

# TRANSPORTATION



**YOUR VISION MATTERS.**

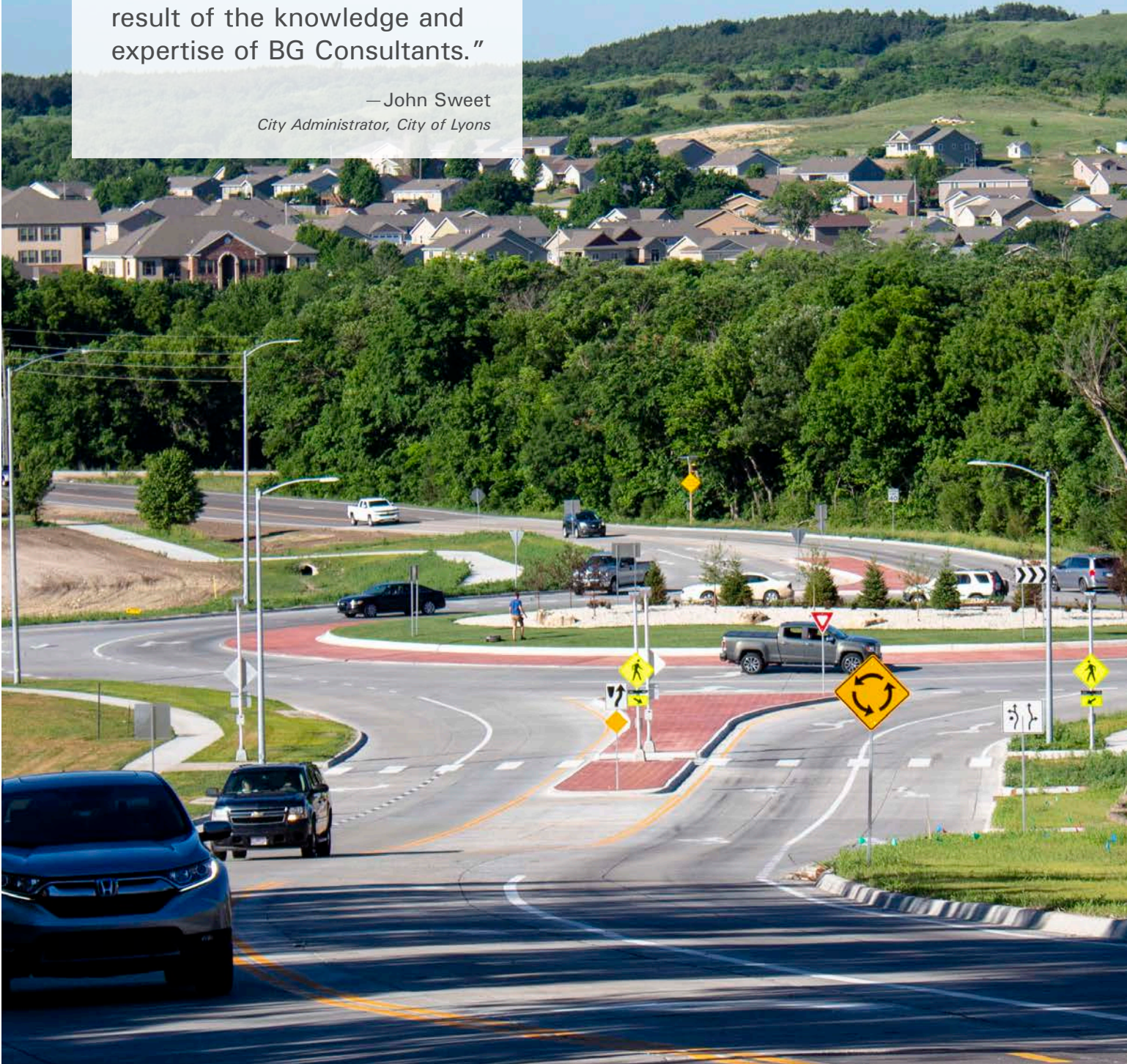
Manhattan  
785.537.7448

Lawrence  
785.749.4474

Emporia  
620.343.7842

“BG Consultants has always provided quality and professional service to the City of Lyons. The success of our many projects, to include water, sewer, and transportation (both highway and street), are a direct result of the knowledge and expertise of BG Consultants.”

