GAI has assembled a team of bridge experts to provide economical solutions to this bridge replacement project in Carroll County. As your proposed Project Manager, Mike Wenning, PE brings 36 years of INDOT bridge experience to the team. The GAI Team is bolstered by top industry names, such as Scott Hornsby, PE and Matt Mason, PE, SE. Both Scott and Matt will be available on this project.

**BRIDGE STAFF AVAILABILITY.** With the likelihood of a long-term Indiana highway funding bill passing and going into effect July 1st of this year, we have ample capacity to expedite the schedule of this assignment to meet a higher level of funding made available to INDOT in the future.

**THE RIGHT QUALIFICATIONS.** Mike and the team have decades of INDOT bridge replacement and rehabilitation design experience. Mike himself has worked on over 425 bridge rehabilitation projects and 300 new bridges for INDOT – including over a dozen truss bridge projects! Mike will perform a life-cycle cost analysis comparing rehabilitation versus replacement options enabling INDOT to make the best long-term investment decision.

**STRONG LEADERSHIP.** Principal in Charge Scott Hornsby, PE is a known industry leader with 28 years of experience and a proven track record of successfully managing and leading transportation teams and high-profile projects. Scott will call upon a very experienced Project Manager, Mike Wenning, PE. Mike has 36 years of bridge design experience.

**QUALITY ASSURANCE.** Our formal quality assurance program includes independent peer reviews and internal constructability reviews conducted by our construction inspection staff, many of whom are former contractors.

**OPEN ROADS.** GAI, in the last 18 months, has found over $2 million in practical design savings on our current INDOT projects. We will deliver a project on time, within scope and under budget, that satisfies the purpose and need without unnecessary enhancement.

The GAI Team presents this proposal with full confidence in our ability to meet your needs and looks forward to successfully delivering this project.

Sincerely,

GAI Consultants, Inc.

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**LETTER OF INTEREST**

Joe Bell
INDOT, Seymour District

March 28, 2017

**RESPONSIBLE OFFICE**
6420 Castleway West Drive
Indianapolis, Indiana 46250

**AUTHORIZED TO NEGOTIATE**
Scott Hornsby, PE
Senior Director, Midwest Markets
s.hornsby@gaiconsultants.com
317.436.4836

**PREQUALIFICATIONS & PERCENTAGES**

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FIRM OVERVIEW

Transforming ideas into reality for over 55 years, GAI is a 900+ person employee-owned, multidisciplinary engineering and environmental consulting firm, serving our clients worldwide in the transportation, energy, real estate, water, municipal, government, institutional, and industrial markets from offices throughout the Northeast, Midwest, and Southeastern United States.

FIRM INTRODUCTION. The GAI Team has extensive experience with bridge replacements and rehabilitations and has developed other similar projects for local communities and state agencies. GAI has the technical expertise and experience to deliver the SR 75 Bridge Replacement project on schedule and within budget and to the District’s complete satisfaction.

GAI’s established working relationships with state and local agencies demonstrate our ability to complete timely projects, within budget, and easily adapt to any unforeseen project development situations. The LaPorte District will benefit from a partnership with Project Manager Mike Wenning and GAI, as Mike and his highly skilled team of experts will work closely with you to develop and oversee a priority scheduled project and successfully deliver improvements that meet your current and future transportation needs, as well as one that will be safe for the traveling public.

INNOVATION AND COST SAVINGS. GAI embraces Practical Design implementing “common sense” methodologies to reduce costs where appropriate. We welcome the District’s willingness to accept design flexibility, always with safety as the priority. Locally, we have found over $2 million in savings in the past 18 months on our transportation projects.

Our organization provides a conduit for transportation leadership, expertise, and manpower across all of our 24 offices to contribute to clients and their projects nationally. We have the ability to apply national state-of-the-industry knowledge and innovation to our local Indiana projects to the benefit of local transportation agencies.

