single-lane road, while wider vehicles carrying heavy agricultural loads often had to use a different route altogether because they could not fit on the bridge. In addition to the safety issues associated with a two-lane bridge sometimes shifting to a single lane, replacing the structure was deemed economically necessary to ensure that agricultural products could continue to be transported safely and efficiently.

Replacing the Jesup Bridge was estimated to cost almost \$250,000. To cover costs while pursuing innovations in steel infrastructure, Keierleber reached a unique arrangement with the Short Span Steel Bridge Alliance (SSSBA). In 2012, SSSBA had released new bridge-design software called eSPAN140, a free online tool that allows users to enter project specifications and obtain a steel bridge design in a matter of minutes. Keierleber arranged to make Buchanan's Jesup Bridge a demonstration project for the eSPAN140 software. In addition to partnering with SSSBA, the county also partnered with three educational institutions—Iowa State University, the University of Wyoming and West Virginia University—that helped develop the project design, test materials and monitor the bridge's functioning. By using eSPAN140, the county saved time and money that would normally go towards hiring an engineering firm to produce a bridge design. Furthermore, several of SSSBA's member companies donated many of the project's materials, and in the end, Buchanan County contributed less than \$100,000 of the project's \$250,000 cost.<sup>16</sup>

The bridge replacement also created jobs and income for local residents: because Keierleber wanted local workers to understand the new technologies used in the bridge construction, county crews carried out the project. Keierleber explained that the easy-to-use eSPAN140 software was essential to his broader goal of identifying new and cost efficient ways for local governments to rehabilitate bridges. Construction lasted from August to November 2013, and now the new, 40-foot wide bridge has resulted in easier and safer passage for large vehicles and two-way traffic.



*Bridge replacements in Buchanan County include railroad flatcar bridges. Source: Buchanan County*



Cedar Rock Bridge construction project in Buchanan County.

Source: Buchanan County

In 2014, Buchanan County entered another partnership to replace the Cedar Rock Bridge. Located near the entrance to the Frank Lloyd Wright Cedar Rock House, the bridge is part of the primary access route used by those visiting this important cultural site. Construction was underway in fall 2014 to replace the old 21-foot wide structure with a 40-foot wide bridge that will improve travel experience for both visitors to the Frank Lloyd Wright house and drivers en route to other destinations. To fund the \$300,000 project, which is expected to be complete in fall 2014, Keierleber arranged a partnership with Gruen-wald Engineered Laminates, a manufacturing company based in South Dakota. Keierleber met Duane Boice, a structural engineer at Gruen-wald, at a bridge conference in spring 2014 where the two began discussing innovative approaches to bridge construction. Keierleber worked with Boice to designate Cedar Rock Bridge as a timber demonstration project: Gruen-wald is donating the materials and working with Buchanan County to develop long-lasting timber solutions, including an epoxy coating for the bridge deck to prevent long-term water damage. Thanks to the partnership, Buchanan County is contributing only \$85,000 of the \$300,000 project.<sup>17</sup> Boice and Keierleber worked together to design the bridge overhaul and intend to produce a guide based on the Cedar Rock Bridge that other communities could use to replace local bridges using timber.

In addition to innovations in steel and timber bridge construction, Buchanan County recycles decommissioned railroad flatcars—purchased from salvage yards across the country—for some projects, replacing 23 bridges in this manner since 2001. While the Iowa Highway Research Board helped fund the first two railroad flatcar bridges, Buchanan County has entirely paid for the remaining 21. The chief benefit of using railroad cars, explained Keierleber, “is they are a fraction of the cost of standard bridge construction.” For instance, the county’s 23rd flatcar bridge, the Gericke Bridge finished in summer 2014, would have cost \$260,000 using conventional construction, but only cost the county \$90,000 with the railroad flatcars. Furthermore, like the timber and steel projects, railroad flatcar bridge construction is managed entirely by county employees.

