Proposal

Professional Engineering Services for Design and Construction Engineering for the 19-14 Bridge Deck Repair Project at Home, East and Lombard Avenues

Oak Park

Village of Oak Park

March 6, 2019

CONSULTING ENGINEERS

BLA, Inc.

CONSULTING ENGINEERS

BLA, Inc.
333 Pierce Road, Suite 200 ▪ Itasca, IL 60143
630 438 6400 ▪ FAX 630 438 6444 ▪ www.bla-inc.com

March 6, 2019

Byron Kutz
Assistant Village Engineer
Village of Oak Park
201 South Boulevard
Oak Park, Illinois 60302

Re: Proposal for Professional Engineering Services for Design and Construction Engineering for the 19-14 Bridge Deck Repair Project at Home, East and Lombard Avenues

Mr. Kutz:

BLA appreciates the opportunity to submit our proposal to provide engineering services for the Village of Oak Park. We have the exact experience and knowledge required for this project as we are currently performing the same exact tasks for the 18-14 Bridge Project. As part of 18-14, we inspected and developed the patching survey for Home Avenue and East Avenue. The number one benefit that BLA brings to the 19-14 project is the understanding of the extensive and painstaking communication and coordination with the CTA and CSX Railroad. We will build on our previous project relationships and experience with each agency so the Village does not need to start all over from step one.

BLA commits that personnel named in this proposal will be available for the duration of the project at the indicated level of involvement, except where prevented by circumstances beyond the control of the consultant.

BLA has no objections to any terms of the request for proposal.

Our firm would perform this work out of our Itasca office. Our mailing address and contact information is presented below:

Corporate Office
333 Pierce Road, Suite 200
Itasca, Illinois 60143
Phone: 630-438-6400

Daniel B. Bruckelmeyer, P.E.
President & Chief Executive Officer
dbruckelmeyer@bla-inc.com
630-438-6400

We sincerely appreciate the opportunity to submit our Proposal to the Village of Oak Park and look forward to answering any questions you may have to further clarify our submittal.

Sincerely,
BLA, Inc.

Daniel B. Bruckelmeyer, P.E.
President & Chief Executive Officer

Table of Contents

Firm Information and Capabilities

BLA is an Illinois corporation established in 1978 as a professional civil engineering consulting firm. Our corporate office is located in Itasca and we have an office in Indianapolis.

We have the exact design and construction experience to serve Oak Park

BLA is in the process of completing the construction inspection for the 18-14 bridge deck project for the Village of Oak Park. As part of 18-14, BLA assisted in analysis of East Avenue as well as Home Avenue; however, the greatest lesson learned is the amount of painstaking coordination with the CTA and CSX *just to install protective shielding*. BLA's familiarity with the process and requirements is exactly what the Village needs on 19-14. By selecting BLA, our coordination efforts will *continue forward* eliminating the need to start over. This experience is invaluable to the project and Village. We understand the majority of the submittals, work plans and right of entry applications with the CTA and CSX are the contractor's responsibility; however, it is imperative the Resident Engineer is constantly involved and facilitates the process.

We have demonstrated BLA goes above and beyond what is required in the scope of work such is the case with the Home Avenue patch survey, CTA headquarter meetings and our Director of Construction Kerry Field's constant presence on the project. This will not change if BLA is selected as the 19-14 consultant.

Why Choose BLA?

Our team has a broad range of experience from dealing with many clients where we have performed similar services - none more fitting than the 18-14 project. We would use this knowledge and experience to enhance the 19-14 project.

- ✓ *We have the benefit of understanding the extensive coordination and urgency of working with the CTA and CSX and will build on our existing relationships with each agency*
- ✓ *BLA has previously investigated and began the designs of Home Avenue and East Avenue which provides us the background knowledge and eliminates starting from step one*
- ✓ *Everyone on 18-14 will be involved with 19-14 providing continuity with the Village, CTA and CSX*

BLA Experience

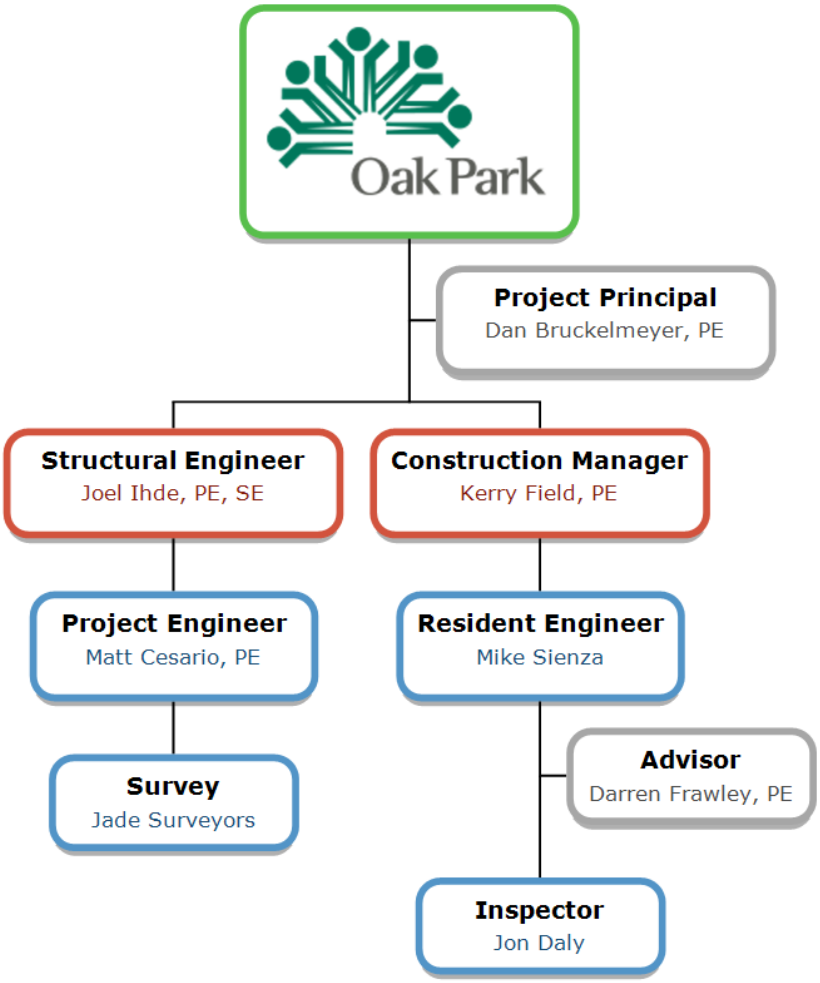
BLA staff will be led by our lead Structural Engineer, Joel Ihde, P.E., S.E. Joel has designed bridge deck rehabilitations over expressways and arterial IDOT routes – *recently*, the Village's 18-14 project; 88th Avenue over the Tri-State Tollway; and Western Avenue over Broadway Street, Canal Street and the Metra Rock Island Railroad. Additionally, we have provided recent construction inspection for expansion joint, concrete deck and bridge sidewalk repairs on three bridges over I-355 (Maple Avenue, 63rd Street and 75th Street). Our Director of Construction, Kerry Field, P.E., served as the Area Supervisor for District 1 Expressways during his 17 years at IDOT and is uniquely qualified for this project in that he not only has managed several projects requiring lane closures, he also resurfaced I-290 *beneath these same bridges* as a Senior Project Manager for Plote Construction (17 years). *We have the exact design and construction inspection experience to serve Oak Park.*

Communication

Your expectations for the project design, schedule and budget will be met through our clear and frequent communication with Village staff, but more notably with the CTA and CSX. This communication is critical; we have already begun by being involved in the 18-14 project. We know them, they know us and we will continue that relationship from where we left off in 18-14.

Project Team

All staff in the Organization Chart is available to serve the Village of Oak Park. The personnel shown will be assigned to the project based on the requirements and need for their engineering expertise. *BLA commits that personnel named in this proposal will be available for the duration of the project at the indicated level of involvement, except where prevented by circumstances beyond the control of the consultant.*



Anticipated Construction Oversight

Jon Daly will be the full-time inspector; he has expressway and bridge inspection experience. He will be on site any time the contractor is working and provide documentation of the work being performed.

Mike Sienza will provide guidance and oversight and remedy any contract issues or changed conditions where experience will take precedence in making decisions that may impact the budget. We anticipate Mike to be on site 30-40% of the time. Mike has extensive bridge experience; Mike has more than 30 years under his belt in bridge construction with several over expressways. Mike is very detail-oriented and works in a very professional manner. He would provide the Village with bridge experience; he is proficient with ADA requirements and would be an asset to this project if we were fortunate enough to be selected for this work.

JOEL J. IHDE, P.E., S.E.

Director of Structural Engineering

Education

University of Illinois, M. S. Civil Engineering (Structures), 1989

University of Wisconsin, B.S. Civil Engineering, 1985

University of Wisconsin, B.S. Mining Engineering, 1981

Professional Registration

Professional Engineer:

State of Illinois: #062-046287, 1990

State of Indiana: #10707723, 2007

State of Wisconsin: #39560-6, 2008

Structural Engineer:

State of Illinois: #081-005051, 1992

Certifications

National Bridge Inspection Standard (NBIS) Program Manager: State of Illinois and Wisconsin

Team Leader: State of Indiana

Professional Societies

Member – Structural Engineers Association of Illinois; Precast/Prestressed Concrete Institute

Specialized Training

National Highway Institute: Safety Inspection of In-Service Bridges

Experience Summary

Over 30 years in structural design of bridges and structures. Responsible for preliminary and contract plans, inspections, cost estimates, specifications and design support during construction for a variety of major civil engineering projects. Structural design experience includes complete design for new and rehabilitated highway and railroad structures, foundation selection, substructure design and steel and concrete superstructure design, seismic analysis and fatigue evaluation; experience also includes rail maintenance facilities, deep tunnel projects, underground stormwater storage structures, parking garages, retaining walls, box culverts and tower foundations.

Representative Projects

Structural Engineer for Oak Park & East Avenue(s) over I-290; Village of Oak Park – Provided design engineering services for the bridges carrying Oak Park and East Avenues over the Eisenhower Expressway (I-290). The general scope of work consisted of partial depth bridge deck patching, ADA ramp improvements, sidewalk repairs, and repairs to the existing parapets. The project required overnight lane closures on I-290 in order to complete the work. Protective shielding was required in order to protect drivers and trains from falling construction debris.

Structural Engineer for Central Tri-State Tollway (I-294); ISTHA – Roadway study from 95th Street to Cermak Road. Work within the Master Plan Phase included bridge, box culvert and retaining wall/noise wall inspections; Bridge and Culvert Condition Reports for two bridges (88th Avenue and 95th Street); a box culvert and five retaining/noise walls. Conducted inspections with lane/shoulder closures and inspection equipment. Work included load rating analysis, retaining wall feasibility analysis and constructability review for the entire corridor. Advanced Engineering Studies Phase included TS&L for bridges, box culverts and retaining walls. Prepared advanced engineering drawings for bridge deck repairs on the bridge deck carrying 88th Avenue over I-294.

Structural Engineer for Green Street Bridge; City of McHenry – Work included verification of the existing BCR, bridge inspection, measurements and recommendations to rehabilitate existing bridge. The bridge was built in 1949 as a three-sided arch structure. Work included bridge deck repairs, sidewalk removal and replacement, steel railing repairs, substructure repairs and staining substructure. Designed new watermain supports attached to the face of the bridge which allowed the watermain to be supported indecently from the existing sidewalk which was to be replaced. Work also included asbestos determination for EPA clearance. Engineering estimates were prepared for multiple additional improvement options to allow the City to choose which improvements can be added to the design and stay within budget.

Structural Engineer for Randall Road over Union Pacific Railroad; Kane County DOT – Provided bridge inspection and design for the rehabilitation of the bridge carrying Randall Road over the UPRR. Rehabilitation included concrete deck repair, slope wall repair, substructure repair, approach pavement reconstruction, drainage improvements, and painting. Because of limited work area available between the bridge and the UPRR right-of-way, extensive coordination was required to meet the UPRR's strict guidelines for work near active tracks.

Structural Engineer for IL 56 over East Branch DuPage River; IDOT – Phase I and II design included rehabilitation and modification of the IL 56 bridge over the East Branch of the DuPage River. The structure was modified to accommodate a six-lane roadway. Work on the bridge included beam replacement, bearing replacement, new overlay, deck joint and substructure repairs.

MATTHEW T. CESARIO, P.E.

Project Manager

Education

University of Iowa – B.S. Civil Engineering, 2007

Professional Registration

Professional Engineer

State of Illinois: #062-066160, 2014

State of Indiana: #11400733, 2014

State of Wisconsin: #43929-6, 2014

Certifications

IDOT Documentation of Contract Quantities

Professional Societies

American Public Works Association (APWA) Fox Valley Branch

APWA Fox Valley Branch Membership Committee

American Council of Engineering Companies (ACEC) – Tollway

ACEC – Regional Informational Meeting Committee

Civil 3D User Group

Specialized Training

GEOPAK, Civil 3D, Soil and Erosion Control, Permitting, IDOT Documentation, WisDOT Construction Standards, WisDOT Local Program, WisDOT Signage, Field Manager/Fit Course, IL Tollway Barrier Guidelines

Specialized Software

AutoCAD Civil 3D 2010-2012, StormCAD, Microstation V8 & V8i, GEOPAK, Auto-Turn, Hy-8 Culvert Design, Field Manager, Synchro 7.0, HCS+ Traffic Software, HCS+ Signal Warrants, Estimator 2.8, Trans.prt, Haestad Methods: Pondpack, TR-20, Stormnet, Axiom

Experience Summary

Consulting engineer since 2007; experience with design and coordination of site and transportation projects including reconstruction, rehabilitations, expansion, traffic modeling, stormwater management, and roundabouts. Design experience involves stormwater modeling and management reports; roadway geometry; ADA Ramp Design, storm and sanitary sewer; hydraulic and hydrology analysis of streams, creeks and rivers for bridges/culverts; roadside barrier warrants; horizontal and vertical alignment; roundabout; traffic signals and contract plans.

Representative Projects

Project Manager for Oak Park & East Avenue(s) over I-290; Village of Oak Park – Provided design engineering services for the bridges carrying Oak Park and East Avenues over the Eisenhower Expressway (I-290). The general scope of work consisted of partial depth bridge deck patching, ADA ramp improvements, sidewalk repairs, and repairs to the existing parapets. Making the project more complex was additional permitting required from the CSX Railway and the CTA as Oak Park Avenue spanned those entities as well.

Project Manager for Green Street Bridge; City of McHenry – Green Street is the main route through downtown City of McHenry and experiences a large number of pedestrian traffic due to the location. Patching was required under the bridge due to deficiency and failures noticed on the inspection. ADA design was required at the sidewalk crossing adjacent to the south bridge approach slab. Traffic staging and signage was necessary to be included in the design to redirect pedestrian traffic during the ADA ramp improvements. The City was on a tight budget so throughout the duration of the design engineering estimates were prepared for improvement options to allow the City to choose which improvements can be added to the design and stay within budget.

Project Manager for Millstream Road; McHenry County DOT – BLA visited two bridges over the Kishwaukee River to determine and document the deficiencies, prepare a Technical Memorandum of the improvement options and prepare PS&E. The design schedule was expedited in order to design and construct the repairs prior to the fall harvest season. The improvements consisted of mill/overlay of the bridge decks, concrete structure repair, full depth and partial depth deck patching, deck joint repairs. Also necessary was the design of railing repairs, concrete parapets, and superstructure/substructure repairs.