GAI has the CAPACITY locally and company-wide, to devote to the LaPorte District so the project schedule will be maintained. Mike will dedicate the majority of his time to put toward this project and make sure all INDOT’s priorities are met. GAI employs 50+ staff in our Indianapolis and Fort Wayne offices. This represents a total annual billing capacity of over $6 million. Our available capacity is far greater than the advertised projects required effort. If needed, GAI can call upon our 250-strong national transportation staff for specialized expertise to meet any technical challenge, and depth of resource to beat any deadline.

AN ESTABLISHED AND EXPERIENCED TRANSPORTATION TEAM. GAI has assembled a transportation leadership group with well-established career transportation industry credentials. Mike Wenning has 36 years of comprehensive transportation project experience, with a bridge focus. Experienced bridge designer, Matt Mason, supplements Mike’s manpower and capabilities in the bridge discipline. Long-time transportation project manager Dave Vorndran has 37 years of comprehensive transportation project experience, with a multi-discipline and major highway focus. Mark Young is a tenured designer and transportation project manager with 19 years of experience on roadway projects specializing in serving local agencies. Scott Hornsby contributes 28 years of experience and a proven track record of successfully managing and leading large transportation teams and high-profile projects. Recently added to the GAI Team, Mark Miller contributes 30 years of experience in diverse roles administering INDOT’s construction program. Our survey, environmental, hydraulics, and construction inspection groups have similarly experienced professionals in leadership positions.

PERFORMANCE. GAI’s evaluation scores for INDOT and Federal-aid LPA project deliverables rank in the top 20% of engineering firms commonly competing for transportation design assignments. Up significantly from just a year ago!
The intent of this project per the mini-scope is to replace the bridge. The existing deck, built in 1973, is cracking and is near the end of its useful life. Many of the steel members are rusted and have lost some of their section. Also, the substructures have some cracks and are leeching. Even though the bridge is considered non-select on INDOT’s historic registry it still needs to be evaluated for an honest rehabilitation option. The bridge is currently rated at 30 tons which is below the threshold of 36 tons required to be non-restricted. We will begin this project with an engineer’s assessment that will evaluate options including rehabilitation and strengthening, replacement, two-way pairs and bypassing with a new bridge. Shown on the following pages we highlight the considerations for each of these.

### SUMMARY FROM SITE VISIT
- Alignment straight and level
- Overhead utilities to the east
- Creek alignment good and stable
- No collision damage on bridge
- Not heavily traveled (<3000 ADT)
- Narrow Shoulders

### QUALITY MANAGEMENT SYSTEM
GAI will utilize its formal corporate Quality Management System (QMS). In addition to standard plan and quantity checking, a formal internal Peer Review is undertaken. **Mark Miller will review for constructability to troubleshoot potential field issues and implement best practices, resulting in effective, pragmatic design, especially regarding construction safety, phasing, and staging.** Review comments and checks are logged electronically to document that each submittal is complete and that QMS has been followed. GAI’s philosophy is that quality is a continuous process, not just a box to check at the end of a project.

### BRIDGE ELEVATION
- Plate girder and truss bridge
- Side mounted bridge railing
- Piers deteriorating

### SOUTH APPROACH
- Public drive SE of bridge
- Farm field entrance SW of bridge
- Wildcat Creek is scenic river
- Substandard shoulders over bridge and approaches

### RUSTED STEEL MEMBERS
Typical of many details on bridge some section loss throughout
- Railing could remain under Open Roads
- Painted in 2007
PROJECT APPROACH

REHABILITATION AND STRENGTHENING. For this option it will be important to determine the controlling feature(s) that are limiting the live load capacity. Members that are deteriorated will be investigated for strengthening or replacement. Higher strength materials may be used so the section sizes can be maintained. The bridge deck may also be a candidate for replacement since it can’t be overlaid without reducing the capacity further. Using lightweight concrete has proven to be an effective method of reducing the structure’s weight and thereby increasing the live load capacity. The current deck and overlay thickness is 9½”. With beam spacings of only 4’-8” a thinner deck than INDOT’s usual 8” could even be considered here to reduce the weight.