By replacing the Jesup and Cedar Rock Bridges, embarking on demonstration projects with outside partners and using recycled rail flatcars in many bridge replacements, Buchanan County is encouraging innovative research and fiscal responsibility while ensuring the safety of county residents. The county’s expansive bridge replacement program has also provided economic security by strengthening critical access routes that are essential for the region’s agricultural-based economic activities. Keierleber has worked within the county and with outside partners to build 100-year bridges that will benefit the county for decades to come, and counties across the country can learn from Buchanan’s commitment to the long-term stability of its bridge infrastructure.



## IMPROVING TRANSIT ACCESS FOR RURAL RESIDENTS

MUSKEGON COUNTY, MICH. | POPULATION: 171,008

Located in western Michigan along the shores of Lake Michigan, Muskegon County operates a transit system that provides bus service to its residents. The Muskegon Area Transit System (MATS) operates nine lines on a Monday through Saturday schedule, with most of the lines running through the city of Muskegon’s downtown. In fiscal year 2014, MATS had 708,243 passenger trips system-wide.

In recent years, Muskegon County heard two common requests from MATS’ ridership: passengers wanted evening service, and they wanted service to extend beyond the core downtown area and into more rural parts of the county. Starting in 2010, MATS addressed the first of these requests by providing evening service after 6 p.m. for the first time: buses now operate until 10:40 p.m. Monday through Friday, with service until 5:40 p.m. on Saturdays.

Then, in 2012, Muskegon County saw the opportunity to use federal grants to help meet its goal of extending service into more rural parts of the county and begin to develop a regional approach to its transit service. The county applied for a grant through the U.S. Department of Transportation’s Transportation Investment Generating Economic Recovery (TIGER) grant program. In June 2012, Muskegon County was awarded \$1.35 million in TIGER grants to obtain equipment to expand the current MATS system. With the money from the TIGER grants, Muskegon County purchased three new compressed natural gas (CNG) buses, which were delivered in September 2014. Muskegon County has used a variety of CNG vehicles since the year 2000, but began replacing heavy-duty buses with CNG ones in 2010 because of their lower emissions and reduced fuel and maintenance costs. The county expects to save \$15,000-\$20,000 per year in fuel costs compared to diesel-run buses.<sup>18</sup>

The three CNG buses provide service along four new transit lines that extend into the more rural parts of Muskegon County, a program which the county calls the Muskegon Area Regional Connections (MARC). Rural residents often have less access to transit, if any at all, compared to those living in urban centers. With the new MARC lines, which opened in November 2014, MATS is providing important transportation options and addressing the gap in service. These new MARC lines expand service to 47,000 residents in the county, making public transportation available to nearly 80 percent of county residents.<sup>19</sup> Two of the lines, which connect the cities of Montague and White Lake to Muskegon, operate five days a week, with ten hours of service. The other two lines, which provide service to the communities of Holton and Ravenna, will initially operate two days a week with three trips per day.

“WE KNOW THAT WE ARE NOT SOLVING EVERY TRANSPORTATION PROBLEM, BUT WE’RE MAKING SOME BIG ONES MUCH SMALLER. WE ARE HOPING THAT THE NEW MARC PROGRAM DEMONSTRATES TO THE COMMUNITY THAT TRANSPORTATION NEEDS ARE NOT JUST AN URBAN ISSUE.”

- Jim Koens,  
Transit System Manager,  
Muskegon Area Transit System



Muskegon County began to extend transit service to rural parts of the county in November 2014.

Source: Muskegon County

To cover the operating costs associated with the MARC routes, Muskegon County is using a mix of federal grant money and local funds. Over the next three years, the county will use \$120,000 per year from the Federal Highway Administration's Congestion Mitigation and Air Quality Improvement program to cover 80 percent of the operational costs; the county will then cover the remaining \$30,000 from its own transportation budget and other grant sources.<sup>20</sup>

Muskegon County developed the MARC routes to provide broader service that benefits county residents and businesses and creates a more regional approach to transportation in the county. With the newly expanded MARC service, residents in the more rural parts of the county have improved connections to downtown Muskegon, as well as connections to adjacent counties. In particular, the lines with service to White Lake and Montague provide greater accessibility to shopping centers, schools and local colleges, grocery stores, places of employment, pharmacies and senior centers.