Project Engineer for Western Avenue over Cal-Sag Channel; IDOT –Western Avenue is a four-lane roadway in which BLA designed the plans and contract documents for the replacement of the south approach of the bridge carrying Western Avenue over the Cal-Sag Channel, Metra Rock Island Railroad and two roadways. The north approach did not require replacement was in need of repairs and rehabilitation due to spalling, cracking, and failures in the bridge deck, piers, and sidewalk. Coordination and communication was a necessity in order to provide details, and specifications for the maintenance of traffic for the roadways, waterway, and the rail road below the work. A permit was required to be obtained from the Metra Rock Island Railroad as well as the US Coast Guard.

Project Engineer for IL 53 at IL 56; IDOT – Work included the reconstruction of IL 53 and IL 56 which added a third travel lane. Due to the widening of the roadway the existing bridge over the East Branch DuPage River required rehabilitation. The existing bridge had sidewalk located on the deck which was separated from the bridge in the proposed condition and spanned the river via a proposed pedestrian bridge. The existing roadway bridge deck over the river required full depth patching, parapet wall repairs, beam replacement, new overlay, deck joint repairs, and substructure repairs.

KERRY FIELD, P.E.

Director of Construction

Education

University of Illinois Urbana-Champaign – B.S. Civil Engineering, 1981

Professional Registration

Professional Engineer

State of Illinois: #062-043291, 1984

Professional Societies

Member – IRTBA

Industry Activities

10 years on IRTBA & IDOT District 1 Forum, Co-Chair for four years

Experience Summary

Highway construction experience since 1982. Senior Project Manager overseeing the scheduling and construction (11 years) of $20-70 million/year of road construction projects. Vice President of $80-100 million/year heavy highway contractor (six years). 17 years at IDOT Bureau of Construction, starting with construction layout, inspection and documentation. Worked as a Resident Engineer on multi-million dollar projects ending as Area Construction Supervisor for all Expressway Projects in District 1.

Representative Projects

Project Manager for Oak Park Avenue and East Avenue over I-290; Village of Oak Park – Provided engineering services for the bridges carrying Oak Park and East Avenues over the Eisenhower Expressway (I-290). The general scope of work consisted of partial depth bridge deck patching, ADA ramp improvements, sidewalk repairs, and repairs to the existing parapets. Protective shielding was required in order to protect drivers and trains from falling construction debris.

Project Manager for Winfield and Ferry Bridges; DuPage County – Project included repairs to two bridges. Winfield over Spring Brook Creek was completed in two stages. The project included hydro scarification of the bridge deck, new approach pavement, deck patching and latex overlay of the bridge deck. When excavating for the new approach pavement, deterioration of the existing approach seats was discovered. BLA worked closely with the designer and County to expedite repairs.

Project Manager for Bridge Joint Repairs Five Locations; DuPage County - Project included replacing the neoprene joints with polymer concrete and silicone joints; other rehabilitation items included sidewalk removal/replacement, curb/gutter removal/replacement, approach pavement patching, bridge deck patching and resurfacing. This work was completed under traffic in staged construction. BLA was responsible for communicating and coordinating lane closures with the ISTHA. BLA determined the locations of the repairs in respect to the contract drawings. Maintenance of traffic scheduling was very important; the high were a big concern. BLA worked with the County and contractor on signal timing to minimize impact on the motoring public. This project was completed on time and under budget.

Previous Professional Experience

Senior Project Manager for I-290 Eisenhower Expressway; IDOT – This four mile $18 million project on I-290 from 9th Avenue to Austin Avenue included shoulder reconstruction, pavement patching, resurfacing and bridge rehabilitation. The fast pace resurfacing allowed modified staging. Helped implement alternate staging utilizing the outside shoulders to facilitate maintaining three lanes of traffic during construction. The alternate staging option helped reduce traffic congestion and gave the contractor an additional lane to work on. As a result, the work zone was safer and the contractor more productive. Proposed and implemented a Value Engineering concept that eliminated $1 million of barrier wall and miscellaneous construction. This VE ultimately saved IDOT $1.4 million and the final product was as originally intended.

Senior Project Manager for I-355/I-290 Extension; IDOT; This $30 million project located on I-355 (Army Trail to I-290 extension) and I-290 (Church to Thorndale) included CRC patching, HMA removal, SMA binder and SMA surface course. Bridge deck rehabilitation included new approach slabs. Hydro scarification, deck patching and concrete latex overlays were performed. Similar improvements were done on I-290 over Church, Grand and IL 83. The US 20 bridge included a unique soil remediation plan. In lieu of an 11 foot undercut, expanded polystyrene blocks (Styrofoam) were used. These offset the weight of traffic and the approach slab and eliminated future settlement from poor soil conditions.

DARREN C. FRAWLEY, P.E.

Resident Engineer

Education

Marquette University – B.S. Civil Engineering, 2002

Professional Registration

Professional Engineer:

State of Illinois: #062-064515, 2012

State of Wisconsin: #43244-6, 2013

Certifications

IDOT Documentation #14-0439

IDOT ICORS (Illinois Construction Records System)

IDOT Soils Field Testing & Inspection

APWA Certified Public Infrastructure Inspector

Specialized Training

Experienced with the use of total stations, data collectors, laser levels, performing level loops and GPS surveying software/equipment

Specialized Software

Microsoft Office, Microsoft Project, AutoCAD, Primavera, Heavy Construction Systems Specialists (HCSS) Software, Timberline, Agtek and Internet proficient

Experience Summary

Experience since 1998 in survey, estimating, project management, field inspection and resident engineering. Project experience includes erosion control implementation, watermain, sanitary sewer, storm sewer, bridges, box culverts, retaining walls, reconstruction, electrical work (traffic signals and lighting), high voltage underground cables and monitoring utility relocation. Experience as a construction manager with responsibilities of project manager/estimator on site work projects. Project experience includes planning, estimating, scheduling, GPS system management, invoicing, cost control and fleet management.

Representative Projects

Resident Engineer for Oak Park and East Avenues over I-290; Village of Oak Park – Provided engineering services for the bridges carrying Oak Park and East Avenues over the Eisenhower Expressway (I-290). The general scope of work consisted of partial depth bridge deck patching, ADA ramp improvements, sidewalk repairs, and repairs to the existing parapets. Protective shielding was required in order to protect drivers and trains from falling construction debris.

Assistant Resident Engineer for Townhall Road and Pearl Street over the Jane Addams Memorial Tollway (I-90); ISTHA – The $5.3 million project demolished and reconstructed a two-span structure with precast beams carrying two lanes over the Jane Addams Memorial Tollway. Oversaw all field activities including bridge demolition, piling, abutment, pier, beam erection, deck, parapets, approach slabs, 60 inch storm sewer, earthwork and landscaping; coordinated utility locate operations.

Construction Engineer for Jane Addams Memorial Tollway (I-90) over Kishwaukee River; ISTHA – The $11.7 million project demolished and reconstructed a four-span three-lane steel beam structure for the westbound lanes of I-90 over the Kishwaukee River. Oversaw bridge demolition, piling, cofferdam, abutment, pier, beam erection, deck, parapets, earthwork and landscaping. Work was on an expedited schedule; the contractor was required to complete operation in the river by April 1st to protect the aquatic spawning environment for the Gravel Chub.

Construction Engineer for Jane Addams Memorial Tollway (I-90); ISTHA – Repair and rehabilitation of 17 structures on or over I-90 from Marengo, IL to Rockford, IL. Extensive repairs and rebuilding on Spring Creek, Mosquito Creek, and the Kishwaukee River bridges. Work on these bridges included deck removal and replacements and patching, quickset latex concrete overlays, slope wall replacements, chanel bottom repairs at scour locations, and widespread shotcrete substructure repairs.

Resident Engineer for Green Street and York Road; Village of Bensenville – The $2.9 million project included layout and inspection of watermain, pavement patches, curb/gutter, sidewalk, driveways and resurfacing. BLA performed inspection, oversaw utility relocations, developed traffic staging and managed contract schedule and change orders. A majority of the watermain was redesigned in the field because of utility conflicts and inaccurate plans. BLA coordinated water service interruptions in advance; door-to-door contact was made with local residents/businesses;.

Resident Engineer for Western Avenue; Cities of Highwood and Highland Park – The $3.1 million reconstruction project included sanitary sewer, watermain, storm sewer, pavement removal, earth excavation, aggregate base course, curb/gutter, HMA paving and thermoplastic striping. A major aspect was new sanitary sewer and watermain systems for the whole project. During construction, water and sanitary service connections and other service disruptions were coordinated in advance with 60 residents impacted. Performed inspection activities, oversaw utility relocations, inspected erosion control and managed contract schedule and change orders.

MICHAEL D. SIENZA

Senior Resident Engineer

Education

University of Illinois Urbana-Champaign – B.S. Civil Engineering, 1976

Certifications

Documentation of Contract Quantities, #17-12560

ICORS Training Seminar

S-33 Geotechnical Field Testing and Inspection

Mixture Aggregate Technician Course (three day)

HMA Level I

HMA Level II

Nuclear Density Tester Course

PCC Level I

PCC Level II

Specialized Training

Hazardous Incident Response Operations EPA Training

Crane Safety

Introduction to Scaffolding

Supervisor's Accident Investigation

Special Waste, Construction Reports and Special Provisions

Industry Activities

IAHE

Experience Summary

Construction professional with a strong background in bridge and roadway construction and peripheral experience in watermain and sewer installation (including tunneling) and building construction. Has viewed construction from both the contractor and consultant points of view and worked with such agencies as IDOT, ISTHA, City of Chicago, MWRD, DuPage County, CTA and numerous municipalities. Adept at supplying technical assistance to the workforce, maintaining owner relations and interpreting the plans and specifications.

Previous Professional Experience

Resident Engineer for Downtown Bridge Renovations over I-90/94; CDOT - Reconstruction for bridge replacements at Jackson Boulevard and Randolph Street over the Kennedy Expressway. Each bridge project consisted of concrete deck and ramp superstructure replacement, approach slab replacement, expansion bearings and expansion joint replacement, repair and paint superstructure, concrete substructure repairs, pavement removal and replacement, pavement widening and resurfacing, construction of storm sewers and drainage structures, turning radii improvements, pavement marking, new lighting, signing, surveillance, crash protection improvements and architectural enhancements; all while maintaining traffic flow for 300,000 daily vehicles underneath each bridges.

Resident Engineer for IL 38 (Roosevelt Road) Bridge Construction at the Union Pacific Railroad and Kautz Road; IDOT - Phase III engineering for the improvement of IL 38 (Roosevelt Road) at UPRR and Kautz Road (DuPage County Line). The improvement included construction of a grade-separation structure of IL 38 over the UPRR with a relocated intersection of IL 38 and Kautz Road. The project included constant coordination and communication with local residents and businesses to address their concerns and maintain access at all times. For example, the only access points to a local golf course and local school were reconstructed utilizing staged construction. In one instance, it became necessary to build a temporary road to maintain access. The project also involved coordination with two Villages and two Counties; it included extensive utility relocations by ComEd, Nicor, AT&T and Comcast.

Resident Engineer for the South Pulaski Road Bridge Reconstruction; CDOT - Reconstruction and rehabilitation of South Pulaski Road over I-55 including the removal of an existing bascule bridge and the construction of a new three-span fixed steel girder bridge. Miscellaneous roadway improvements.

Resident Engineer for the US 6 (159th Street) I-294 to IL 1 Pavement Reconstruction and the CNRR and Metra Bridges Reconstruction; IDOT - Phase III engineering services for improvements to US 6 (159th Street) I-294 to IL 1. The project involved two miles of staged roadway reconstruction in the City of Harvey using a long term detour. Because of its length, maintaining access to the dozens of local businesses and residences was very challenging. The work affected local school bus routes, school crossings, Pace bus routes and a local hospital. The project also involved close coordination with two railroads as it related to their daily operations. In addition, ComEd performed extensive overhead and underground relocations. The general scope of work included the removal and replacement of the existing pavement with PCC pavement, widening, drainage and watermain installation, traffic signals, lighting DMS sign and surveillance loops. The widening consisted of additional lane construction west of Halsted and added turn lanes for the entire length of the project. The bridge construction included track relocation/construction, ballast installation, catenary structures, caisson installation and braced excavation.

JONATHAN M. DALY

Construction Engineer

Education

University of Illinois Urbana-Champaign – B.S. Civil Engineering, 2017

Professional Registration

Engineer-in-Training

Certifications

IDOT Documentation of Contract Quantities #17-12536

IDOT Soils Field Testing and Inspection

Professional Societies

Member – ASCE

Specialized Training

Tollway ebuilder

Experience Summary

Experience since 2016 as a field/construction engineer. Responsibilities include oversight of contractors along with testing and recording of field work. Also assists the Resident Engineer for the satisfactory completion of projects.

Representative Projects

Construction Engineer for Oak Park & East Avenue(s) over I-290; Village of Oak Park – Provided construction inspection services for the bridges carrying Oak Park & East Avenues over the Eisenhower Expressway (I-290). The general scope of work consisted of partial depth bridge deck patching, ADA ramp improvements, sidewalk repairs, and repairs to the existing parapets. Protective shielding was required in order to protect drivers and trains from falling construction debris.

Construction Engineer for Plum Grove Road (Golf Road to Wiley Road); Village of Schaumburg – BLA provided construction management, public relations and utility coordination services for the $7.6 million IDOT project. Work included the complete reconstruction of Plum Grove Road with full-depth HMA pavement and the Village's first roundabouts at the Remington and State Parkway intersections. The project also included a new storm sewer system, revisions to the existing watermain system, new roadway lighting and extensive landscaping. Preconstruction work included extensive utility relocation and coordination.

Construction Engineer for Street Improvement Program; Village of Schaumburg – BLA provided construction engineering for the $3.99 million Street Improvement Program including the Weathersfield Lakes residential subdivision, the Hammond/Palmer industrial area and the new Bethel Lane alignment and parking lot improvement. Work included concrete curb, driveway and sidewalk replacement in residential and industrial areas along with resurfacing of asphalt roadways. Work at Bethel Lane included the vacation and realignment of the roadway along with the relocation of existing parking lots. New traffic signals at the Bethel/Roselle provide additional safety. Roadway work included storm sewer, watermain improvements, sanitary sewer and installation of a StormTrap system within the parking lot pavement.

Construction Engineer for Washington Street; Lake County DOT – BLA provided construction engineering for the $12.5 million Washington Street project from west of Hainesville Road to east of Haryan Way. Work included complete reconstruction and widening from two lanes to four with a median and Hainesville Road intersection improvements. New traffic signals at that intersection included communication links to the LCDOT emergency communications center. Roadway work included storm sewer, watermain, sanitary sewer and removal/replacement of a lift station owned by Lake County Public Works. BLA coordinated several months of utility work to remove conflicts and roadblocks to the contractor's progress.

Construction Engineer for Elgin O'Hare Western Access (I-390); ISTHA – The three year $66 million project incorporated construction of evaluated embankment and staging a new highway from I-290 to Prospect Avenue. Existing high capacity roads were transformed to frontage roads while a new highway was built adjacent. Toll collection systems, four bridges, four lengthy mechanically stabilized earth retention walls, three ramps, traffic signal maintenance/replacement and intersection rebuilds. Westbound pavement included five concrete pavement test zones and monitoring equipment for future determination of highway designs. Pavements were concrete mainline with hot mix asphalt feeder roads. Wide ranging drainage systems with special large environmentally sensitive retention ponds were also built. Massive earth moving operations included substantial unsuitable removals and expedited lime improvement operations.