REPLACEMENT. The highest initial cost option will be to replaced the bridge. The existing truss and supports would be removed and replaced with a new bridge along the same alignment. A hydraulic analysis would be performed to determine the required opening and the bridge length set accordingly. Pier locations would be set to avoid the existing substructure’s footings to reduce the required removal. New integral end bents and piers on one row of piles would reduce the impacts to the stream. Since trusses have a very thin profile the new bridge would have a higher roadway. From the original plans and current FEMA mapping it appears there is currently about 1’ of freeboard. With 2’ preferred and a deeper superstructure type the new grade could be 3’-4’ higher. Road closure and a temporary runaround will be investigated for maintenance of traffic.

BYPASS OR 2-WAY PAIR. Both of these options would require a new bridge being built to one side of the existing truss. The first would carry one lane in each direction and the second would reuse the existing bridge for one-way traffic while building an adjacent one lane bridge. Restricting the truss to one lane would reduce the live load and raise the load rating. The new bridge would be sized as a replacement but at least one pier would be placed in line with the existing pier. Due to the house and drive on the southeast corner it may prove more feasible to realign the road to the west but both options will be investigated. All of these options will be investigated to determine the best scope for this project. Level 1 design criteria will also be investigated as part of the report so that a full comparison can be made. We will also invite the historic approval organizations such as SHPO and Historic Spans to consult early on in the process. This will avoid any unexpected issues later in the process. Once an option is selected we will begin the environmental process (described later), begin survey and proceed with bridge plan development. Right of way will need to be obtained for all options except rehabilitation. 8-12 months would be included in the final schedule for land acquisition activities.

LIFE CYCLE COSTS AND OPEN ROADS. When comparing alternates with varying life spans or rehabilitation cycles it is important to look at the life cycle cost of each option. This method exposes the best long term investment for INDOT. Also we want to take advantage of possible level 1 design exceptions and the Open Roads concept to save INDOT funds where possible. We have experience in using both of these concepts to save the Department millions of dollars on past projects.
PROJECT APPROACH

ENVIRONMENTAL. The appropriate level of Categorical Exclusion (CE) for the proposed project involving the Historic Bridge carrying SR 75 over Wildcat Creek in Carroll County will be prepared. All services necessary for the Categorical Exclusion (CE) document will be completed in accordance with the INDOT Procedural Manual for Preparing Environmental Studies (2008 Edition), the Indiana Categorical Exclusion Manual (Updated July 2013) and all other appropriate Federal, State, and local laws relating to the environment. All work will be performed in close coordination with INDOT and the Federal Highway Administration.

The Bridge has been designated as a Non-Select Bridge, so in accordance with the Historic Bridges Programmatic Agreement (PA) Project Development Process (April 1, 2010), an evaluation of the alternatives will be completed that involves the rehabilitation of the historic bridge for two-way operations, bypassing the historic bridge and rehabilitating for one-way operations with a new bridge, bypassing the historic bridge and rehabilitating for non-vehicular use, relocation of the historic bridge and replacement. Each alternative will be evaluated to the appropriate level to fully consider feasibility and prudence. The evaluated alternatives will be compared to the Purpose and Need statement for the project, and revisions will be made as necessary. The Purpose and Need and Alternatives Analysis will be provided to Consulting Parties for review comment following approval from INDOT.

If road closure is the selected maintenance of traffic option, the official state detour will be 27 miles. Local route is only 4 miles.
GAI will complete a Wetland Delineation of the wetlands identified along the preferred alternative, using GPS technology to establish the upland boundary. The wetland delineation will be completed as per the 1987 Corps of Engineers Wetland Delineation Manual (Y-87-1) and the Midwest Supplement to the Delineation Manual (August 2010). A Routine Wetland Delineation Report including all mapping, photographs and description of existing conditions on site will be prepared and submitted to the INDOT Ecology and Waterway Permitting Office for approval and for use in later waterway permitting documents.