— John Sweet  
*City Administrator, City of Lyons*





## Connecting Kansas communities.

In an increasingly mobile society, safe and reliable infrastructure that gets us from point A to point B is imperative. From county roads to interstate highways, transportation is what keeps our society moving.

Transportation engineering has been a staple of BG Consultants since 1976. As a recognized transportation engineering leader in Kansas, we have helped city, county, and state agencies, as well as private developers design, repair, and maintain their vital infrastructure.

We greatly enjoy working with our clients and have a track record of meeting project deadlines. As most projects encounter the inevitable twists and turns throughout the design and construction process, having a consultant you can depend on is especially important. BG Consultants understands the importance of keeping a close eye on project schedules and costs as the project develops from preliminary design to construction.

In the face of increasing demand created by aging roadways and bridges combined with funding limitations, communities trust our team to deliver innovative and cost-saving solutions that minimize impacts to the environment and neighboring properties. Keeping your long-term success in mind, we'll help you analyze the worth of your existing infrastructure and formulate plans to maximize its service life. Throughout the design and construction process, we'll partner with you to communicate with the public, identify funding sources, and plan for the long-term management of your assets.

**Innovation, experience, and commitment**— we have what it takes to deliver quality and cost-effective transportation designs.

**Left:**

Roundabout Design at Anderson and Scenic Drive  
*Manhattan, KS*

# HIGHWAYS & ROADS

Kansas' network of highways and roads has a direct impact on our region's economy and quality of life. Our roadways must ensure the well-being of the traveling public, accommodate growing agricultural vehicles, and provide vital connections through our nation's heartland. With a highly qualified and experienced team that includes a Professional Traffic Operations Engineer (PTOE), BG Consultants has helped private developers, rural communities, large municipalities, and the Kansas Department of Transportation successfully complete hundreds of road and highway projects.

## George Williams Way Improvements Lawrence, KS

A major roadway improvement in an evolving commercial area, BG Consultants, Inc. was selected by City of Lawrence to develop plans for this project located north of 6th Street. BG designed a 5-lane urban roadway section and included the following design elements: drainage structures, cross section, two-way left turn lane, horizontal and vertical curvature, pavement design and ADA compliance.



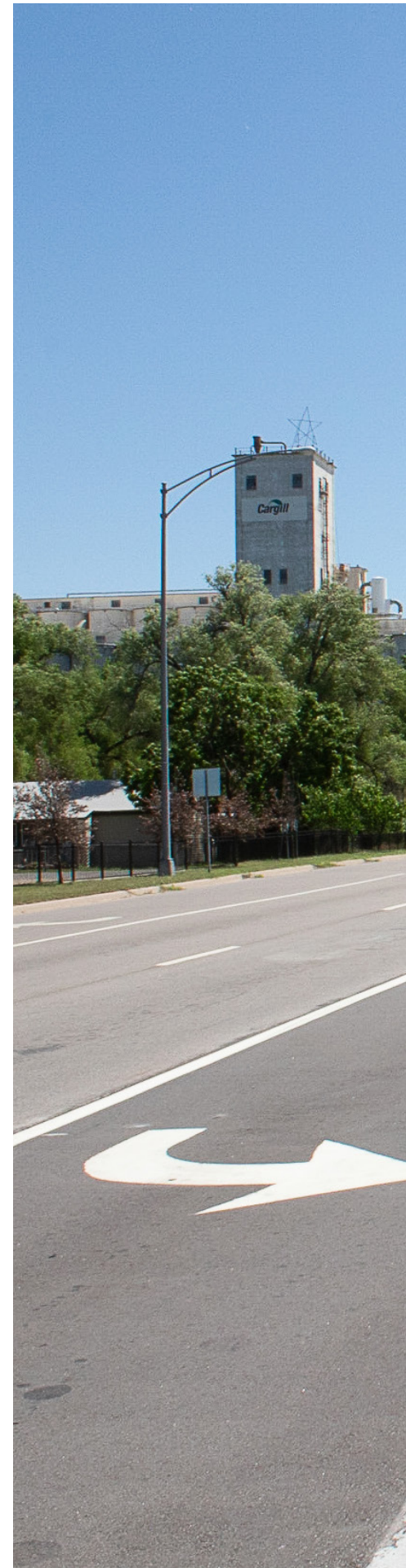
## 23rd & Iowa Street Improvements Lawrence, KS