Relevant Experience

Oak Park, East and Home Avenues Bridges over I-290 — Village of Oak Park

Bill McKenna
201 South Boulevard – Oak Park; 708-358-5700

contract cost: $350,000
engineering fee (design and construction): $40,000

This project included both design and construction (Phase II and III) engineering services for the bridge carrying Oak Park Avenue, East Avenue and the Home Avenue Pedestrian Bridge over the Eisenhower Expressway (I-290). The general scope of work of Oak Park Avenue consisted of partial depth bridge deck patching, ADA ramp improvements, sidewalk repairs and repairs to the existing parapets. The general scope of work of East Avenue consisted of partial depth bridge deck patching, bridge deck joint repair and sidewalk replacement. The Home Avenue pedestrian bridge required protective shielding for a future project. The project was funded 100% by the Village of Oak Park and required overnight lane closures on I-290 to complete the work. Making the project more complex was additional permitting required from the CSX Railway and the CTA as Oak Park Avenue spanned those entities as well. Protective shielding was required in order to protect drivers and trains from falling construction debris.

Green Street Bridge — City of McHenry

Troy Strange
1415 Industrial Drive – McHenry; 815-363-2186

contract cost: $400,000
engineering fee (design and construction): $60,000

BLA provided design and construction services. As part of the bridge rehabilitation, BLA inspected the historic structure to determine the appropriate scope of work to extend the life of the bridge and preserve its aesthetic qualities. Structural rehabilitation included 2.5 inches of microsilica concrete applied to the bridge deck, concrete repairs to the underside of the deck, sidewalk replacement and bridge railing restoration. At the request of the City to revitalize the appearance of the structure, BLA prepared specifications for colored and textured concrete sidewalks and concrete staining that matched the aesthetic of an adjacent community Riverwalk. A watermain attached to the bridge fascia was also relocated out of view of the public to further improve appearance. Overlay placement and repairs were performed in stages to maintain vehicular and pedestrian traffic across the bridge throughout construction.

Western Avenue over Cal-Sag Channel — IDOT

Kim Harvey
201 Center Court – Schaumburg; 847-705-4055

contract cost: $12.2 million
engineering fee: $775,000

The work included Phase II design for the complete replacement of the eight-span simple span PPC box beams with a five-span continuous steel plate girder superstructure. Phase II work consisted of TS&L, contract plans, specifications and cost estimates for the replacement of the south bridge approach along with repairs to the truss span, stairs and bridge deck for the north bridge approach of the bridge carrying Western Avenue over the Cal-Sag Channel, Metra Rock Island railroad line, Broadway Street and Canal Street.

Central Tri-State Tollway (I-294) Master Plan Study — ISTHA

Paul Kovacs — *contract cost: N/A*
2700 Ogden Avenue – Downers Grove; 630-241-6800 — *engineering fee: $360,000*

BLA performed a roadway study from 95th Street to Cermak Road. Work within the Master Plan Phase included bridge, box culvert and retaining wall/noise wall inspections; Bridge and Culvert Condition Reports for two bridges (88th Avenue and 95th Street); a box culvert and five retaining/noise walls. BLA conducted inspections with lane/shoulder closures and inspection equipment. Work included load rating analysis, retaining wall feasibility analysis and constructability review for the entire corridor. Advanced Engineering Studies Phase included TS&L for bridges, box culverts and retaining walls along with advance engineering drawings including bridge deck repairs on 88th Street over I-294.

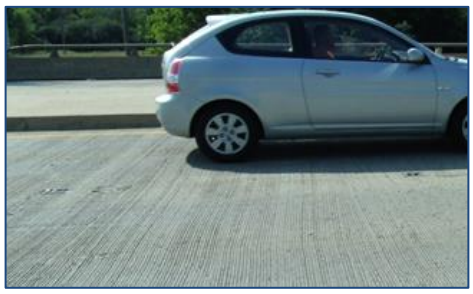
US 31/Nimtz Parkway — INDOT

Daniel Corbin — *contract cost: $800,000*
7200 Melton Road – Gary, IN; 219-6325-7854 — *engineering fee: $60,000*

This project rehabilitated the Nimtz Parkway bridge over US 31 near South Bend; the project included the complete replacement of the bridge deck. As part of the deck replacement, the bridge was converted to semi-integral by modifying the existing stub abutments. The bridge had been hit several times over the years and had a lane shut down for a period of time prior to the bridge rehabilitation. This project included the replacement of the outside southern girder (#8) and the heat straightening of the next girder (#7) on the Nimtz Parkway Bridge over the northbound lanes of US 31. BLA also prepared plans to lower US 31 below the Nimtz Parkway Bridge to prevent the bridge from being hit in the future and provide proper clearance. The project also included modification of the bridge rail on the wingwalls and slopewall replacement.

IL 56 over East Branch DuPage River — IDOT

Brian Kuttab — *contract cost: $40 million (entire project)*
201 Center Court – Schaumburg; 847-705-4431 — *engineering fee: $3.4 million*



This project rehabilitated the structure carrying IL 56 over the East Branch DuPage River. This project included bridge deck inspection and sounding to determine the bridge full depth and partial depth deck repairs areas. Work on the bridge also included partial deck replacement, new railings, deck joint replacement, latex modified concrete overlay, bearing replacement, concrete substructure repairs, steel beam replacement, diaphragm repairs and bridge painting. BLA provided inspection and design engineering services for the improvements necessary to extend the life of the IL 56 bridge and add one more traffic lane in each direction. The existing bridge was modified to accommodate a new six lane roadway, a new sidewalk and expanded shoulder width. Work on the bridge was done using stage construction and required four stages in order to maintain the 42,000 vehicles per day on IL 56.

Cross Bridges over I-88 — ISTHA

Paul Kovacs — *contract cost: N/A*
2700 Ogden Avenue – Downers Grove; 630-241-6800 — *engineering fee: $360,000*

BLA was selected as the construction section engineer by the Illinois State Toll Highway Authority for rehabilitation of seven bridges over I-88 from Farnsworth Road west to DeKalb. Construction services included full-time observation of existing bridge deck repairs/patching, drainage improvements, substructure repairs, bituminous removal and resurfacing of existing ramps, lighting, materials testing, signing, guardrail, landscaping, erosion control and interstate maintenance of traffic staging. Other services provided were complete project documentation, the preparation of record drawings, change orders, extra work orders and pay estimates.

Randall Road over Union Pacific Railroad (UPRR) — Kane County Division of Transportation

Mike Zakosek — *contract cost: $700,000*
41W011 Burlington Road – St. Charles; 630-584-1170 — *engineering fee: $70,000*

BLA prepared plans for the rehabilitation of the bridge carrying Randall Road over UPRR. Work included the design of a bridge deck overlay utilizing Cargill "Safe-Lane" which improved safety during rain and snow by increasing traction and reducing icing of the bridge deck. Rehabilitation work also included concrete substructure repairs, slopewall repair, approach pavement reconstruction, drainage improvements and bridge painting. Work was completed using stage construction. Because of the limited work area between the bridge and the UPRR right-of-way, extensive coordination was required to meet the strict guidelines for work near active tracks. BLA prepared unique staging and construction details to ensure the requirements were met while still providing an economical design. Contractor staging areas and haul roads were shown on the plans as well as temporary drainage features to ensure constructability concerns were addressed.

Bridge Rehabilitation Services — DuPage County Division of Transportation

Chris Snyder — *contract cost: $420,000*
421 N. County Farm Road – Wheaton; 630-407-6900 — *engineering fee: $80,000*

BLA represented the DuPage County DOT providing Phase III construction engineering services for bridge rehabilitation and joint repairs for five DuPage County bridges. The bridges were located at Maple Avenue, 63rd Street and 75th Street over I-355, Ferry Road over West Branch DuPage River and Diehl Road over the West Branch DuPage River. The project replaced the neoprene joints with polymer concrete and silicone joints. Other items of rehabilitation included sidewalk removal and replacement, curb and gutter removal and replacement, approach pavement patching, bridge deck patching and resurfacing. This work was completed under traffic in staged construction. BLA was responsible for communicating and coordinating lane closures with the ISTHA. BLA determined the locations of the repairs in respect to the contract drawings. Maintenance of traffic scheduling was very important on this project; the high ADTs at these locations were a big concern to the County engineers. BLA worked with the County traffic engineer and the contractor on timing the traffic signals to minimize impact on the motoring public. These projects were completed on time and under budget.

Understanding and Approach

There is no firm more familiar with the needs, requirements, process and endless coordination efforts with the CTA and CSX Railroad that are necessary for 19-14 Bridge Deck Project than BLA. On our 18-14 project for the Village of Oak Park, we encountered all that could be encountered with these two agencies and will utilize that painstaking effort on this project so we do not have to go back to step one. From day one, our same design team will work hand-in-hand with the same construction team (18-14 team) to take the lessons learned and implement them to 19-14. In reviewing the RFP, based on our experience, the number one item that jumps out is the timeframe between the anticipated contract award and the substantial completion date. During the design, coordination with CTA and CSX is necessary, but only extends as far as providing the agencies with the project scope/design and receiving the necessary specifications and requirements. The true extensive efforts begin once the contract is awarded as that is when the CTA and CSX require the work plan, contractor information, insurance, agreements, etc. As BLA and the Village experienced firsthand on 18-14, the back and forth with these agencies is a process that requires constant efforts to receive a response, several iterations of revisions to the contractor work plans and agreements and multiple meetings via phone conference or at CTA headquarters.

BLA is the exact firm the Village needs on 19-14 in order to avoid going back to the beginning of the process and restarting the coordination and communication with CTA and CSX. We already have the relationships established and the documents necessary to start 19-14 where we left off on 18-14. In efforts to meet the project schedule and expedite the approval process, there are specific methods BLA will take when it comes to these two agencies:

- → *We understand the contractor for 19-14 most likely will not be the same as 18-14; however, we would attempt to have the 18-14 agreement amended to add the new work as well as the current contractor*
- → *The approved work plan provided by Norvilla will assist with the 19-14 contractor and development of their work plan; this will ensure the specifics the CTA and CSX are requesting are included and the work plan approved the first time*

Our knowledge, experience, familiarity and lessons learned from 18-14 are invaluable when it comes to the 19-14 project. We have the relationships and contacts built with the CTA and CSX, documents and designs developed for several of the improvements; we also have the background needed to complete a successful project.

Phase II Engineering

Last year, BLA performed several of the necessary tasks for 19-14; this information will be verified and supplemented with additional data to be utilized in the 19-14 plan set. To begin the process of updating the current information, BLA revisited the site/stayed on site to perform additional investigations.

Deck Scanning

BLA's past bridge deck repair projects included managing subconsultant deck scanning services. Vendors can provide only infrared thermography (IR) deck surveys. Infrared alone detects temperature anomalies such as deck defects and debonding of the overlay. This type of deck scanning is sufficient for determining deck repair areas in many situations, but not with overlays.

Some vendors use a combination of infrared thermography (IR) scanning, Ground Penetrating Radar (GPR) and HD video. GPR detects debonding between reinforcement and concrete resulting from active corrosion. GPR also shows the depth to the rebar. GPR does not have a depth limit; it can provide information for both the overlay and the deck. The HD video is used to verify the scanning findings. Scanning of the deck is typically done at mid-day after the deck has warmed up. Scanning can be done at normal driving speeds and does not require lane closures.

Our proposed GPR subconsultant has recommended combinations of GPR, IR and video be used for the 19-14 project. IR and video will be used for all bridge deck scanning. GPR, IR and video can be used for the East Avenue bridge deck because it has a concrete overlay. For Home Avenue, all deck repairs will be full depth so GPR may not provide additional essential information. For Lombard Avenue, IR and video should be sufficient as there is no overlay. For East Avenue and Lombard Avenue, BLA has requested our subconsultant scan the bridge sidewalk areas. For consistency with the RFP, we are including GPR scanning for all three bridges. Our vendor would provide GPR, IR and HD video for all three bridges.

Protective Shield

BLA has designed temporary protective shield and permanent protective shield for bridge projects. Our computations and plan details have been submitted to outside agencies for review and approval. Protective shield over I-290 for this project will be permanent. The main difference between temporary and permanent is the 'duration factors' used in the design computations and permanent protective shield uses all treated timber and plywood. BLA has coordinated the design and plan details for protective shield in the past with Sarah Wilson at IDOT District 1 and we are familiar with the District's requirements.

Structure Plan Development

While the deck and sidewalks will be scanned for defects, BLA will also walk each bridge to confirm the repair requirements. This will include evaluation of deck joint condition and replacement options along with parapet repairs. In the field, we will evaluate the necessary modifications to the structure to get ADA ramps to work. We will submit our bridge plans to Sarah Wilson at IDOT District 1 for her review. Sarah will also forward the plans to Victor Veliz who is the Bridge Investigations and Repair Unit Chief in Springfield. BLA has the exact structural experience required for this project based on our past experience with Home, Oak Park and East Avenue bridges as well as from our experience in bridge rehabilitation on other projects throughout the Chicagoland area. BLA was recently selected for a bridge deck rehabilitation project with the Village of Wilmette; that bridge spans I-94, was built in 1949 and is very similar to the condition to these bridges.

Home Avenue Pedestrian Bridge

This bridge was constructed in 1958. The bridge deck is only six inches thick and has one layer of reinforcing in the bottom of the slab. We anticipate any deck repairs for this structure will be full depth for the entire area of the repair. We have also alerted the potential deck scanning subconsultants that no vehicles will be required for this structure as only pedestrian access to the bridge is possible.

Condition evaluation of the deck will include a combination of GPR, IR and video; deck cores will also be taken. BLA will confirm the extent of repairs identified from scanning by using visual observation and sounding. Permanent protective shield will be installed at Home Avenue as part of a separate contract. The shielding will be installed over I-290, CTA and CSX.

Oak Park Avenue Bridge

The work for Oak Park Avenue will be limited to installing permanent protective shield over I-290 at locations where currently there is none. There are nine beam bays on this bridge; two bays already have older protective shield installed - the eastern bay and the second bay from the west. The westernmost bay and a portion of the northeast bay have new protective shield that was installed as part of 18-14.

East Avenue Bridge

This bridge was constructed in 1958. The bridge deck is seven inches thick with a 3.75 inch concrete overlay. The sidewalks are only six

inches thick and have two layers of reinforcing.

Condition evaluation of the deck will include a combination of GPR, IR and video; deck cores will also be taken. The sidewalk areas will also have IR scanning and video. BLA will confirm the extent of repairs identified from scanning by using visual observation and sounding. Replacing the deck joints will also be included.

Accurately determining the extent of full depth sidewalk repairs is an important consideration at this bridge for a number of reasons. Most important is the existing deck is not connected to the steel beams with shear studs as is done on a modern bridge. That means if enough of the sidewalk is removed, the remaining parapet and deck concrete under the parapet could become unstable. BLA has resolved this in the past by constructing concealed ties under sidewalk to ensure stability of the parapet when sidewalk is removed. The other reason for accurately determining full depth repair areas is to avoid change orders during construction that will also lead to time delays in construction.