Section 106 Consultation, as required by the National Historic Preservation Act, will be completed prior to submittal of the environmental document for approval. As required by INDOT and FHWA, all tasks will be completed by individuals satisfying the Secretary of Interior Professional Qualification Standards. Section 106 compliance for the historic bridge will be fulfilled through adherence to the Historic Bridge PA Project Development Process. The Section 4(f) impacts resulting to the bridge will be addressed as part of the Historic Bridge PA Project Development Process. Any further impacts to publicly owned parks and recreational land, wildlife and waterfowl refuges or historic resources will require a separate Section 4(f) analysis. In accordance with the Historic Bridge PA, a Public Hearing will be required prior to approval of the Environmental Document.

Wildcat Creek at the SR 75 Bridge is included on the Indiana list of Outstanding State Resource Waters. Waterbodies with this designation are not eligible for Army Corps 404 Nationwide permits or IDEM 401 Regional General Permits. If work is proposed below the ordinary high water mark of Wildcat Creek, a 404 Regional General Permit and an IDEM 401 Individual Permit will be required. A Construction in a Floodway Permit will be sought from the IDNR for the encroachment on the Wildcat Creek floodway. If required by IDNR, a Woody Revegetation Plan will be developed for proposed project impacts to regulated floodways. Area within the right-of-way will be reviewed for opportunities. A Rule 5 Permit will be obtained if more than one acre of ground will be disturbed. Coordination of the proposed erosion control plan with the local soil and water conservation district will occur prior to the publication of the Notice of Intent and application to IDEM.

**SCHEDULE**

Based on a scope that constructs a new bridge with right-of-way acquisition – we can meet or beat your March 30, 2020 tracings date. As a comparison, a rehabilitation option with no right-of-way could be completed 18 months sooner.
MIKE WENNING, PE | PROJECT MANAGER

Mike brings 36 years of experience and has been involved in 300 new bridges and over 425 bridge rehabilitation projects throughout Indiana. He has worked on many complex replacement and rehabilitation projects throughout the state of Indiana, deck replacement and overlays, concrete earthfilled and open spandrel arch bridges, as well as stone and brick arches. Mike’s involvement in these types of projects spans from conceptual design, final design, post-design support, innovative strategies for rapid rehabilitation and replacement, and assessment of vulnerability to extreme loading conditions. His reputation is based on delivering quality projects on time and on budget.

Known for his innovative and forward thinking approach, Mike has been on the forefront of bringing the use of hydrodemolition and jointless bridges to Indiana. He prepared plans for INDOT’s first cathodically protected bridge on I-70 and designed the longest jointless bridge in the state (1000’). Recently he has worked to implement FHWA’s link slab concept to further reduce troublesome joints in bridges.

*Brief Resumes included on the following pages
MIKE WENNING, PE | Project Manager
BS, Civil Engineering, 1981, Purdue University

Indiana Avenue over Elkhart River Truss Bridge Rehabilitation, Bridge No. 403 | INDOT – Elkhart County, IN. Project Manager for a 180-ft Pennsylvania through truss bridge that received an extensive rehabilitation including replacement and repair of various deteriorated truss and tie members and bearings. Stones in the masonry abutments were replaced or patched as necessary and the abutments were repointed with a porous grout material. The end panels of the metal deck were filled with concrete to keep the salt and water off of the new bearings and susceptible end posts. Finally, new railing was installed and the bridge painted. This LPA project included the use of both ARRA and TE funding.

Bridge No. 48, Centerville Road over Greens Fork | Wayne County Highway Department – Wayne County, IN. This 3-span continuous composite steel beam bridge was designed to replace a bridge with serious shear cracks through its web. Therefore, speed was essential on this project. The new 162’ long, jointless bridge included full 6’ shoulders, solid stem piers on 1 row of piles, and thrie-beam railing. Drainage in the northwest quadrant was improved by adding a larger culvert under a nearby drive. An intermittent stream in the southeast quadrant caused a requirement to mitigate tree removal through the project. Right of Way plans were developed and appropriate permits were obtained as part of this project.

SR 56 over I-65 | INDOT, Seymour District – Scottsburg, IN. Project Manager responsible for the design of a superstructure on this bridge was replaced with a 4-span continuous composite steel beam and the vertical clearance was raised over I-65 due to a number of previous collisions with the beams. The use of grade 50 steel and integral end bents allowed the structure depth to be reduced to minimize the grade’s effect on SR 56. Loop ramps just west of the bridge were reconfigured to increase safety. Temporary ramps were constructed to allow all traffic motions to continue while the new bridge and ramp portions were constructed.