The intersection of K-10 (23rd Street) and US Highway 59 (Iowa Street) is one of the busiest in the city. The City of Lawrence hired BG Consultants to design geometric and traffic signal improvements and solve the operational problems intersection users were experiencing. Each leg of the intersection now has two through lanes, two left turn lanes, and one right turn lane.



## Kansas State University Manhattan, KS

BG Consultants was contracted to provide civil and structural engineering services for renovations at the Jardine Apartment Complex. This project's street and parking design aligned the roadways around the perimeter of the Jardine Complex, allows emergency vehicles improved access, promotes pedestrian safety, and increases the parking capacity at the residential complex.





## Comprehensive Services

- Designs for Pavement Reconstruction, Realignment, & Widening of Existing Roads
- "Road Diet" Improvement Plans
- Passing & Turning Lane Configuration
- Pavement Marking & Signage
- Designing Accommodations for Pedestrians & Bikers
- Traffic Signal Systems
- Temporary Traffic Control Plans
- Traffic Impact Studies
- Road Safety Assessments
- Area Transportation Plans
- Interchange & Intersection Capacity Analysis

South Manhattan Avenue Bridge  
Manhattan, KS

## Bridge Engineering Services

- Design of Pre-stressed Concrete Bridges, Post-tensioned Concrete Bridges, Steel Bridges, & Box Culvert Bridges
- FRP Bridge Repair & Strengthening
- Design of Pedestrian Bridges
- Emergency Structural Repair
- Rehabilitation of Historical Bridges
- Retrofit Design of Bridges
- Bridge Deck Evaluation & Replacement
- Chloride Content Testing on Bridge Decks
- Polymer Concrete Overlays
- Scour Analysis & Countermeasure Design
- Constructability Assessments
- Annual & Routine Bridge Inspections
- Fracture Critical Inspections

# BRIDGE ENGINEERING

Bridges are essential to any transportation system, but they are more than simple means of passage. They connect communities and people, enable commercial and agricultural growth, impact the environment, and, in some cases, reflect the scenic, historic, and cultural characteristics of a community. The bridge design team at BG Consultants has delivered solutions for hundreds of bridges across Kansas. We know effective design requires proficient structural knowledge and an understanding of the surrounding environment. Our structural recommendations are responsive to span length, waterway opening, hydraulics, and all other site-specific concerns.



## **Wakarusa River Bridge Douglas County, KS**

BG Consultants designed a 3-span, 120'-170'-120' composite welded plate structure to replace the existing bridge over the Wakarusa River. The girders were made of weathered steel, which naturally develops protective coating and never needs to be painted. The replacement provides improved safety, increased the load carrying capacity, and extended life expectancy in excess of 50 years.



## **K-23 Bridge over Hackberry Creek Gove County, KS**

This three-span inverted-T pre-stressed bridge was the first of its kind to be built in the state of Kansas. The existing bridge was a five-span reinforced concrete deck girder bridge. By designing a three-span bridge, BG Consultants effectively removed two piers from the creek and greatly improved the waterway's hydraulics. This project also included designing almost a half mile of new roadway on K-23.



## **Junction City 1-70 Interchange Junction City, KS**

The interchange at I-70 and East Street in Junction City had become obsolete due to increased traffic. KDOT hired BG Consultants to design a new interchange, which included two bridges that would span a widened roadway. The new bridges have longer span lengths and were post-tensioned both longitudinally and laterally to tightly compress the concrete and increase the carrying capacity and life of the structure.