Reconstructing the bridge sidewalk at the south end of the bridge in order to meet ADA requirements at the intersection will require full depth bridge sidewalk removal and replacement. This will require the installation of protective shield over the CSX tracks.

Permanent protective shield will be installed over all lanes of I-290. Protective shield will also be installed over the CTA and CSX as required in areas were full depth deck patching is anticipated based on bridge deck scanning or if full deck replacement is required for deck joint replacement or ADA ramp construction.

Lombard Avenue Bridge

This bridge was constructed in 1957. In 1990, the entire bridge deck was replaced with a 7.5 inch deck slab with no overlay. There are areas of deck and sidewalk delamination. The reinforcing steel in the sidewalk appears corroded even though the plans called for epoxy coated reinforcing steel. Condition evaluation of the deck will include a combination of IR, GPR and video; deck cores will not be taken. BLA will confirm the extent of repairs identified from scanning by using visual observation and sounding.

Ridgeland Avenue Bridge

The intent of our work here is to document the bridge deck deficiencies. The documentation will provide the Village the backup information necessary for the Village to request that IDOT make bridge deck repairs to a structure for which IDOT has the maintenance responsibility. Condition evaluation of the deck will be done using visual observations and sounding. BLA will prepare plans showing the recommended deck and sidewalk repair areas and quantities. We will also prepare a brief narrative of our work at the site and include photo exhibits of the deteriorated deck and sidewalk areas for the Village's use.

Construction Bid Package

We understand all work described above for the bridges is to be included in one package for contractor biding. The 19-14 construction project needs to stay on budget. As we develop the contract documents, we will continually update the construction cost estimate and keep the Village informed of where we stand relative to budgeted local funds. We understand the work at Lombard Avenue is subject to elimination from the package if necessary to meet the budget. BLA will provide the Village flexibility in eliminating or adding individual bridge items from the contract in order to keep the construction project under budget.

Traffic Control

Maintenance of traffic (MOT) is a key element because it impacts residents, businesses, emergency responders and commuters on a daily basis. In addition to impacting local Village roadways, the improvement also impacts

commuters on the Eisenhower Expressway, adding an additional complexity to MOT. BLA design and construction staff (***the same team from 18-14***) will take our experience from 18-14 and apply it to 19-14. There are several key aspects from 18-14 that carry over to 19-14.

Village Roadway MOT: First is the Village roadway MOT which will be implemented with standard IDOT details. The existing bridge width allows one lane of traffic in each direction while the outer lanes are closed for construction staging and contractor access to the sidewalk and parapets. In the plans, it will be detailed and special provisions written to indicate when the improvement to the ADA ramps, sidewalk and parapets occur; pedestrian traffic must be maintained through/around the construction zone. This will be achieved with temporary barrier to designate a walkway, temporary ramps and temporary drainage measures under the ramps. All these items will be specified within the contract to assist the contractor in accurately bidding the project.

Home Avenue: Home Avenue is anticipated to be closed throughout construction and this will be indicated in the contract plans via notes and necessary pay items. Indicated in the traffic control notes will be the opening date of the bridge prior to school beginning.

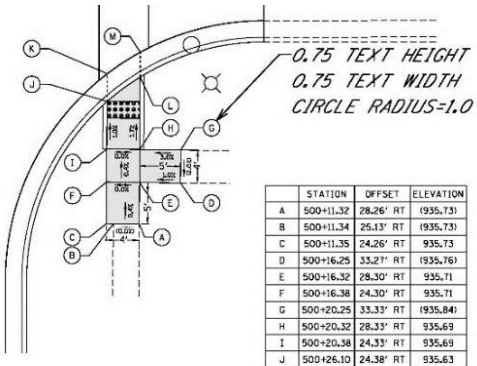
CTA Platform Access: Access to the CTA platform from the west side of East Avenue must remain accessible 24/7. Requirements will be included in the plans to ensure that happens in construction. Such requirements would be:

- → *Limiting sidewalk improvements to one side of the roadway at a time and providing direction signage for temporary routing to CTA access*
- → *Providing temporary crossings or platforms over the ADA ramp improvement locations*
- → *Using High Early Strength Concrete for the patching directly in front of the CTA access to lessen curing time*

I-290 Eisenhower Expressway: Night work is needed to install at a minimum the protective shielding under the bridges. This work will be performed from under the bridges on I-290 requiring temporary lane closures. A MOT engineering plan is not necessary as this work can be accomplished via IDOT Highway Standards; however, IDOT coordination is necessary to obtain the special provision to be inserted into the contract documents. This special provision obtained from Bill Weitzel indicates closure timeframes, blackout dates, such as sporting events, and penalties if the roadway is not opened in time. The main coordination regarding these closures will occur during the construction phase via the Resident Engineer and the contractor to call in advance of the closures for the request.

CTA and CSX Tracks: Each improvement location above the CTA and CSX and will require access to those agencies properties to install the protective shielding. The MOT necessary for the CTA and CSX will be implemented by each of those agencies via flaggers; however, coordination is essential to obtain the necessary documents and requirements to insert into the contract documents - all of which BLA has from 18-14.

The project may look great when completed, but the traveling public and the Village will remember the construction. While construction is always a nuisance, selecting a consultant with the *exact experience and knowledge* of working with the Village, CTA, CSX and IDOT all on one project, which BLA has, will provide a detailed traffic control specification in the design that will carry into construction. This ultimately will reduce the inconvenience during construction for everyone. The success is not just defined by the final product, but how we get there.



	STATION	OFFSET	ELEVATION
A	500+11.32	28.26' RT	(935.73)
B	500+11.34	25.13' RT	(935.73)
C	500+11.35	24.26' RT	935.73
D	500+16.25	33.27' RT	(935.76)
E	500+16.32	28.30' RT	935.71
F	500+16.38	24.30' RT	935.71
G	500+20.25	33.33' RT	(935.84)
H	500+20.32	28.33' RT	935.69
I	500+20.38	24.33' RT	935.69
J	500+26.10	24.38' RT	935.63
K	500+29.46'	24.40' RT	935.65
L	500+29.06	28.40' RT	935.54
M	500+32.05	28.42' RT	935.60

ADA Ramp Compliance

BLA has extensive experience in ADA ramp design which comes from completing 150+ ramps for the Village of River Forest and 250+ ramps for IDOT within the City of Chicago limits (within a two-month period). The best experience, however, has come from 18-14. After completing 18-14, we understand the constraints and challenges associated with the design development. BLA previously obtained topographic survey for East Avenue and performed ADA design on the south sidewalk ramps as part of 18-14. The key to a successful ADA design begins with the survey.

Survey cannot only be taken around the sidewalk ramp and curb line, it must extend into the roadway pavement. The spot grades shall be taken more frequently than typical on ADA ramps to reduce the assumed variation in elevation between spot grades.

The longitudinal running slope of the roadway is often greater than the maximum allowed slope for the ADA ramp landing; when this is the case, as on East Avenue and Lombard Avenue, available options include:

→ ***Crossing Location Adjustment***
If space and geometrics allow, the crossing may have potential to slightly shift off the bridge to a location where the slopes are more favorable to obtain ADA compliance

→ ***Roadway Patching***
The plans will indicate the location, size and material of roadway patching which allows the ADA ramp along the carbine and landing to meet the required maximum slopes by adjusting the roadway pavement slopes

→ ***Maximum Extent Practical (MEP)***
This method is not desired, but is available if the sidewalk ADA improvements cannot be obtained via the above methods. In this case, exhibits and forms would be competed and presented to IDOT for approval. BLA is familiar with this process as MEP was necessary in certain locations for the ADA ramp improvements we performed for IDOT at locations adjacent to buildings and existing roadway slopes and structures where the requirements could not be met.

Phase II Scope of Services

Topographic Survey

BLA has topographic survey of the East Avenue south ADA ramps from 18-14. This survey will be supplemented with additional shots within the ramp locations in order to accurately design the ramps to be compliant. The survey will consist of above ground shots only and extend past the corners to depict the proposed tie-in point. In addition, topographic survey will be obtained on the Lombard Avenue bridge to improve the ADA ramps. It is understood the only ramps requiring improvements are on East Avenue and Lombard Avenue across the adjacent roadway. Also, the ramps on the south side of East Avenue shall be the only ramps included for that bridge. Site benchmarks have already been set by our surveyor as required on our previous East Avenue survey. Aerial maps, existing bridge plans and site measurements will supplement the remaining survey necessary to prepare the plans.

Data Collection

BLA will obtain and review pertinent information from the Village including *existing bridge plans*, *existing topographic survey* and *bridge condition reports*; this information will be combined with the existing information BLA has from 18-14. BLA will not solely rely on the Village for information; we will obtain existing dry utility locations from the JULIE One-Call System and follow up via Atlas Request Letters. The keys to utility collection are determining the owner of any conduit attached to the underside of the bridge and if the facility is abandoned or operational. *We encountered this situation on 18-14 and have the direct utility personal contact information.* Right-of-way shown on the plans will be depicted via existing bridge plans and GIS maps.

Bridge Inspection

BLA will perform a site inspection of all bridges detailing and documenting the deficiencies to formulate the optimal solution. *BLA performed this work for the Home Avenue and East Avenue bridge*; an update will be necessary, but we would not be starting from scratch. To determine the limits of patching, BLA will sound the structure and results will be documented. To assist in the determination of the patching limits, ground penetrating radar will be utilized. In the process, deck cores will be taken to confirm the general condition and measure the amount of chloride contamination.

Agency Coordination/Meetings

As experienced on 18-14, coordination between all agencies is critical and a timely response from CTA and CSX is essential. BLA anticipates several meetings to complete this project as well as constant phone calls and emails to outside agencies; coordination will be essential.

→ ***Kick-Off Meeting with Village***
To start the project, BLA will attend a kick-off strategy meeting with the Village; this meeting will review the project design, details and proposed scope as compared to the budget. Backup and recommendations for any revision to the scope required to meet the Village's budget will be presented.

→ ***CSX/CTA Coordination Meeting***
Immediately after the kick-off meeting, BLA will schedule a coordination meeting (in-person/conference call) with CSX and CTA. This meeting will discuss the project and necessary duration required for flaggers to be provided by each agency. We also anticipate beginning the coordination and preparation process of the agreements.

→ ***IDOT Permit Coordination Meeting***
A permit coordination meeting with IDOT is anticipated to effectively obtain a permit. Upfront discussions will eliminate surprises and confusion when submitting the permit. Bill Weitzel will be the point of contact and the goal is to obtain the special provision from IDOT on the timeframe and limitations of closures on I-290.

→ ***Progress Coordination with Village***
As the design progresses, BLA foresees a possible meeting with the Village to discuss any necessary design changes/additions and to finalize the details prior to bidding. This is anticipated to occur after the first milestone submittal unless otherwise determined.

Throughout the design, BLA will be in constant contact with the Village, IDOT, CTA and CSX so all parties are aware of the plans and schedule. From our past experience with CTA and CSX, receiving a timely, concise response does not occur too often; therefore, if necessary, BLA will contact CTA and CSX at least once a week to avoid delaying the project. We have the information for the people who will be directly involved.

Detailed Design Plans and Specifications

BLA will prepare contract design plans that follow the latest Village and IDOT guidelines and requirements. Engineering plans will include:

- ✓ *Cover Sheet*
- ✓ *General Notes*
- ✓ *Summary of Quantities*
- ✓ *Alignment, Ties and Benchmarks*
- ✓ *Structural Improvement Plans*
- ✓ *ADA Ramp Design Plans*
- ✓ *Village and State Details/Standards*

BLA will prepare the specifications to include: *plan-specific special provisions, Village specifications, IDOT specifications, CTA and CSX requirements* and the *Village-supplied front-end documents*. At the time of the pre-final plans submittal, BLA will also submit the Village's Complete Streets Checklist.

Construction Cost Estimate

We understand the need for several iterations of cost estimating as part of the design. Initial estimates of cost will be conducted to provide the Village with a preliminary estimate to compare against their current budget and anticipated cost of construction. The estimate will be updated at each submittal and include all quantities and unit costs (based on past IDOT awarded unit costs). The underlying factor that will inflate the estimate of cost is accurately estimating the cost of permitting/flaggers from the CTA and CSX. From 18-14, we have these costs and will use them to accurately estimate the cost for this project.

Milestone Submittal/Project Deliverables

We understand the request for submittals at the 75%, 90% and 100% stage; however, because of the tight timeframe and to allow ample time for Village review, BLA proposes there be only two submittals – **prefinal and final.** Submitting plans three times within two months and allowing a fair timeframe for Village review is challenging. Nonetheless, BLA will be in constant communication with the Village and provide status update sets as requested.

- → *Submittals include engineering plans at 11x17 and 22x34, or a combination thereof, along with the specifications and estimate of cost at all submittals*
- → *The Village shall be provided with pdf digital files of 11x17 and 22x24 size and all MicroStation CAD files upon completion of the project*
- → *Bid sets will be provided (10-15 copies) to the Village*

The final submittal will be signed and sealed by a Registered Professional Engineer in the State of Illinois; both Structural and Civil.

Since it is anticipated that the Village's task of this improvement project is to review the design plans, BLA is understanding of the Village's busy schedule and would like to allow as much time as possible for Village review. This assumption can be revised upon project start.

Permits

BLA will work with IDOT, CTA and CSX to submit and secure permits and agreements. Through past experience with the CTA and CSX, the bulk of the permits/agreements do not occur during the design, but rather once the contract is awarded and a contractor has been determined (since their information and documents must accompany the agreements). During design, BLA will work to facilitate any advancement of the permits/agreements to the extent possible and utilize our existing contact information and relationships to assist. Any additional permits necessary will be identified and submitted by BLA.

Bidding Assistance

BLA will issue any construction contract addenda needed during the bidding process. Upon the bid opening, all proposals will be tabulated and reviewed by BLA to provide the Village with a recommendation for contract award.

Phase III Engineering

BLA has extensive bridge experience having worked on numerous bridge projects throughout the area. As you are aware, we are currently in the process of completing the 18-14 deck repairs on the Oak Park Bridge over I-290. The experience gained on that project will be a great benefit to the Village if we are fortunate enough to be selected for the proposed work on Home, East and Lombard Avenues. The biggest takeaway from 18-14 is the amount of pre-construction coordination required while working with CSX and CTA. Most of the work requires the contractor to provide a comprehensive work plan to each agency. Though all the submittals and right of entry applications are the contractor's responsibility, it is imperative the resident engineer is involved with each process and facilitates the communication between the contractor, CSX, CTA and Oak Park. This involvement will help ensure progress on the project stays on track and work gets completed prior to the anticipated completion date of November 27, 2019.

Kerry Field, P.E., our proposed Construction Manager, has extensive experience with IDOT expressway work and was the District 1 Expressway Construction Supervisor while at IDOT. He is very familiar with the lane closure requirements and will see to it that these critical

closures are planned in advance and approved. He has worked with the District 1 Expressway Traffic Engineers on several projects in the past. Kerry was the Senior Project Manager for the most recent IDOT resurfacing under these bridges while working for Plote Construction and has worked on this stretch of I-290 on several occasions. Kerry will guide our staff of engineers led by Resident Engineer **Mike Sienza** who brings with him extensive bridge construction experience. Mike has managed the construction of 29 bridges in his 40 year career - *from simple span bridges to bascule bridges, he has seen it all*. Like Kerry, Mike has a unique ability to foresee what contractors are thinking and mitigate issues before they arise. His knowledge of the specifications and experience in handling complicated issues while maintaining a professional attitude is well respected by contractors and engineers alike. **Darren Frawley, P.E.** has extensive bridge experience and is the Resident Engineer on 18-14. Darren will be utilized in a limited capacity on 19-14, but his 18-14 experience will lend itself well for this project.