MAR-CR13 B Bridge | ODOT – Marion County, OH. Project Manager responsible for the design of a project that included plan preparation and environmental studies for the replacement of a high steel truss bridge damaged by a passing vehicle. It included Hydrologic Engineering Center’s River Analysis System (HEC-RAS) hydraulic calculations for design year and 100-year frequency water surface elevations for the existing and proposed bridge. The scope of services included survey, right-of-way plans and legal descriptions, utility coordination, public involvement, and a bridge type study.

Steel Truss Bridge Studies and Scoping Reports
- CR 400W over Flatrock River, Decatur County – 101’-0 Riveted Pratt Through Truss
- CR 500S over Sand Creek, Decatur County – 122’-0 Pratt Through Truss
- CR 600N over Flatrock River, Decatur County – 150’-0 Pratt Through Truss
- CR 700S over Sand Creek, Decatur County – 180’-0 Riveted Camelback Through Truss
- SR 32 over Walnut Creek, Montgomery County – 125’-0 Pony Truss
- SR 46 over Eel River, Clay County – 2 spans at 198’ Through Truss
- SR 55 over Big Pine Creek, Warren County – 165’-0 Steel Deck Truss
**KEY STAFF**

**MATTHEW MASON, PE, SE | Project Engineer**  
BS, Civil Engineering, 1996, Purdue University  
Matt specializes in structural bridge design and project management. His bridge design experience includes designs for curved and straight steel girders, steel beams, prestressed concrete beams, cast-in-place concrete slabs, various substructure types, and bridge rehabilitations. He was responsible for the INDOT plan review of more than 70 INDOT and local public agency bridges and performed the INDOT bridge superstructure shop drawing reviews for two years. Matt is also familiar with structural building design, site/civil engineering, and highway engineering. He has also performed bridge design in Illinois, Ohio, Minnesota, Maryland, Florida, and West Virginia. Matt’s relevant **bridge replacement** experience includes:  
- Bridge No. 711, Peacock Road over Clear Creek – Wayne County Highway Department, Wayne County, IN  
- Bridge No. 35, US 35 over Quigley-Marsh Ditch – INDOT, Pulaski County, IN  
- Bridge No. 54, SR 54 over Ritter Ditch – INDOT, Greene County, IN  
- Bridge No. 54, SR 54 over Richland Creek – INDOT, Greene County, IN

**MARK YOUNG, PE | Right-of-Way Plan Development**  
BS, Civil Engineering, 1998, West Virginia University Institute of Technology  
Mark has nearly 20 years of experience and specializes in preparing preliminary and final contract plans and documents, including right of way plans, horizontal and vertical geometry, traffic control, permitting, drainage, erosion control, and specifications and bid documents for highways, bridges, and site development. Mark’s experience in developing **right-of-way plans and providing right-of-way engineering** includes:  
- State Road 930 Roadway Rehabilitation/Widening/Added Travel Lanes – INDOT, Fort Wayne, IN  
- West 2nd Street Reconstruction – City of Seymour, IN  
- US 20 Pavement Replacement – City of Angola, IN  
- North Clinton Street Rehabilitation – City of Fort Wayne, IN  
- Dupont Road Arterial Widening & Pedestrian Tunnel – City of Fort Wayne, IN  
- Main Street ROW Activities – City of Franklin, Johnson County, IN  
- Plaza Drive South Rehabilitation – City of Bedford, Lawrence County, IN  
- Washington Street Urban Roadway Widening – City of Kokomo, IN  
- Pennsylvania Street Roundabout – City of Carmel, IN  
- Lincoln County Road Relocation – Columbia Natural Resources, Lincoln County, WV