The new MARC service is improving accessibility for local residents, but the county recognizes that this initiative is just the first step in addressing the broad transportation needs of county citizens. Over the next six months, the county will continue to make improvements, working with MARC riders and local community organizations to assess if changes need to be made to the routes, number of trips per day or frequency of service. As Jim Koens, MATS Transit System Manager noted, "We know that we are not solving every transportation problem, but we're making some big ones much smaller. We are hoping that the new MARC program demonstrates to the community that transportation needs are not just an urban issue." Muskegon County's use of federal grants and local funding to invest in its transit service and infrastructure highlights how counties are working to provide new and needed services to urban and rural residents alike.



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## MORRIS COUNTY, N.J. | POPULATION: 499,397

The Chester Branch railroad is a four-mile freight rail line that runs through Morris County, N.J.—a county with a population of nearly half a million, located approximately 25 miles west of New York City. The railroad is part of the county's small, but growing, freight rail infrastructure. Freight rail is vital to the local wholesale, transportation and warehousing industries, which employ more than 63,000 people in the county.<sup>21</sup> These industries rely on the efficient delivery of goods, and freight rail infrastructure will play an increasingly important role in the coming years, as freight traffic in the county has the potential to double in the next 25 years.<sup>22</sup> To ensure the viability of local businesses relying on rail infrastructure, Morris County acquired and rehabilitated the rail line with federal support and in collaboration with the local business community.

Built in 1867, the Chester Branch line originally served the local mining industry and was used to transport iron ore. Over the years, ownership transferred hands from the Delaware, Lackawanna & Western Railroad to the now-defunct Conrail, which in the early 1980s announced its plan to abandon the Chester Branch line. In 1983, Holland Manufacturing, a local business in Morris County, purchased the rail line from Conrail because continued operation of the line was vital for Holland Manufacturing's business. The company, which has been in operation since 1958 and has 90 employees, relies on rail connectivity for shipments of industrial materials such as cornstarch, which it uses to manufacture adhesive papers and other tapes.<sup>23</sup> Holland Manufacturing receives these shipments from Indiana and Texas on 160,000-pound train cars; trucking in these materials would be cost-prohibitive for the company.

The Chester Branch line is also critical for other local businesses, like Kuiken Brothers Company, a company with 240 employees that sells residential and commercial building materials and relies on the rail line for shipments to its warehouse. Kuiken Brothers intentionally built its warehouse facility along the Chester Branch rail line to take advantage of the ability to efficiently and cost-effectively send and receive materials. Over time, Holland Manufacturing was not able to fund maintenance of the tracks, and the rail line deteriorated to the point where it was questionable if service could continue. Facing the threat of discontinued service, Holland Manufacturing began to consider relocating its operations.

In February 2009, recognizing the importance of the Chester Branch line for keeping Holland Manufacturing and Kuiken Brothers in the county, Morris County applied through the North Jersey Transportation Planning Authority for \$6 million in federal funding from the American Recovery and Reinvestment Act to rehabilitate the rail line. In December that year, the county was awarded \$5.8 million for the project, and it subsequently purchased the rail line from Holland Manufacturing for \$1.<sup>24</sup> The county then designed a work plan for replacing the entire four miles of old tracks, ties and ballast. The new rail is a heavier grade supported by sand, rock and ballast which



Chester Branch railroad had fallen into disrepair before Morris County acquired the line and completed important rehabilitation work.

Source: Morris County.



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“THE REHABILITATION OF THE CHESTER BRANCH NOT ONLY CREATED EMPLOYMENT OPPORTUNITIES DURING THE TRACK REHABILITATION, BUT IS ALSO CREATING FUTURE ECONOMIC OPPORTUNITIES IN MORRIS COUNTY.”

- Gerald Rohsler,  
Director of Transportation, Morris County

committee meets quarterly to monitor activities along the rail line and address any issues that any involved parties may have. Since its creation, the committee has successfully fostered improved relations between the county, local townships and the business community.