Jon Daly will be a full-time inspector and has expressway and bridge inspection experience. Jon has been involved with 18-14 and is familiar with the work. He will be on site any time the contractor is working and inspect and document any work being performed. Mike will provide guidance and oversight to Jon and remedy any contract issues or changed conditions where experience will take precedence when making decisions that may impact the project budget; we anticipate Mike to be on site 30-40% of the time.

Construction

ADA standards have changed over the years with a recent emphasis on compliance and enforcement. ADA ramp construction is always an important part of a project. Darren Frawley, P.E. is very familiar with the newest ADA requirements and will ensure ramps are built correctly. After building many ADA compliant ramps, we have learned there is no substitution for an engineer with a digital level working hand-in-hand with the contactor while forming and pouring the ramps to make sure they go in correctly. It is essential the BLA engineer be there to check at both these points to get the ramp built correctly *the first time*. When contractors proceed on their own, things tend to go wrong. While the ramps are being replaced, it will be necessary to coordinate ramp removals to allow pedestrians to travel. In order to allow pedestrians to travel both directions during the project, BLA proposes signing and temporary aggregate walks. The sidewalk in front of the CTA access/station/stairs is in good shape on Oak Park and has recently been repaired on East Avenue. This will eliminate the need to worry about coordinating and controlling the pedestrian traffic that enters/exits - reducing the likelihood of someone tripping and getting hurt.

Before work can begin on the bridge decks, protective shielding (lagging) will need to be installed underneath the structures at East Avenue and Lombard Avenue. This work will require lane closures on I-290 and coordination with the CTA and CSX which will also require flaggers. Installing the protective shield over I-290 will be very straightforward once permits are issued and lane closures are approved. Standard lane closures will be utilized for this work: closing the outside right shoulder and outside lanes one night and the inside left shoulder and left lane the following night. This work should take two to three nights to complete. Nonetheless, installing the protective shielding over the CTA and CSX will take longer because of the limited timeframes allowed for working because work needs to stop when a train is approaching. Flagger availability can sometimes be an issue; we have experienced delays in the past waiting for flagger approval. Overall, the protective shield work could take two weeks to complete once the contractors work plan has been approved by the railroad.

Prior to any deck/sidewalk repairs, BLA will sound the concrete surface by hand method in order to determine the limits of concrete repairs (patching). If Ground Penetrating Radar (GPR) is used during the design phase to try and ascertain the level of deck deterioration, we will use this information as a guide, but also verify the location and size of the patch utilizing hand methods of

sounding the deck. It is imperative that we try and preserve concrete deck that is to remain in place. Utilizing small chipping hammers to perform partial depth repairs is critical to preserving the underlying concrete that is to remain.

The condition of the bridge deck at Lombard Avenue is in fairly good shape and we do not anticipate much deck patching outside of a few small partial depth patches. The east sidewalk, however, will need extensive repairs as evidenced by the delamination that is visible at the face of the curb; conversely, the west sidewalk is in very good condition and does not appear to need any repairs. ADA improvements will be required at three of the four corners. At the northeast corner, the sidewalk leads to a pedestrian crossing that is well north of the bridge. The East Avenue Bridge is in poor condition and will require some full depth patching, particularly at the north end where a large area of the deck has been filled with asphalt. Sidewalks are in poor condition and will require both partial and full depth repairs. Work on the sidewalk in front of the CTA entrance will need to be staged in order to accommodate CTA bus access and pedestrian movement. The Home Avenue bridge deck will require extensive concrete patching and replacement of the expansion joints at each end of the deck.

Utilities

There are utilities that need to be protected. Both East Avenue and Lombard Avenue have duct packages that run under the bridge between the beams. The contractor will need to use caution when installing protective shield and provide protection over the ducts during concrete removal operations so as not to let broken concrete fall onto the duct package. In addition, each ends of these bridge decks are signalized intersections; the contractor will need to use smaller chipping hammers when performing parapet repairs as it is likely there are ducts carrying lighting and signal cables inside the parapet.

Traffic Control

Immediately after the contract is executed, BLA will work with IDOT to get the permit approved for the lane closures needed on I-290 to install the protective shield. These lane closures will be performed at night and require IDOT approval. Once protective shield is in place and traffic control is implemented on Lombard and East Avenue, the bridge repairs and the joint replacement can begin. The existing traffic pattern on East Avenue will allow for the outside lanes to be closed simultaneously allowing the contractor to perform work on the bridge deck sidewalk, expansion joint, parapet and ADA improvements at the corners. When this work is completed, the middle lanes would be closed splitting traffic to the outside lanes in each direction allowing the contractor to complete the joint work and any deck patching in the middle of the deck.

Lombard Avenue requires a different approach to traffic control since this two lane bridge only provides 15 foot lanes in each direction. This will require the contractor to work on one side of the bridge at a time in order to maintain two lanes of traffic at all times. With minimal work anticipated for the west sidewalk, the contractor may want to consider using temporary striping to stage traffic with two 11 foot lanes shifted to the west side of the deck allowing for an eight foot work zone on the east side where all the repairs are located. The contractor may also consider implementing a one-way detour which would allow for one traffic lane to cross the bridge in one direction only while detouring traffic heading in the opposite direction to Austin Avenue or Ridgeland Avenue around the bridge construction.

The Home Avenue pedestrian bridge should be closed during construction. The number of deck repairs necessary to properly complete the work will make for unsafe conditions and not accommodate pedestrian traffic. BLA will ensure signing is in place well in advance of the closure so pedestrians who utilize this bridge on a regular basis have proper advance notice. At the end of each day, we will make sure the bridge entrances at both Harrison Street and Garfield Street are secured with barricades, proper signage is in place and the area is left in a safe condition.

Phase III Scope of Services

Preconstruction Meeting

Our Resident Engineer will schedule and lead the preconstruction meeting working with the Village to secure an appropriate time and meeting place. BLA will notify local agencies (IDOT, CSX, CTA, fire and police) along with any other identified stakeholders. BLA will provide the agenda unless the Village has a preferred format and document and prepare the minutes and secure any signatures from the awarded contractor on all necessary documents.

Public Communications

BLA understands that in general the Village will be the lead in communication between the residents and adjacent businesses; however, BLA staff members are capable of taking on the role to relieve the Village as necessary. We can serve as the Village's on-site everyday point of contact with residents, businesses and institutions. BLA is always available to attend public meetings and assist with the descriptions of work areas or contractor activities.

Progress Schedules

Contractor schedules reflect the most efficient and cost-effective method to preserve the *contractor's* bottom line; however, that may not be the best way to satisfy the *Village, residents, institutions or businesses*. BLA will review preliminary schedules and make sure the Village's needs are being met. To that end, BLA will promote language in the contract documents that details the Village's stance.

Progress Meetings

BLA will hold, facilitate and lead regularly scheduled progress meetings to keep the Village up to date on progress and promote the identification and resolution of potential issues. BLA generates agendas and minutes that detail the decisions made and the schedule for resolution on open items so issues are tracked until resolved. This process identifies both the individual responsible for the decision and the required date for resolution. Minutes also include logs of open requests for information, submittals and change orders.

Progress Reports

BLA will provide weekly reports to the Village to help monitor progress and locate areas requiring additional effort.

Progress Documentation

BLA follows standard IDOT procedures for documentation of construction activities. Staff will maintain diaries, field books and quantity records on IDOT-style forms. Field checks on all relevant materials will be performed and documented. Those records will include measurements and track any potential cost changes because of quantity overruns or extra work. All field staff proposed for this project is IDOT-Documentation certified.

Requests for Information and Submittal Reviews

BLA strives to return both RFIs and submittals to contractors within five working days. Understanding that contractors often find questions during ongoing operations, BLA uses prudent judgment and rapid escalation practices to explain situations, promote solutions and gather consensus so contractor activities can proceed.

Construction Staking

BLA resident engineers have the latest technology including GPS and other robotics to verify elevations and ensure proper placement of proposed facilities and confirm lot corners for potentially vocal residents who may request demarcation between private property and Village right-of-way. Our staff constantly verifies the contractors staking to ensure the proper elevations are met and placement of items is accurate.

Construction Photography

Digital photos provide an easy way to store and retrieve a visual record of both standard work items and extra work. Photos also serve to document the 'before' and 'after' condition of properties adjacent to the work areas. BLA will provide the Village with regular photo updates for use on websites or in reports and provide digital storage of all photos at the end of each season.

Pay Estimate Preparation and Review

Before sending to the Village for approval, BLA will review the contractor's pay estimate and confirm the quantities proposed for payment match documented records. Adjustments will be made and sent back to the contractor if (and when) discrepancies are identified. Once BLA and the contractor agree, the pay estimate will be forwarded to the Village for approval.

Punch List and Final Walk-Thru

Prior to Village acceptance of the project, BLA will walk the project and identify items to be addressed as part of the punch list. These items generally include adjustments of utilities to final grade (hydrant grade rings, inlet structures) and damaged curb or sidewalk, but are specific to each site. Once the punch list has been assembled and reviewed by the Village, it will be transmitted to the contractor and followed up with to ensure satisfactory completion. A final walk-thru will be conducted to confirm all work has been completed.

Record Drawings

BLA will revise the contract documents to reflect the as-constructed conditions and quantities. Those documents will be delivered as electronic files in the Village's preferred format.

Change Orders

Both BLA and the Village understand that extra work is a potential part of the construction process. BLA works to monitor changes in quantity to keep the contract in balance and provide contractors with prompt payment for their work. BLA also strives to identify potential added work with enough advance notice to allow for review and approval by the Village before contractors are forced to delay operations.

Project Closeout

A timely closeout is critical to minimize the time the project is carried on Village accounts. We do not want this project sitting on the Village's books for years into the future; contractors are often slow to provide material certifications and we are continually requesting these documents. As these contractors move from job to job and key people change, these simple documents and tickets become more difficult to obtain the longer it remains active. *We always strive to follow the ABCs of closeout – **A**lways **Be** **C**losing.*

RESPONDENT CERTIFICATION

PROPOSAL SIGNATURE: _____

State of Illinois)

County of DuPage)

Daniel B.Bruckelmeyer ,

TYPE NAME OF SIGNEE

being first duly sworn on oath deposes and says that the Respondent on the above proposal is organized as indicated below and that all statements herein made on behalf of such Respondent and that this deponent is authorized to make them, and also deposes and says that he has examined and carefully prepared their bid proposal from the Contract Exhibits and Specifications and has checked the same in detail before submitting this proposal or bid; that the statements contained herein are true and correct.

Signature of Respondent authorizes the Village of Oak Park to verify references of business and credit at its option.

Signature of Respondent shall also be acknowledged before a Notary Public or other person authorized by law to execute such acknowledgments.

Dated 03-01-2019

BLA, Inc.

Organization Name

(Seal - If Corporation)

By _____

Authorized Signature

333 Pierce Road, Suite 200 - Itasca, IL 60143

Address

630-438-6400

Telephone

Subscribed and sworn to before me this 1st day of March, 2019.

_____

In the state of Illinois. Notary Public

My Commission Expires: 01-31-2020

OFFICIAL SEAL
KATHLEEN FORMAS
NOTARY PUBLIC - STATE OF ILLINOIS
MY COMMISSION EXPIRES:01/31/20

(Fill Out Applicable Paragraph Below)

(a) Corporation

The Respondent is a corporation, which operates under the legal name of

BLA, Inc.

and is organized and existing under the laws of the State of

Illinois.

The full names of its Officers are:

President ___Dan Bruckelmeyer_____
Secretary ___Joel Ihde_____
Treasurer ___Laura Schimek_____

The corporation does have a corporate seal. (In the event that this bid is executed by a person other than the President, attach hereto a certified copy of that section of Corporate By-Laws or other authorization by the Corporation which permits the person to execute the offer for the corporation.)

(b) Partnership

Name, signature, and addresses of all Partner

_____
_____
_____
_____

The partnership does business under the legal name of _____ which name is registered with the office of _____ in the county of _____ in the state of _____.

(c) Sole Proprietor

The Respondent is a Sole Proprietor whose full name is _____.
If the Respondent is operating under a trade name said trade name is _____ which name is registered with the office of _____ in the county of _____ in the state of _____.

Signed _____
Sole Proprietor

Attachment I. **RESPONDENT CERTIFICATION**

BLA, Inc., as part of its bid on a contract for
(name of Respondent)

Professional Engineering Services for Design and Construction Engineering for the 18-14 Bridge Deck Repair Project at Home, Oak Park, and East Avenues to the Village of Oak Park, hereby certifies that said Respondent is not barred from bidding on the aforementioned contract as a result of a violation to either Section 33E-3 or 33E-4 of Article 33E of Chapter 38 of the Illinois Revised Statutes or Section 2-6-12 of the Oak Park Village Code relating to "Bidding Requirements".

By:_____
(Authorized Agent of Respondent)

Subscribed and sworn to
before me this 1st day
of March, 2019

_____
(Notary Public)

OFFICIAL SEAL
KATHLEEN FORMAS
NOTARY PUBLIC - STATE OF ILLINOIS
MY COMMISSION EXPIRES:01/31/20

Attachment II. TAX COMPLIANCE AFFIDAVIT

Daniel B. Bruckelmeyer, being first duly sworn, deposes and says:

that he/she is President and Chief Executive Officer of
(partner, officer, owner, etc.)

BLA, Inc.
(bidder selected)

The individual or entity making the foregoing proposal or proposal certifies that he/she is not barred from entering into an agreement with the Village of Oak Park because of any delinquency in the payment of any tax administered by the Department of Revenue unless the individual or entity is contesting, in accordance with the procedures established by the appropriate revenue act, liability for the tax or the amount of the tax. The individual or entity making the proposal or proposal understands that making a false statement regarding delinquency in taxes is a Class A Misdemeanor and, in addition, voids the agreement and allows the municipality to recover all amounts paid to the individual or entity under the agreement in civil action.

By: Daniel B. Bruckelmeyer
Its: President and Chief Executive Officer

(name of bidder if the bidder is an individual)
(name of partner if the bidder is a partnership)
(name of officer if the bidder is a corporation)

The above statement must be subscribed and sworn to before a notary public.

Subscribed and sworn to before me this 1st day of March, 2019.

Notary Public's Signature - Notary Public Seal -

OFFICIAL SEAL
KATHLEEN FORMAS
NOTARY PUBLIC - STATE OF ILLINOIS
MY COMMISSION EXPIRES:01/31/20

Minority Business and Women Business Enterprises Requirements

The Village of Oak Park in an effort to reaffirm its policy of non-discrimination, encourages and applauds the efforts of bidders and subConsultants in taking affirmative action and providing Equal Employment Opportunity without regard to race, religion, creed, color, sex, national origin, age, handicap unrelated to ability to perform the job or protected veteran's status.

Reporting Requirements

The following forms must be completed in their entirety, notarized and included as part of the proposal document. Failure to respond truthfully to any question on the list or failure to cooperate fully with further inquiry by the Village of Oak Park will result in disqualification of your proposal.