**DAVE CROFT, PS | Survey & Right-of-Way Plan Development**  
Dave specializes in right-of-way engineering and land surveying activities including boundary, route, topographic, and construction surveying. Dave has more than 27 years of experience in the surveying and engineering field. In addition to his surveying activities, his responsibilities also include designing storm and sanitary sewers, street layout, and grading for many subdivisions throughout Indiana as well as commercial and institutional site plans. Dave also has experience with Location Control Route Surveys relating to local LPA and INDOT projects. Dave’s relevant experience includes:  
- I-65 Bridges over Wabash River, INDOT, Tippecanoe County, Indiana  
- I-69 Bridge, INDOT, Grant County, Indiana  
- 3RPORT Location Control Route Survey – Fort Wayne, IN  
- West 2nd Street Reconstruction – Seymour, IN  
- Plaza Drive South Rehabilitation – Bedford, IN  
- Washington Street Urban Roadway Widening – Kokomo, IN  
- Dupont Road Rehabilitation – Fort Wayne, IN

**ERIN WENGER, PE, CFM | Project Engineer**  
BS, Agricultural & Biological Engineering, 2004, Purdue University  
Erin specializes in various aspects of the engineering field, performing technical, design, and permitting tasks. She has experience in municipal, state, and private stormwater systems, municipal water systems, municipal wastewater collection systems, and hydrologic and hydraulic flood hazard studies. Use of HEC-RAS includes bridge sizing analysis to meet INDOT and Indiana Department of Natural Resources requirements, scour analysis, and floodplain and floodway delineations. Erin is also well versed in the regulatory requirements for stormwater projects required by State, Federal, and local agencies. Erin’s **bridge sizing for replacement projects and permitting/environmental documentation** relevant experience includes:  
- Peacock Road over Clear Creek – Wayne County Highway Department, Wayne County, IN  
- Gaar Jackson over Lick Creek – City of Richmond, IN  
- USH 14 over Turtle Creek – WisDOT, Walworth County, WI  
- SR 205 over Spring Creek – INDOT, Whitley County, IN  
- SR 5 over Eel River – INDOT, Whitley County, IN  
- US 33 over Eel River – INDOT, Allen County, IN  
- SR 19 over St. Joseph River – INDOT, Elkhart County, IN  
- I-469 over St. Joseph River – INDOT, Allen County, IN
KEY STAFF

DAVID BOURFF | Environmental Manager
BS, Environmental Science, 2000, Indiana University
David has 16 years of experience and is responsible for the environmental compliance of all projects including due diligence, quality control, field activities, and agency coordination. He has extensive experience in environmental consulting for numerous federal, state, and local public agencies. His areas of expertise include preparation of environmental studies for transportation-related projects, wetland delineations, permitting and mitigation plans, facilitation of public meetings, terrestrial and aquatic ecology and mitigation plans, Section 106 regulations, construction inspection, Phase I Environmental Site Assessments, and Phase II Subsurface Investigations. Dave’s relevant experience in bridge replacement environmental documentation includes:

- Replacement of Through Truss Bridge No. 85 over Mississinewa River, Categorical Exclusion – Delaware County, IN
- Replacement of Through Truss Bridge No. 2 over Kankakee River, Categorical Exclusion – Lake, Newton and Jasper Counties, IN
- Replacement of Through Truss Bridge No. 271 over Little Pigeon Creek – Warrick County, IN
- Replacement of Bridge No. 78, Categorical Exclusion – Monroe County, IN
- Replacement of Bridge No. 186, Categorical Exclusion – Wayne County, IN

JOE DLUZAK | Utility Coordination
AS, 1979, ITT Technical Institute
Joe specializes in all aspects of site engineering design and development, utility coordination, and sanitary sewer design. His experience includes transportation and trail design. He has over 35 years of experience and is a valuable member of GAI’s design staff. He has completed more than 30 utility coordination jobs throughout the Indiana. Joe is an excellent AutoCAD Civil 3D and Eagle Point civil engineering software user, and his design abilities are complimented by his strong organization and communication skills. Joe’s relevant experience in coordination with INDOT includes:

- State Road 930 Roadway Rehabilitation/Widening/Added Travel Lanes – INDOT, Fort Wayne, IN
- West 2nd Street Reconstruction – City of Seymour, IN
- Hugenard and Cook Road Improvements – Allen County Highway Department, IN
- Washington Street Urban Roadway Widening – City of Kokomo, Howard County, IN
- Leo/Mayhew Intersection Improvements – INDOT, Allen County, IN
- Diebold Road Improvements – Allen County Highway Department, Fort Wayne, IN
- Coldwater Road Improvements – Allen County Highway Department, Fort Wayne, IN

TEGAN BAIOCCHI, MS | Architectural Project Historian
MS, Historic Preservation, 2009, Eastern Michigan University
BA, Public History, 2006, Lee Honors College
Tegan meets the Secretary of the Interior’s Professional Qualification Standards for History and Architectural History (as defined in 36 CFR Part 61). Tegan specializes in authoring architectural descriptions, historic contexts, and resource evaluations, and is adept at conducting historic resource surveys and archival research. While her focus is architectural history, she also has experience preparing archaeological reports and forms, heritage interpretation, and oral history. Tegan is familiar with the architectural and cultural history of the Midwestern United States, with a special interest in Michigan history. While attending both Western Michigan University and Eastern Michigan University, she had the opportunity to perform various cultural resource tasks throughout the state. Tegan’s relevant experience includes:

- First Street Reconstruction Section 4(f), and Section 106 Documentation – City of Gas City, IN
- Phase I Archaeological Investigation, Possum Point Power Station Coal Combustion By-Product Pond Closure – Dominion Virginia Power, Dumfries, Prince William County, VA
- Phase I Technical Report, South Brush Valley Bridge Replacement – PennDOT, Brush Valley Township, Indiana County, PA

ANGELA KATTMANN, LPG | Environmental Manager
BS, Geology, 1995, Ball State University
Angela’s responsibilities include the preparation of environmental documents for transportation and aviation projects ensuring the federal, state, and local environmental compliance. During her career, she has excelled in National Environmental Policy Act (NEPA) project management, organization and preparation of environmental documents, management and communication with both clients and sub-consultants, and appropriate research and remediation of contaminated sites. Angela’s relevant experience in bridge replacement environmental documentation includes:

- State Road (SR) 48 Bridge over West Fork of Turman Creek, Bridge Replacement – INDOT, Sullivan County, IN
- Shadeland Road Reconstruction and Bridge Replacement – City of Indianapolis, DPW, Indianapolis, IN
- Small Structures Replacement On Call – INDOT, Greenfield District
- Small Structures Replacement On Call – INDOT, Vincennes District
- SR 48 Small Structure Replacement – INDOT, Sullivan County, IN
PROJECT EXPERIENCE

SR 135 OVER INDIAN CREEK EMERGENCY TRUSS REPAIR
INDOT, Seymour District
GAI performed the design for the emergency repair of this 150’-0” long single-span steel thru-truss bridge over Indian Creek located 0.33 miles south of SR 252 in Morgan County, IN. The repairs included the replacement of several of the truss members damaged due to a recent collision. The bridge was originally constructed in 1933 and all original connections were made with steel rivets. Steel round headed bolts were used for the replacement connections for reasons of practicality and aesthetics. As plans were nearly complete INDOT identified a major structural crack in the main bottom steel truss chord gusset plate at the northeast end post. GAI designed an innovative retrofit capable of handling the full capacity of the bottom chord without removing any members. This retrofit allowed the bridge to safely live out the remaining years of its life prior to its planned replacement.

RESPONSIVENESS. GAI’s communication plan has redundancy built into it allowing you to have 24/7 access to our team. Our response time to a phone call from the client is typically the same day. Our team will provide the same responsiveness to you!