# STREETSCAPES

Your community's streetscape amounts to more than just the roads and sidewalks. A streetscape characterizes your community's identity, draws attention to local businesses, and becomes part of its history. BG Consultants partners with cities to transform downtown streetscapes into vibrant community attractions. Our full-service team can help you create safe and efficient circulation for vehicular and pedestrian traffic, increase businesses' visibility, and establish inviting spaces for commercial and social interactions.

## Downtown Streetscape Improvements Hiawatha, KS

To improve the accessibility and appearance of Hiawatha, the City of Hiawatha contracted BG Consultants to design renovations for their streetscape. New sidewalks with decorative inlays, planters, trash receptacles, street furniture, lighting and landscaping were constructed. Landscaped bump outs featuring concrete sidewalks leading to the street crosswalks promote pedestrian safety.



## Downtown Streetscape Improvements Alma, KS

Streetscape improvements designed by BG Consultants for downtown Alma provided the area with a distinguished sense of place and featured decorative sidewalks, inlaid brick, new planters, public seating, and trash receptacles. The distinctive "Lover Limerick" access was opened as a matter of historical interest. Additional ADA improvements to sidewalks and ramps enhanced accessibility for visitors.



## Downtown Streetscape Plan & Design Hutchinson, KS

BG Consultants has worked with the City of Hutchinson through multiple phases of downtown streetscape improvements. Services have included new curbs and gutters, sidewalks, parking, pedestrian crossings, bump outs, decorative street lighting, and stormwater drainage improvements. Pedestrian amenities include decorative pavers, benches, tables, trash receptacles, lighting, and landscaping.



Downtown Streetscape Improvements  
Hutchinson, KS





## Streetscape Services

- Street Surfacing & Parking
- Storm Drainage
- Water System Improvements
- Landscaping
- Sidewalks & Pedestrian Crossings
- ADA Compliance & Railings
- Street Lighting
- Seating Areas
- Decorative Surfaces & Parks
- Signage
- Public Art
- Bicycle Racks



## Recent Honors and Awards

- 2018** Kansas Ready Mixed Concrete Association, Municipal Concrete Award for West Anderson Avenue Expansion Project
- 2017** Kansas Ready Mixed Concrete Association, Municipal Concrete Award for Baldwin City Depot Restoration Project
- 2016** American Council of Engineering Companies, Kansas, First Place Kansas City Public Improvement Award Under 5,000 Population Award City of Hiawatha School and Fitness Trail
- 2015** American Public Works Association - Kansas Chapter, 2015 Public Works Project of the Year: Less Than \$5 Million - Transportation Award for 23rd Street & Iowa Street Reconstruction in Lawrence, Kansas
- 2014** American Council of Engineering Companies, Kansas, 1st Place, Kansas County Public Improvement Award, 10,000 and Over Population Award for US-56 Reconstruction in Douglas County
- 2014** Kansas Ready Mixed Concrete Association, Municipal Concrete Award for the City of Hiawatha Downtown Streetscape Improvements in Hiawatha, Kansas
- 2013** American Concrete Institute, Municipal Commercial Paving Award for City of Alma Downtown Streetscape Improvements in Alma, Kansas
- 2013** Kansas Ready Mixed Concrete Association, Municipal Concrete Award for Kellogg Circle Improvements in Emporia, Kansas
- 2012** American Council of Engineering Companies, Kansas, 1st Place, Kansas City Public Improvement Award, Under 5,000 Population Award for Alma Downtown Streetscape Improvements in Alma, Kansas





Our mission is to

**provide  
client-focused service  
through  
integrated design solutions.**

**About BG Consultants**

BG Consultants, Inc is a full-service E/A design firm providing services in planning; architecture; civil engineering; structural engineering; mechanical, electrical and plumbing engineering; and surveying. Our people are experts in their field, but above all, they're focused on our clients and helping them to realize their project vision.

For more information about BG Consultants and the services we provide, visit [www.bgcons.com](http://www.bgcons.com).

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ENGINEERS · ARCHITECTS · SURVEYORS