Attachment III. ORGANIZATION OF BIDDING FIRM

Please fill out the applicable section:

A. Corporation:

The Consultant is a corporation, legally named BLA, Inc. and is organized and existing in good standing under the laws of the State of Illinois. The full names of its Officers are:

President Dan Bruckelmeyer

Secretary Joel Ihde

Treasurer Laura Schimek

Registered Agent Name and Address: Dan Bruckelmeyer; 333 Pierce Road, Suite 200 - Itasca, Illinois 60143

The corporation has a corporate seal. (In the event that this Bid is executed by a person other than the President, attach hereto a certified copy of that section of Corporate By-Laws or other authorization by the Corporation that permits the person to execute the offer for the corporation.)

B. Sole Proprietor:

The Consultant is a Sole Proprietor. If the Consultant does business under an Assumed Name, the

Assumed Name is _____, which is registered with the Cook County Clerk. The Consultant is otherwise in compliance with the Assumed Business Name Act, 805 ILCS 405/0.01, et. seq.

C. Partnership:

The Consultant is a Partnership which operates under the name _____

The following are the names, addresses and signatures of all partners:

_____ _____

_____ _____

Signature Signature

(Attach additional sheets if necessary.) If so, check here _____.

If the partnership does business under an assumed name, the assumed name must be registered with the Cook County Clerk and the partnership is otherwise in compliance with the Assumed Business Name Act, 805 ILCS 405/0.01, et. seq.

D. Affiliates: The name and address of any affiliated entity of the business, including a

description of the affiliation: _____

_____

Signature of Owner

Attachment IV. Compliance Affidavit

I, Dan Bruckelmeyer being first duly sworn on oath depose and state as follows:

(Print Name)

1. I am the (title) President and Chief Executive Officer of the Proposing Firm ("Firm") and am authorized to make the statements contained in this affidavit on behalf of the Firm.
2. The Firm is organized as indicated on Exhibit A to this Affidavit, entitled "Organization of Proposing Firm," which Exhibit is incorporated into this Affidavit as if fully set forth herein.
3. I have examined and carefully prepared this proposal based on the Request for Proposals and verified the facts contained in the proposal in detail before submitting it.
4. I authorize the Village of Oak Park to verify the Firm's business references and credit at its option.
5. Neither the Firm nor its affiliates[1] are barred from proposing on this project as a result of a violation of 720 ILCS 5/33E-3 or 33E-4 relating to bid rigging and bid rotating, or Section 2-6-12 of the Oak Park Village Code related to "Proposing Requirements".
6. The Proposing Firm has the M/W/DBE status indicated below on the form entitled "EEO Report."
7. Neither the Firm nor its affiliates is barred from agreement with the Village of Oak Park because of any delinquency in the payment of any debt or tax owed to the Village except for those taxes which the Firm is contesting, in accordance with the procedures established by the appropriate revenue act, liability for the tax or the amount of the tax. I understand that making a false statement regarding delinquency in taxes is a Class A Misdemeanor and, in addition, voids the agreement and allows the Village of Oak Park to recover all amounts paid to the Firm under the agreement in a civil action.
8. I am familiar with Section 13-3-2 through 13-3-4 of the Oak Park Village Code relating to Fair Employment Practices and understand the contents thereof; and state that the Proposing Firm is an "Equal Opportunity Employer" as defined by Section 2000(E) of Chapter 21, Title 42 of the United States Code Annotated and Federal Executive Orders #11246 and #11375 which are incorporated herein by reference. **Also complete the attached EEO Report or Submit an EEO-1.**
9. I certify that the Consultant is in compliance with the Drug Free Workplace Act, 41 U.S.C.A, 702.

[1] Affiliates means: (i) any subsidiary or parent of the bidding or contracting business entity, (ii) any member of the same unitary business group; (iii) any person with any ownership interest or distributive share of the bidding or contracting business entity in excess of 7.5%; (iv) any entity owned or controlled by an executive employee, his or her spouse or minor children of the bidding or contracting business entity.

Signature:  Printed Name Daniel B. Bruckelmeyer

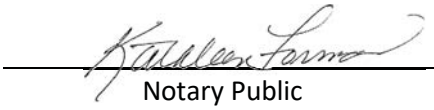
Name of Business: BLA, Inc. Your Title: President and Chief Executive Officer

Business Address: 333 Pierce Road, Suite 200 Itasca, Illinois 60143

(Number, Street, Suite #) (City, State & Zip)

Telephone: 630-438-6400 Fax: 630-438-6444 Web Address: www.bla-inc.com

Subscribed to and sworn before me this 1st day of March, 2019.



Notary Public

M/W/DBE STATUS AND EEO REPORT

1. Consultant Name: BLA, Inc.

2. Check here if your firm is:

   ☐ Minority Business Enterprise (MBE) (A firm that is at least 51% owned, managed and controlled by a Minority.)

   ☐ Women's Business Enterprise (WBE) (A firm that is at least 51% owned, managed and controlled by a Woman.)

   ☐ Owned by a person with a disability (DBE) (A firm that is at least 51% owned by a person with a disability)

   ☑ None of the above

   [Submit copies of any W/W/DBE certifications]

3. What is the size of the firm's current stable work force?

   42 Number of full-time employees

   3 Number of part-time employees

4. Similar information will be requested of all subConsultants working on this agreement. Forms will be furnished to the lowest responsible Consultant with the notice of agreement award, and these forms must be completed and submitted to the Village before the execution of the agreement by the Village.

Signature: 

Date: March 1, 2019

Failure to respond truthfully to any questions on this form, failure to complete the form or failure to cooperate fully with further inquiry by the Village of Oak Park will result in disqualification of this Bid. For assistance in completing this form, contact the Department of Public Works at 708-358-5700.

EEO REPORT

Please fill out this form completely. Failure to respond truthfully to any questions on this form, or failure to cooperate fully with further inquiry by the Village of Oak Park will result in disqualification of this proposal. An incomplete form will disqualify your proposal. For assistance in completing this form, contact the Purchasing Department at 708-358-5473.

An EEO-1 Report may be submitted in lieu of this report

Consultant Name BLA, Inc.
Total Employees 45

Job Categories	*Total Employees*	*Total Males*	*Total Females*	*Males*				*Females*				*Total Minorities*
				Black	*Hispanic*	*American Indian & Alaskan Native*	*Asian & Pacific Islander*	*Black*	*Hispanic*	*American Indian & Alaskan Native*	*Asian & Pacific Islander*	
Officials & Managers	-	-	-	-	-	-	-	-	-	-	-	-
Professionals	32	30	2	-	1	-	3	1	-	-	-	5
Technicians	6	6	-	-	-	-	-	-	-	-	-	-
Sales Workers	-	-	-	-	-	-	-	-	-	-	-	-
Office & Clerical	4	-	4	-	-	-	-	-	1	-	-	1
Semi-Skilled	-	-	-	-	-	-	-	-	-	-	-	-
Laborers	-	-	-	-	-	-	-	-	-	-	-	-
Service Workers	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	-	-	-	-	-	-	-	-	-	-	-	-
Management Trainees	-	-	-	-	-	-	-	-	-	-	-	-
Apprentices	3	2	1	-	-	-	-	-	-	-	-	-

This completed and notarized report must accompany your Proposal. It should be attached to your Affidavit of Compliance. Failure to include it with your Proposal will be disqualify you from consideration.

Daniel B. Bruckelmeyer, *being first duly sworn, deposes and says that he/she is the* President and Chief Executive Officer
(Name of Person Making Affidavit) *(Title or Officer)*
of BLA, Inc. *and that the above EEO Report information is true and accurate and is submitted with the intent that it*

be relied upon. Subscribed and sworn to before me this 1st *day of* March, *2019.*

(Signature) 03-01-2019 *(Date)*

CONSULTING ENGINEERS

BLA, Inc.

Office Locations

Corporate Office
333 Pierce Road
Suite 200
Itasca, IL 60143
630-438-6400
Fax 630-438-6444

Indianapolis Office
8720 Castle Creek Parkway
Suite 329
Indianapolis, IN 46250
317-842-4500
Fax 317-842-4506

Fee Summary Table
19-14 Bridge Deck Repair Project

Phase II - Design Engineering		
Scope of Work	***BLA + Subconsultant Fee***	
Base Scope of Work: Bridge Repair, ADA Ramp Design, Topographic Survey	$	42,065.00
Ground Penetrating Radar Services & Deck Cores	$	25,678.00
Total Phase II	**$**	**67,743.00**
Phase III - Construction Inspection		
Scope of Work	***BLA + Subconsultant Fee***	
Base Scope of Work: Construction Inspection (Resident Engineer & Inspector)		
Total Phase III	**$**	**67,953.00**
Total Engineering Fee	***$***	***135,696.00***

PAYROLL ESCALATION TABLE
ANNIVERSARY RAISES

FIRM NAME	BLA, INC.	**DATE**	03/01/19
PRIME/SUPPLEMENT	BLA, INC.	**PTB-ITEM #**	0
Prepared By	Matthew Cesario		

CONTRACT TERM	4	**MONTHS**	**OVERHEAD RATE**	104.18%
START DATE	4/1/2019		**COMPLEXITY FACTOR**	0
RAISE DATE	ANNIVERSARY		**% OF RAISE**	3.00%

ESCALATION PER YEAR

DETERMINE THE MID POINT OF THE AGREEMENT

2

CACULATE THE ESCALATION FACTOR TO THE MIDPOINT OF THE CONTRACT

0.50%

The total escalation for this project would be: 0.50%

PAYROLL RATES

FIRM NAME BLA, INC. **DATE** 03/01/19
PRIME/SUPPLEMENT BLA, INC.
PTB-ITEM # 0

ESCALATION FACTOR **0.50%**

Note: Rates should be capped on the AVG 1 tab as necessary

CLASSIFICATION	IDOT PAYROLL RATES ON FILE	CALCULATED RATE
Dir. Structural Engineering	$70.00	$70.35
Project Manager	$52.29	$52.55
Structural Engineer	$31.52	$31.68

COST PLUS FIXED FEE
COST ESTIMATE OF CONSULTANT SERVICES

FIRM	**BLA, INC.**		**DATE**	**03/01/19**
PTB-ITEM#	**0**	**OVERHEAD RATE**	**104.18%**	
PRIME/SUPPLEMENT	**BLA, INC.**	**COMPLEXITY FACTOR**	**0**	

DBE DROP BOX	ITEM	MANHOURS (A)	PAYROLL (B)	OVERHEAD & FRINGE BENF (C)	DIRECT COSTS (D)	FIXED FEE (E)	SERVICES BY OTHERS (G)	DBE TOTAL (H)	TOTAL (B-G)	% OF GRAND TOTAL
	Bridge Inspection	18	915	953		339		-	2,207	5.25%
	Pre-Final Engineering	168	7,898	8,229	14	2,922		-	19,063	45.32%
	Final Engineering	88	4,556	4,746	84	1,686		-	11,072	26.32%
	Permits	40	2,102	2,190		778		-	5,070	12.05%
	Meetings	12	735	766	180	272		-	1,953	4.64%
	Topographic Survey		-	-		-	2,700	-	2,700	6.42%
	Ground Penetrating Radar		-	-		-		-	-	0.00%
			-	-		-		-	-	
			-	-		-		-	-	
			-	-		-		-	-	
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	Subconsultant DL					0			-	
	TOTALS	326	16,206	16,884	278	5,997	2,700	-	42,065	100.00%
			33,090							

DBE 0.00%

AVERAGE HOURLY PROJECT RATES

FIRM BLA, INC.
PTB-ITEM# 0
PRIME/SUPPLEMENT BLA, INC.

DATE 03/01/19

SHEET 1 OF 5

PAYROLL CLASSIFICATION	AVG HOURLY RATES	TOTAL PROJ. RATES			Bridge Inspection			Pre-Final Engineering			Final Engineering			Permits			Meetings		
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Dir. Structural Engineering	70.00	75.0	23.01%	16.10	9	50.00%	35.00	40	23.81%	16.67	20	22.73%	15.91				6	50.00%	35.00
Project Manager	52.55	144.0	44.17%	23.21				50	29.76%	15.64	48	54.55%	28.66	40	100.00%	52.55	6	50.00%	26.28
Structural Engineer	31.68	107.0	32.82%	10.40	9	50.00%	15.84	78	46.43%	14.71	20	22.73%	7.20						
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TOTALS		326.0	100%	$49.71	18.0	100.00%	$50.84	168.0	100%	$47.01	88.0	100%	$51.77	40.0	100%	$52.55	12.0	100%	$61.28

AVERAGE HOURLY PROJECT RATES

FIRM BLA, INC.
PTB-ITEM # 0
PRIME/SUPPLEMENT BLA, INC.

DATE 03/01/19

SHEET 2 **OF** 5

PAYROLL CLASSIFICATION	AVG HOURLY RATES	Topographic Survey			Ground Penetrating Radar														
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Dir. Structural Engineering	70.00																		
Project Manager	52.55																		
Structural Engineer	31.68																		
TOTALS		0.0	0%	$0.00	0.0	0%	$0.00	0.0	0%	$0.00	0.0	0%	$0.00	0.0	0%	$0.00	0.0	0%	$0.00

BLA Manhours
PROJECT: 19-14 Bridge Deck Repair Project (Design)
Oak Park
Home Avenue, East Avenue, Lombard Avenue

Design Engineering Manhours - Phase II

ITEM	# OF SHEETS	MH PER SHEET	TOTAL MH'S
PHASE II - PLAN SET			
Title Sheet	1	2	2
General Notes, Index, Standards	1	2	2
Summary of Quantities	3	6	18
Alignment, Ties, and Benchmarks	1	4	4
ADA Ramps Detail Sheets			40
Structural Plans			176
Estimate of Cost			8
Specifications			24
PHASE II - ADDITIONAL REQUIREMENTS			
Permits			40
Meetings (See Back Up Sheet)			12
		TOTAL	**326**

BLA Manhours
PROJECT: 19-14 Bridge Deck Repair Project (Design)
Oak Park
Home Avenue, East Avenue, Lombard Avenue

Meeting Manhours - Phase II

Meetings

Phase II Village Kick-Off Meeting	1 mtg @ 2 hrs @ 2 people	4
Phase II Permit Meeting	1 mtg @ 2 hrs @ 2 people	4
Phase II Village Progress Meeting	1 mtg @ 2 hrs @ 2 people	4

Total 12

BLA Manhours
PROJECT: 19-14 Bridge Deck Repair Project (Design)
Village of Oak Park
Home Avenue, East Avenue, Lombard Avenue

Direct Cost - Phase II

	Sheets	Sets	$/Sht			
90% PRE-FINAL PLANS - Village						
Quarter size plans (11x17) - 2 Village	20	2	$0.10	=	$	4.00
Special provisions and Estimates - 2 Village	50	2	$0.10	=	$	10.00
Pre-Final Total					$	14.00
100% FINAL PLANS - Village / Bidding						
Quarter size plans (11x17) - 2 Village / 10 Bidding	20	12	$0.10	=	$	24.00
Special provisions and Estimates - 2 Village / 10 Bidding	50	12	$0.10	=	$	60.00
Final Total					$	84.00
VEHICLES						
4 Vehicle Days x $45.00/day (1 site visit / 3 meetings)		=			$	180.00
Grand Total					**$**	**278.00**