ROCKVILLE ROAD OVER I-465 | EMERGENCY SUPERSTRUCTURE REPLACEMENT
INDOT, Central Office
On January 10, 2017 a piece of equipment destroyed the southernmost four prestressed beams over the northbound lanes of I-465 bringing traffic to a halt. GAI was on site within four hours of the incident to assess the damage and determine a plan of action in concert with INDOT personnel. GAI worked with INDOT and the contractor to develop final bridge construction plans within five weeks of the accident.
In addition, GAI produced maintenance of traffic plans for six different phases of I-465 lane closures, one phase of Rockville Road Lane and ramp closure details, traffic stoppage details, shoulder closures, advanced signage, pavement markings, and a detour plan for I-465.
Originally, GAI was to produce a traditional set of plans for bidding, however, the scope was changed to team GAI with a contractor that had an IDIQ contract with INDOT. This eliminated the bidding phase and allowed GAI to produce plans as the contractor needed them, resulting in a 2-month accelerated schedule.
WAS-T48 BEAR CREEK BRIDGE REPLACEMENT  
**ODOT – Washington County, IN**

This project replaced the deficient 50’ single-span, through girder bridge over Bear Creek with an 80’ single-span, prestressed concrete box beam bridge. The new bridge was designed on new alignment to allow the use of the existing bridge in the maintenance-of-traffic scheme. Environmental impacts to Bear Creek were minimized by using the simple-span structure on spill through abutments, allowing for construction of the bridge without disturbing the channel of Bear Creek. The new bridge is composite with the concrete deck and utilizes integral abutments with a 30° skew.

NO. 71, LINDEN ROAD OVER HESTON CREEK  
**INDOT – St. Joseph County, IN**

Replaced a single span structure with severely settled approaches with a 3-span prestressed concrete box-beam bridge once it was determined the road was built on a deep peat deposit. The bridge was located between substandard reverse curves that had to be improved. Expanded polystyrene blocks were used in the roadway fill to reduce future settlement. The entire area is located in a wetland so reducing the project footprint was important for the environmental permitting.

BRIDGE NO. 503, HALE AVENUE OVER ST. MARY’S RIVER  
**INDOT – Allen County, IN**

This 188-foot, 3-span continuous composite prestressed side-by-side box beam bridge was constructed for $512,000 and included extensive approach roadway and drainage work. Details included transverse post tensioning to eliminate deck cracks and incorporating the existing abutments into the new bridge, thus saving approximately $100,000 in construction costs. The original bridge was a steel truss so a low profile bridge was preferred to minimize the grade raise. In the 20 years since this was built it has not exhibited the longitudinal deck cracks typically found in this type of bridge.

BRIDGE NO. 148, CENTERVILLE ROAD OVER GREENS FORK  
**INDOT – Wayne County, IN**

This 3-span continuous composite steel beam bridge was designed to replace a bridge with serious shear cracks through its web. Therefore, speed was essential on this project. The new 162’ long, jointless bridge included full 6’ shoulders, solid stem piers on 1 row of piles, and thrie-beam railing. Drainage in the northwest quadrant was improved by adding a larger culvert under a nearby drive. An intermittent stream in the southeast quadrant caused a requirement to mitigate tree removal through the project. Right-of-way plans were developed and appropriate permits were obtained as part of this project.

BRIDGE NO. 35 OVER QUIGLEY-MARSH DITCH  
**INDOT – Pulaski County, IN**

Lead design for the road and bridge design, traffic maintenance design and permitting assistance for the replacement of the existing bridge located on US 35 over Quigley-Marsh Ditch (Terry Ditch), 0.32 mile north of SR 14 in the Town of Winamac in Pulaski County, Indiana. The new bridge structure is a 3-span continuous reinforced concrete slab bridge. It is 75’-0 1/8” long with a 42’-0” clear roadway. The project length is 395 feet. Single-lane signalized phased construction is being utilized for maintenance of traffic.

BRIDGE NO. 54, SR 54 OVER RICHLAND CREEK  
**INDOT – Greene County, IN**

Lead design for the road and bridge design, traffic maintenance design and permitting assistance for the replacement of the existing structure located on SR 54 over the unnamed tributary (UNT) of Richland Creek, 1.32 miles east of US 231, in Greene County, Indiana. The new bridge structure is a 3-span continuous reinforced concrete slab bridge. It is 71’-6” long with a 38’-0” clear roadway. The project length was 762 feet.