The Morris County Freight Rail Advisory Committee helped to successfully resolve safety concerns voiced by one of the local townships. Prior to and during the rehabilitation work, residents and council members from Roxbury Township expressed their concerns that the upgraded line would lead to a number of safety issues—specifically that the trains would run too close to a biking and walking trail at the township’s Horseshoe Lake recreation complex that runs parallel to the tracks. Morris County’s advisory committee and Roxbury Township came to an agreement to work together on developing a new bicycle and pedestrian trail, putting limitations on train speeds during certain hours and installing a six-foot high fence along the track.<sup>28</sup>

The purchase and rehabilitation of the Chester Branch railroad is not the first time that the county has purchased and operated rail lines. In 1986, Morris County purchased two other short lines from Conrail: the High Bridge Branch and the Dover & Rockaway Railroad.<sup>29</sup> Through an agreement with the Morristown & Erie Railway, the county continues to own the lines, while the railroad operates service. While uncommon for a county to own a rail line, Morris County is succeeding in the endeavor by providing an efficient way to transport goods that simultaneously reduce impacts and congestion on local roads and highways. Moreover, the rehabilitated line helps ensure that current businesses stay, while providing opportunities to attract new businesses and jobs to the county.

can handle the weight of newer train cars, and upgraded rail crossings eliminate the thud heard as cars drive across the train tracks.<sup>25</sup> Through a bid process the county selected Railroad Construction Company to carry out the upgrades, which were completed in May 2011.<sup>26</sup>

To better facilitate communication among all stakeholders about the progress of the rehabilitation work, the Morris County Board of Chosen Freeholders created the Morris County Freight Rail Advisory Committee in October 2009. The advisory committee has nine members appointed by the Board of Chosen Freeholders, which includes two Freeholders, one representative from the county’s Board of Transportation, one representative from the company that operates trains on the rail lines, two representatives from companies that use the rail line and three local municipal representatives.<sup>27</sup> The advisory



*Morris County’s rehabilitation of the Chester Branch railroad made it possible for businesses to stay in the county.*

Source: Morris County.



## BRINGING BROADBAND INFRASTRUCTURE TO RURAL OREGON



SHERMAN COUNTY, OREGON | POPULATION: 1,731

Surrounded by rivers on three sides, Sherman County is located in rural northern Oregon. Because of the region’s low population density—about half of all residents live in unincorporated areas—access to quality broadband was once difficult to find, and many people were still bound to dial-up and expensive satellite service as recently as the late-2000s. In 2009, county officials initiated a county-led effort to provide affordable broadband to all residents.

Sherman County Commissioner Michael Smith explained that because of the remote location of many homes, finding an inexpensive way to fund new broadband infrastructure was an early challenge. When local broadband companies expressed that installing infrastructure in sparsely populated areas would be cost-prohibitive, the county explored creative alternatives to the traditional service model. Importantly, county leaders determined from the outset that the county would not become an Internet service provider. Rather, county leaders maintained that it was their responsibility to ensure the infrastructure was in place to enable broadband development, just as the county maintains other types of critical infrastructure. Smith pointed out that counties build roads, and that broadband should be considered a similar type of investment that helps enable businesses to grow and residents to access goods and services.

With this framework in mind, county officials began to identify existing assets that could be used to realize their broadband goal. One key advantage was the region’s strong 911 system, which had been upgraded in 2001 as a three-county partnership among Sherman, Gilliam and Wheeler counties (it became a four-county partnership in 2013 with the addition of Jefferson County). Smith noted, “We thought, if we could arrange broadband on this existing 911 system that would take care of the most expensive part of the process.” The county already used the 911 infrastructure to get broadband to schools via a fixed wireless system, so they used this as the basis for an expanded system that would extend service to households and private buildings.

One of the key features of the county’s broadband delivery was ensuring that the infrastructure could support the technology used by up to four different providers. The county ultimately issued a Request for Proposal to choose one provider, but because of the flexibility built into the system, the county can easily add or change providers, thereby avoiding a monopoly on the county’s broadband service. Chosen in 2011, the provider, Rural Technology Group (RTG) based out of Bend, Ore., was selected because it could provide affordable equipment for the new system.