Home, Oak Park, East, Lombard, and Ridgeland Avenues

Structural Engineering Manhours - Phase II

Item	Director of Structural Engineering	Structural Engineer	Total Manhours
Structural Plans			
Home Avenue GPE (Revisions)	2	2	4
Home Avenue Deck Repair Plans	2	8	10
Home Avenue Site Visit	2	2	4
Oak Park Avenue GPE (Revisions)	2	4	6
Oak Park Avenue Protective Shield Details	2	4	6
Oak Park Avenue Site Visit	1	1	2
East Avenue GPE (Revisions)	2	4	6
East Avenue Deck Repair Plans	2	8	10
East Avenue Deck 2 ADA Ramps (On Bridge)	6	12	18
East Avenue Deck Joint Details (Revisions)	4	8	12
East Avenue Protective Shield Details	4	8	12
East Avenue Site Visit	2	2	4
Lombard Avenue GPE	4	12	16
Lombard Avenue Deck Repairs	2	8	10
Lombard Avenue Sidewalk Repairs	2	4	6
Lombard Avenue Parapet Repairs	2	4	6
Lombard Avenue Joint Repair Details	2	8	10
Lombard Avenue Site Visit	2	2	4
Ridgeland Avenue Concept GPE	2	8	10
Ridgeland Avenue Concept Repair Areas and Details	2	4	6
Ridgeland Avenue Site Visit	2	2	4
Coordination with Deck Scanning Service	6	4	10
		TOTAL	**176**

File Location:
H:\PROPOSALS\01 GOVERNMENT & MUNICIPAL PROPOSALS\Oak Park, Village of\2019-03-06_design and construction_bridge deck repairs_Home, East, Lombard Avenues\Fee

PAYROLL ESCALATION TABLE
FIXED RAISES

FIRM NAME	**BLA, Inc.**	**DATE**	**03/01/19**
PRIME/SUPPLEMENT	**Prime**	**PTB-ITEM#**	**0**
Prepared By	**Kerry Field**		

CONTRACT TERM	**6**	**MONTHS**	**OVERHEAD RATE**	**104.18%**
START DATE	**7/1/2019**		**COMPLEXITY FACTOR**	**0**
RAISE DATE	**1/1/2020**		**% OF RAISE**	**3%**
END DATE	12/31/2019			

ESCALATION PER YEAR

year	First date	Last date	Months	% of Contract
0	7/1/2019	12/31/2019	6	100.00%

The total escalation = 0.00%

PAYROLL RATES

FIRM NAME BLA, Inc. **DATE** 03/01/19
PRIME/SUPPLEMENT Prime
PTB-ITEM # 0

ESCALATION FACTOR **0.00%**

Note: Rates should be capped on the AVG 1 tab as necessary

CLASSIFICATION	IDOT PAYROLL RATES ON FILE	CALCULATED RATE
Director of Constr Engnrg	$70.00	$70.00
Resident Engineer	$42.11	$42.11
Construction Engineer	$30.67	$30.67

COST PLUS FIXED FEE
COST ESTIMATE OF CONSULTANT SERVICES

Bureau of Design and Environment
Prepared By: Consultant

FIRM BLA, Inc. **DATE** 03/01/19

PTB-ITEM # 0 **OVERHEAD RATE** 104.18%

PRIME/SUPPLEMENT Prime **COMPLEXITY FACTOR** 0

DBE DROP BOX	ITEM	MANHOURS (A)	PAYROLL (B)	OVERHEAD & FRINGE BENF (C)	DIRECT COSTS (D)	FIXED FEE (E)	SERVICES BY OTHERS (G)	DBE TOTAL (H)	TOTAL (B-G)	% OF GRAND TOTAL
	Director of Constr Engnrg		-	-		-		-	-	0.00%
	Resident Engineer	240	10,106	10,529	1,950	3,739		-	26,324	38.74%
	Construction Engineer	496	15,212	15,848	4,940	5,629		-	41,629	61.26%
			-	-		-		-	-	
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	Subconsultant DL					0			-	
	TOTALS	736	25,318	26,377	6,890	9,368	-	-	67,953	100.00%
			51,695							

DBE 0.00%

AVERAGE HOURLY PROJECT RATES

FIRM BLA, Inc.
PTB-ITEM# 0
PRIME/SUPPLEMENT Prime

DATE 03/01/19

SHEET 1 OF 5

PAYROLL CLASSIFICATION	AVG HOURLY RATES	TOTAL PROJ. RATES			Director of Constr Engnrg			Resident Engineer			Construction Engineer								
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Director of Constr Engnrg	70.00	0.0			0														
Resident Engineer	42.11	240.0	32.61%	13.73				240	100.00%	42.11									
Construction Engineer	30.67	496.0	67.39%	20.67							496	100.00%	30.67						
		0.0																	
		0.0																	
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TOTALS		736.0	100%	$34.40	0.0	0.00%	$0.00	240.0	100%	$42.11	496.0	100%	$30.67	0.0	0%	$0.00	0.0	0%	$0.00

Illinois Department of Transportation

Direct Costs Check Sheet

COMPANY NAME: BLA, INC.

PTB NUMBER: Oak Park - 19-14 Bridge Deck Repairs

TODAY'S DATE: 2/19/2019

ITEM	ALLOWABLE	UTILIZE W.O. ONLY	QUANTITY J.S. ONLY	CONTRACT RATE	TOTAL
Per Diem (per GOVERNOR'S TRAVEL CONTROL BOARD)	Up to state rate maximum			$0.00	$0.00
Lodging (per GOVERNOR'S TRAVEL CONTROL BOARD)	Actual cost (Up to state rate maximum)			$0.00	$0.00
Lodging Taxes and Fees (per GOVERNOR'S TRAVEL CONTROL BOARD)	Actual cost			$0.00	$0.00
Air Fare	Coach rate, actual cost, requires minimum two weeks' notice, with prior IDOT approval			$0.00	$0.00
Vehicle Mileage (per GOVERNOR'S TRAVEL CONTROL BOARD)	Up to state rate maximum			$0.000	$0.00
Vehicle Owned or Leased	$32.50/half day (4 hours or less) or $65/full day		106	$65.00	$6,890.00
Vehicle Rental	Actual cost (Up to $55/day)			$0.00	$0.00
Tolls	Actual cost			$0.00	$0.00
Parking	Actual cost			$0.00	$0.00
Overtime	Premium portion (Submit supporting documentation)			$0.00	$0.00
Shift Differential	Actual cost (Based on firm's policy)			$0.00	$0.00
Overnight Delivery/Postage/Courier Service	Actual cost (Submit supporting documentation)			$0.00	$0.00
Copies of Deliverables/Mylars (In-house)	Actual cost (Submit supporting documentation)			$0.00	$0.00
Copies of Deliverables/Mylars (Outside)	Actual cost (Submit supporting documentation)			$0.00	$0.00
Project Specific Insurance	Actual cost			$0.00	$0.00
Monuments (Permanent)	Actual cost			$0.00	$0.00
Photo Processing	Actual cost			$0.00	$0.00
2-Way Radio (Survey or Phase III Only)	Actual cost			$0.00	$0.00
Telephone Usage (Traffic System Monitoring Only)	Actual cost			$0.00	$0.00
CADD	Actual cost (Max $15/hour)			$0.00	$0.00
Web Site	Actual cost (Submit supporting documentation)			$0.00	$0.00
Advertisements	Actual cost (Submit supporting documentation)			$0.00	$0.00
Public Meeting Facility Rental	Actual cost (Submit supporting documentation)			$0.00	$0.00
Public Meeting Exhibits/Renderings & Equipment	Actual cost (Submit supporting documentation)			$0.00	$0.00
Recording Fees	Actual cost			$0.00	$0.00
Transcriptions (specific to project)	Actual cost			$0.00	$0.00
Courthouse Fees	Actual cost			$0.00	$0.00
Storm Sewer Cleaning and Televising	Actual cost (Requires 2-3 quotes with IDOT approval)			$0.00	$0.00
Traffic Control and Protection	Actual cost (Requires 2-3 quotes with IDOT approval)			$0.00	$0.00
Aerial Photography and Mapping	Actual cost (Requires 2-3 quotes with IDOT approval)			$0.00	$0.00
Utility Exploratory Trenching	Actual cost (Requires 2-3 quotes with IDOT approval)			$0.00	$0.00
Testing of Soil Samples*	Actual cost			$0.00	$0.00
Lab Services*	Actual cost (Provide breakdown of each cost)			$0.00	$0.00
Equipment and/or Specialized Equipment Rental*	Actual cost (Requires 2-3 quotes with IDOT approval)			$0.00	$0.00
				$0.00	$0.00
				$0.00	$0.00
				$0.00	$0.00
				$0.00	$0.00
				$0.00	$0.00
				$0.00	$0.00
				$0.00	$0.00
				$0.00	$0.00
				$0.00	$0.00
TOTAL DIRECT COST					$6,890.00

If other allowable costs are needed and not listed, please add in the above spaces provided.

LEGEND

W.O. = Work Order

J.S. = Job Specific

19-14 Bridge Deck Repairs, Home, East, and Lombard Avenues

Village of Oak Park

Request for Proposal

BLA, Inc.

Phase III - Projected Monthly Manpower Schedule

Month Number		1	2	3	4	5	6	7	8	9	10	11	12	13	14	Total Hours
										2019						
BLA, Inc.	*Month of*	*01/10/18*	*02/01/18*	*03/01/18*	*04/01/18*	*05/01/18*	*06/01/18*	*07/01/18*	*08/01/18*	*09/01/18*	*10/01/18*	*11/01/18*	*12/01/18*	*01/01/19*	*02/01/19*	
																0
Director of Const Eng (PM)																0
Resident Engineer (RE)								40	40	40	40	40	40			240
Construction Engineer								32	80	128	128	128				496
																0
																0
																0
Totals		0	0	0	0	0	0	72	120	168	168	168	40	0	0	736
Cummulative Manhours		0	0	0	0	0	0	72	192	360	528	696	736	736	736	
Multiplier		**0.0000**														
Vehicle Days								9	20	24	24	24	5	0	0	106
																Vehicle Days

DIRECT COSTS

Vehicle Costs	Days	Total	Days		
	$65.00 /Day	106	Days		$6,890.00
Phone/ Radio	/Mo	0	Mo	$	-
Printing	0 $ 1.00 each			$	-
Web Site Establishment				$	-
					$6,890.00

Infrared Scanning of Decks Carrying Home Avenue, East Avenue, and Lombard Avenue over Interstate-290

submitted to

BLA, Inc.
333 Pierce Road, Suite 200
Itasca, IL 60143

by

Infrasense, Inc.
21-G Olympia Avenue, Suite 45
Woburn, MA 01801

February 28, 2019

1. Introduction

The overall purpose of this project is to evaluate the condition of the bridge decks carrying Home Avenue, East Avenue, and Lombard Avenue over Interstate-290. The deck condition evaluations will be carried out utilizing infrared thermography (IR) and high-resolution visual (HRV) equipment. For the East Avenue and Lombard Avenue surveys, the equipment will be mounted to a survey vehicle and collected at normal driving speeds; whereas the Home Avenue survey will be carried out using a walkalong survey. An optional ground penetrating radar (GPR) survey may be carried out for each deck. The IR, HRV, and optional GPR datasets will be analyzed to quantify and map rebar-level delamination, concrete deterioration, patching, and spalling. In addition, coring and chloride ion concentration testing will be completed as specified for the Home Avenue and East Avenue bridge decks. A description of the data collection and analysis procedures, as well as the resulting deliverables is provided below.

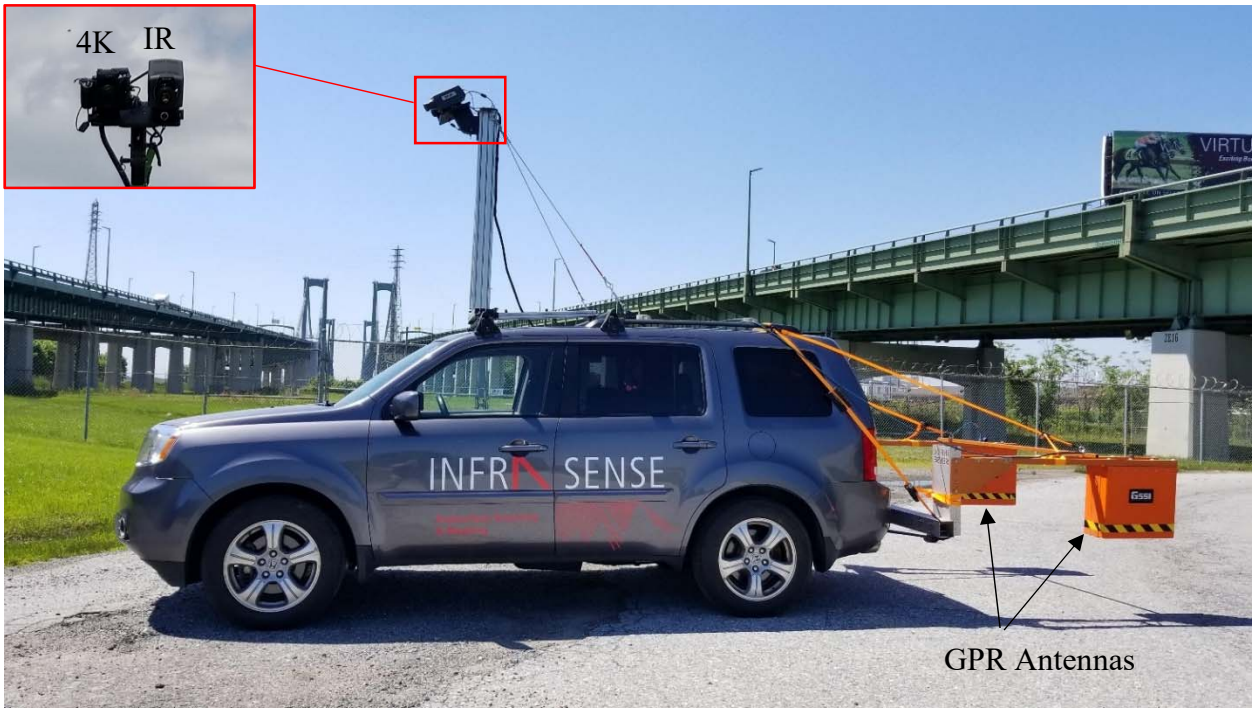

Figure 1 – Survey Vehicle

2. Infrared Thermography (IR) and High Resolution Visual (HRV) Surveys

The infrared survey will be carried out according to ASTM D 4788 – 03 (2013) using a 640x512-pixel FLIR Systems Model A6701sc infrared camera and a Sony – Alpha a7SII 4K resolution visual camera operated from an elevated platform attached to a survey vehicle (see Figure 1) for the driving speed surveys. The infrared camera is capable of capturing a full lane width of data per driving pass, has a frame rate of 60 frames per second, and thermal sensitivity of less than 0.1-degree C. To facilitate accurate location of defects, a high precision electronic

distance measurement encoder (+/- 3" accuracy) attached to the vehicle wheel will collect distance data synchronously with the IR and visual survey systems. All data collection is carried out at normal driving speeds, and no closures are required. The walkalong survey will utilize the same equipment but mounted to a tripod and collect images at a set interval (i.e. 10-ft) along the length of the Home Avenue deck.

The infrared data is analyzed to quantify, and map overlay debonding and rebar-level delamination up to a depth of 5-inches below the surface. The IR data is reviewed simultaneously with the visual data to differentiate delaminated areas from surface features (discoloration, oil stains, sand, shadows, and rust deposits, etc.) that appear in the infrared, but are unrelated to subsurface conditions. Figure 2 shows an example of delaminated areas as they appear in a single image of infrared data and in the corresponding visual data. Each shows a full lane width, the left image representing the infrared data and the right image representing the visual data. The center foot of each infrared and visual image is attached to the center foot of the following image and so on, so that a single strip image is obtained for each pass. The strip image for each pass is placed next to those of adjacent passes to produce thermal and visual plan-view images of each deck (see Figures 3 and 4). For the East Avenue and Lombard Avenue surveys, additional scans will be taken along the outside edges of the roadway area in order to capture the sidewalk areas.

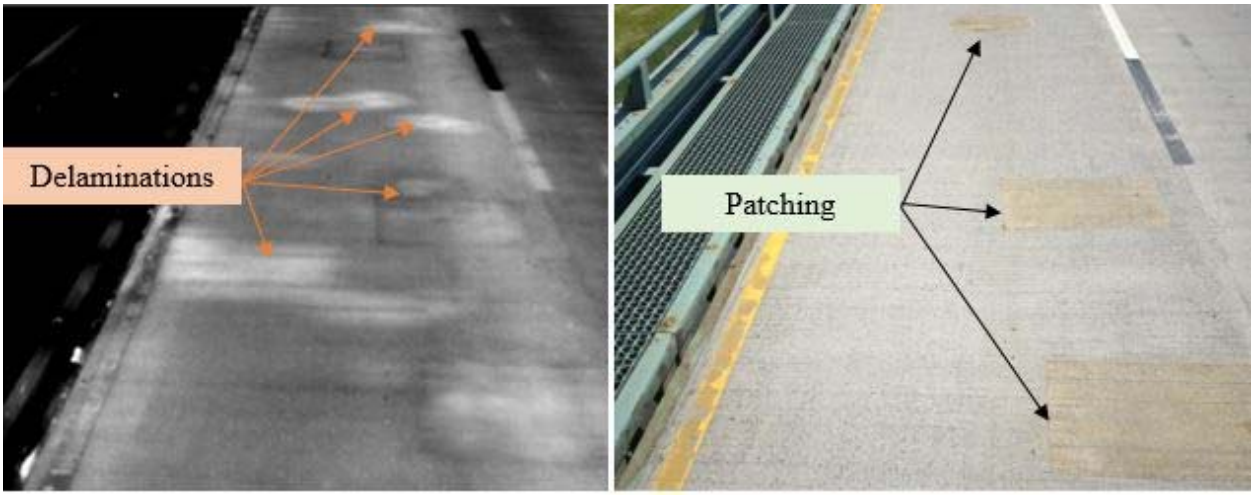

Figure 2 – Sample infrared and visual images at the same location

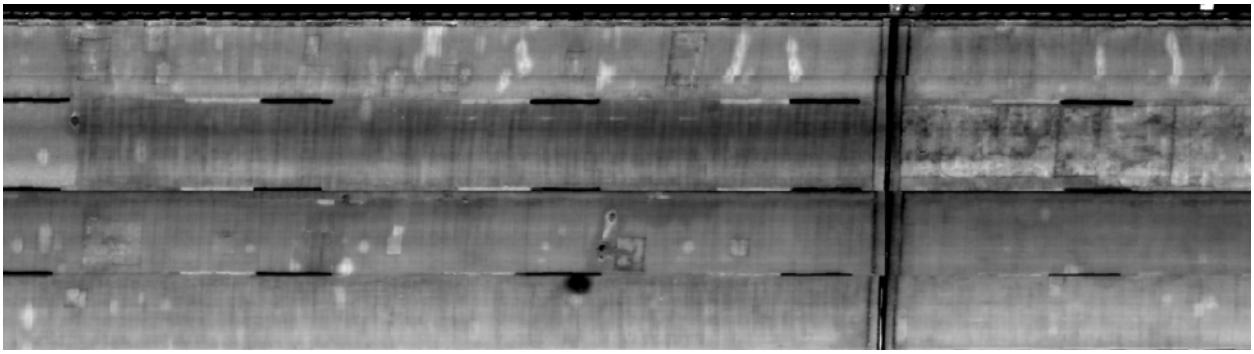

Figure 3 – Sample composite infrared deck plan-view

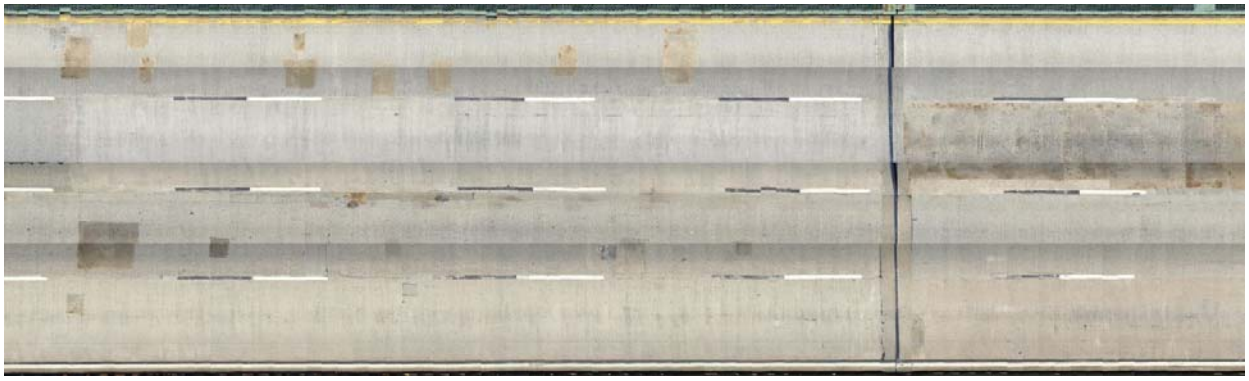

Figure 4 – Sample composite visual deck plan-view

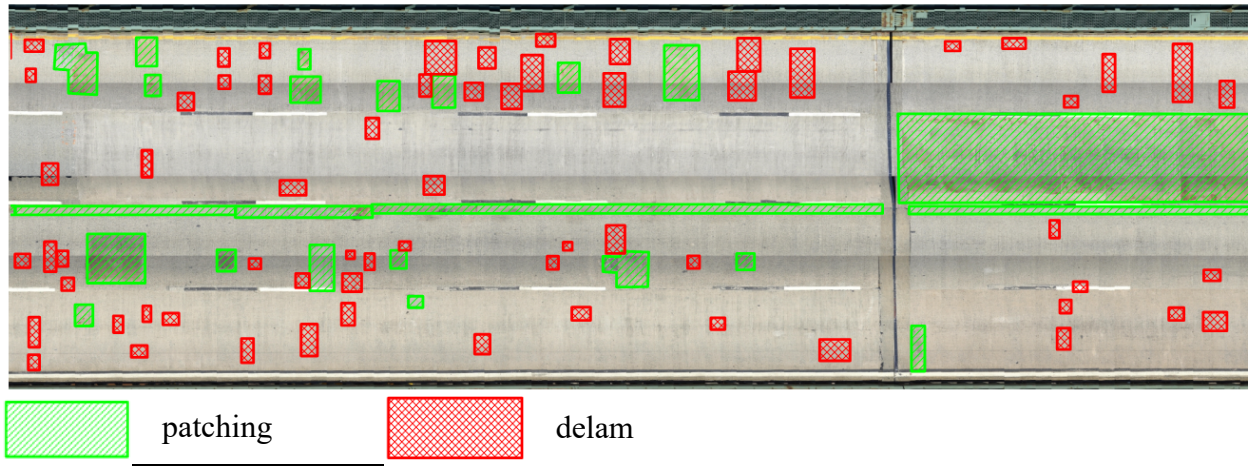

Figure 5 – Sample composite visual deck plan-view

The white blotchy areas on the IR images shown in Figures 2 and 3 indicate overlay debonding or rebar-level delaminations. These are "hot spots" where the surface temperatures are higher due to the thermal barrier produced by the debonding/ delaminations.

The areas of debonding/ delamination that appear in the IR image, as well as areas of spalling and patching that appear in the visual image will be outlined with a cursor. These outlined areas will then be quantified and used to create final plan area maps (see Figure 5).

3. Optional Ground Penetrating Radar Survey

The vehicle-based GPR equipment includes dual 1 GHz air coupled horn antenna system manufactured by GSSI, Inc. of Nashua, NH, shown in Figure 1. The survey vehicle will be equipped with an electronic distance-measuring instrument (DMI), providing continuous distance data as the GPR system is collecting. The data collection is controlled and recorded to a SIR-30 GPR system operated from within the survey vehicle. This system will be used for the East Avenue and Lombard Avenue bridge decks, whereas a cart-based system will be used for the Home Avenue bridge deck consisting of a SIR-4000 control unit and 1.5GHz ground-coupled antenna.

GPR data is collected with a series of longitudinal passes, each spaced 3 feet transversely across the width of the deck. The vehicle-based survey will be carried out at normal driving speeds with no closures, whereas the cart-based survey will be performed at a walking pace.

The GPR analysis will be carried out with Infrasense's proprietary software winDECAR® using the following steps:

3. Identifying the beginning and end of each structure and each span in the GPR data, and checking the GPR distances against lengths provided in the bridge plans;
4. Identifying features (bottom asphalt, top rebar, bottom of deck) that appear as dielectric discontinuities in the GPR data (see example data, Figure 6);
5. Computation of concrete dielectric constant, rebar depth, and concrete attenuation, and calculating quantities of deterioration.

The calculated results for each line of data are combined to create a plan area plot showing concrete cover over rebar, and locations of deteriorated areas, as shown in Figure 7. Overall concrete cover statistics and deterioration quantities will also be reported. The GPR results can be utilized to direct the locations (if desirable) of the core samples, as well as the concrete powder samples for chloride ion concentration testing.

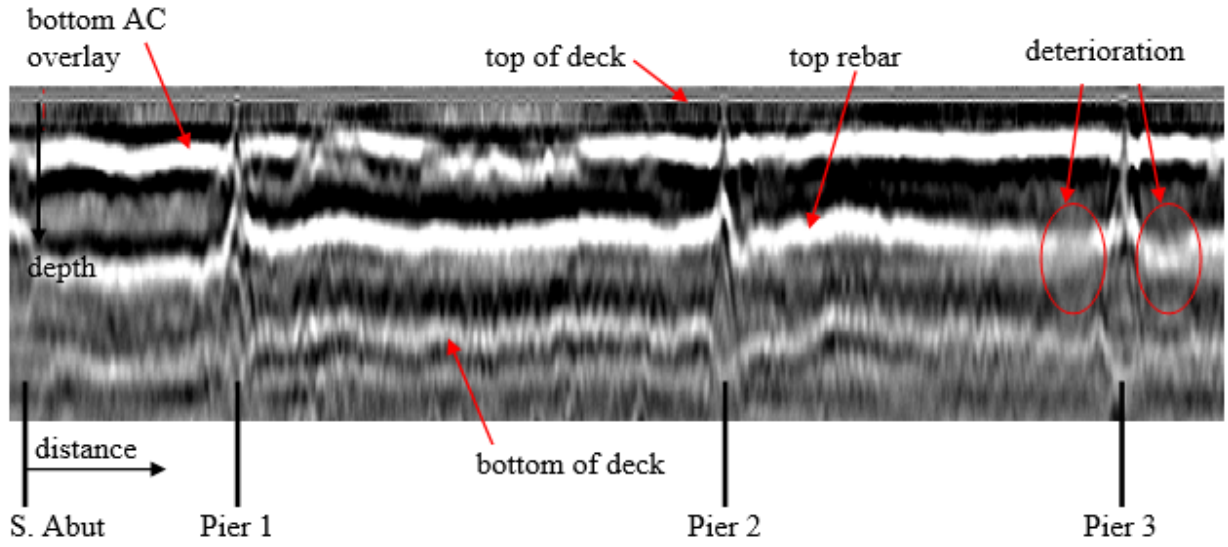

Figure 6 – Sample GPR Data

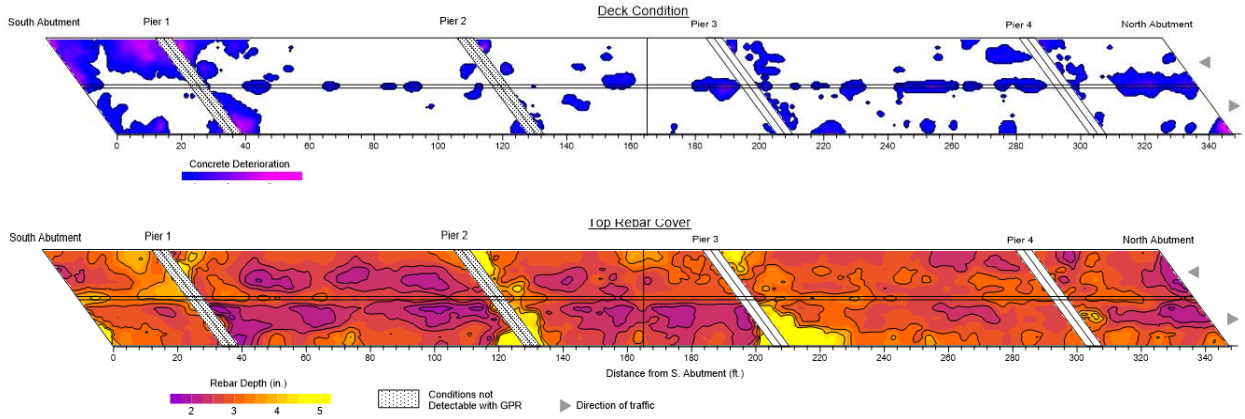

Figure 7 – Sample GPR Survey Results

4. Coring and Chloride Ion Concentration Testing

A total of (2) cores will be extracted from both the Home Avenue and East Avenue bridge decks by Terracon Consultants, Inc. of Glendale Heights, IL. The decks will be cored with an electric core drill using a 4-inch diameter diamond-tipped drill bit. The core-holes will be patched with concrete patching material. Upon completion of coring, cores will be placed in sealed bags and identified for chloride-ion testing at depths of 1.5 and 3 inches from the upper surface. A total of 4 cores (2 per bridge) and 8 chloride-ion tests (2 per core) will be performed.

Upon completion of the field and laboratory services, Terracon will prepare and issue a final summary letter documenting the findings at each core location including a core location

diagram, core photographs, and the chloride ion concentration values at each depth for each core sample. This summary letter will be provided as an Attachment to Infrasense's Final Report.

5. Deliverables

At the completion of the work, a comprehensive final report will be prepared. The report will include a description of the equipment, the data collection and analysis procedures, and the results of the analysis.

The analysis will include plan-view maps and quantities that represent:

- delamination at rebar-level/ overlay debonding (if applicable)
- concrete deterioration
- rebar cover
- patching
- spalling

The resulting maps will be included in the report in "pdf" format, as well as provided in a CADD compatible file format.

6. Cost Estimate

The cost to provide the proposed services and deliverables is $25,678. The cost breakdown is as follows:

Task	Cost
IR and HRV Surveys	$13,209
Coring & Chloride Ion Testing	$4,647
Optional GPR Surveys	$7,822*
TOTAL	**$25,678**

*assumes IR and HRV Surveys are included in the scope of work.