RTG agreed to install household receivers for a flat rate of approximately \$150 with no contract, leaving residents free to keep or change their service as they choose. In order to ensure service for the hardest-to-reach residents—those with homes in canyons where a signal cannot always extend—the county agreed to provide an additional \$150 per household that needed extra accommodations. Several households have pooled their allotted \$150 to install additional repeaters that amplify the signal from a nearby tower or other structure. Smith stressed this ‘self-design’ feature of the broadband system: rather than the county spending a lot of money covering every single canyon, individual residents can choose if they want to buy into the new system and can then use the county-provided funds to optimize the system. When modifications cost more than \$150, individual households must cover the difference up to a few hundred dollars; however, Smith indicated that if a significant investment

BY INVESTING IN INFRASTRUCTURE, COUNTIES ENABLE BUSINESSES TO GROW AND RESIDENTS TO ACCESS GOODS AND SERVICES.



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Sherman County used revenue from its wind farms to help finance its broadband system upgrades. Source: Sherman County

were needed, the county would consider covering the cost. Sherman County financed the \$40,000 broadband infrastructure expansion with revenue from its expansive wind farm program. The expanded broadband system covers 900 square miles (an area slightly larger than the county).

The new system went online in the summer of 2011 and by summer 2014, 13 percent of all households in the county had signed up, with more subscribers signing up every month. Many of the new customers had no access to quality broadband before the new system was developed, while others opted to switch from a different Internet provider because the county-owned system is less expensive and more flexible than available alternatives. Access to broadband has allowed several at-home businesses to expand and help supplement household income, including a family-run hardwood brokerage company.

RTG pays \$6 per month to the county for each subscriber, which covers the cost of monitoring the system. Additionally, before engaging RTG, the county was paying nearly \$3,000 each month to transport Internet through its 911 system; now the private company is entirely covering that cost. The county is continuing to look for savings, such as by disconnecting old DSL lines and instead connecting to the new Internet system, a move which could cut the county's phone bill by around \$1,200 per month (roughly 40 percent).

The broadband system is only the first step in Sherman's Internet overhaul. When the county opted to use its 911 infrastructure for broadband, it engaged two neighbor counties, Gilliam and Wheeler, with whom Sherman worked in 2001 to upgrade the regional 911 system. Because of the relationships built from this multi-county partnership, Gilliam and Wheeler have benefited from Sherman's broadband knowledge base: Sherman shared its Internet plan so its neighbors could develop quality far-reaching broadband systems of their own. Furthermore, the multi-county partnership is now working on a project to bring fiber to the region, a prospect that would cost Sherman County \$4-6 million alone, but is expected to cost the county \$1.4 million if done collaboratively with neighboring counties and engagement of the private sector. Eventually, the region will adopt the fiber system as its primary Internet system and use the existing microwave system as a backup, a redundancy that will help strengthen its 911 services. The state of Oregon is looking into providing \$1 million to support the project (the counties will build the fiber infrastructure and later be reimbursed \$1 million by the state beginning in 2016).

For rural counties, using the existing 911 system as the basis for broadband development can be an efficient strategy for bringing high-speed Internet into low-density areas. Smith pointed out that this simple solution is often overlooked but can be a good fit and cost-efficient for a smaller place: "Think small. Just think about your county and the simple idea of getting a signal to some households. Find a way that's workable, simple and allows business to do what business does, but remember that counties build roads and that's what broadband is."

## ENDNOTES

- 1 TIF is a financing mechanism, designed to spur private investment, that allows public investments to be funded by capturing a percentage of future tax revenue generated from the redevelopment of vacant or underutilized property within a designated area to be reinvested in that area.
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Under the leadership of NACo President Riki Hokama (Council Member, Maui County, Hawaii), NACo is strengthening the capacity of county leaders to deliver transportation and infrastructure services to their communities. The Transportation and Infrastructure Initiative addresses the county role in promoting investments that support economic competitiveness, improve passenger travel, foster creative partnerships, ensure safety and enhance community quality of life. This initiative focuses on the fundamentals of today's county transportation and infrastructure needs and explores the future of America's infrastructure advancements, including broadband expansion and technology innovations. For more information about this initiative, visit [www.NACo.org/transportation](http://www.NACo.org/transportation).



PRESIDENT RIKI HOKAMA

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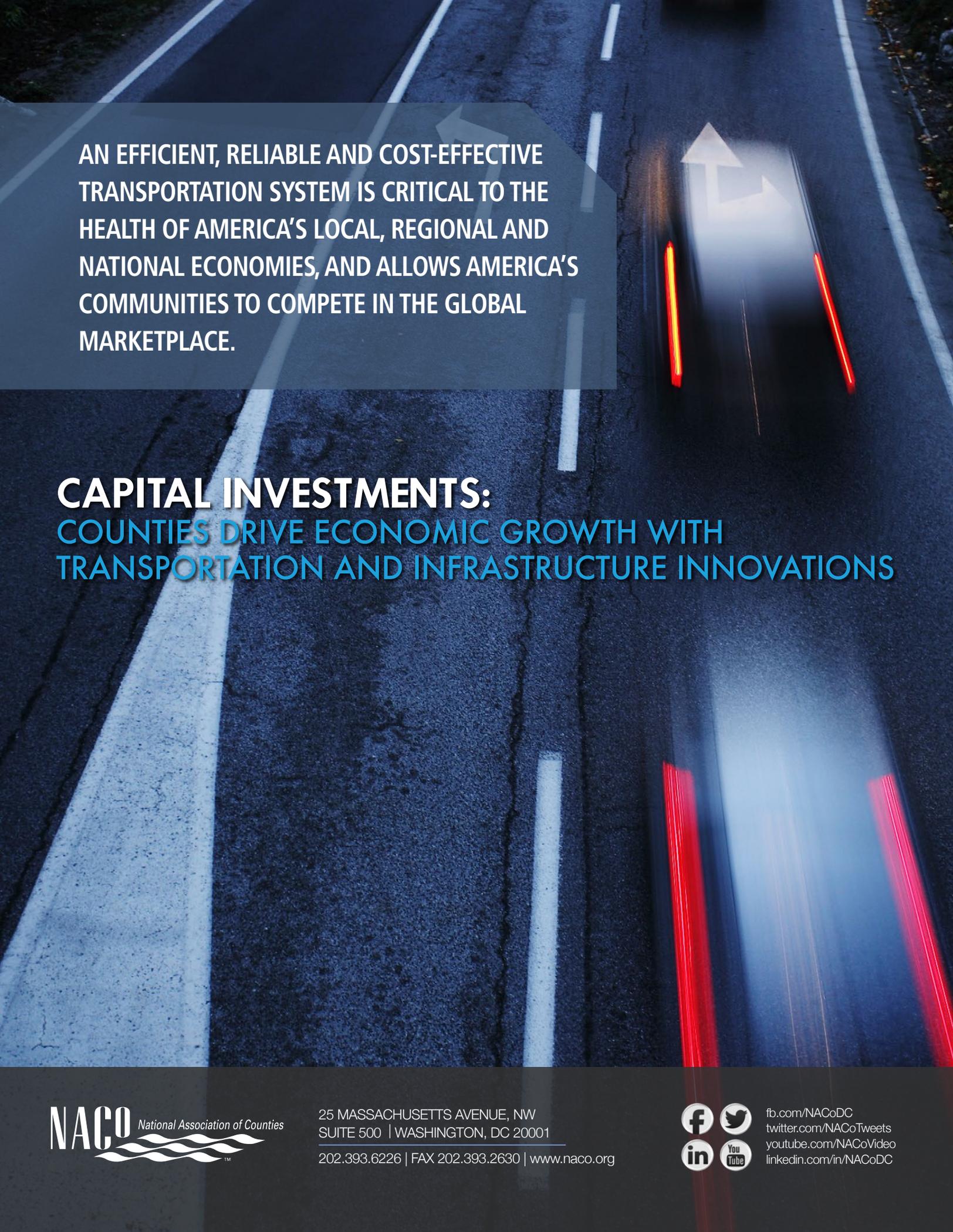
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