

COMPANY BROCHURE

ABNA Engineering, Inc. founded in 1994, has grown to over 70 employees. ABNA provides *full service Civil Engineering Services* for **Transportation** infrastructure including **Structural, Civil, Roadway Design, Stormwater, and Utility Accommodation and Coordination**. ABNA provides **Surveying, Geotech, Construction Management, Inspection, Materials Testing, Planning/GIS Services** and **Construction Operations**.

ABNA is a 100% W/M/DBE certified firm that is MoDOT Prequalified in all of MoDOT's listed categories (E-Verify, Financial Prequal, LPA Basic Training, Bridge Form and Bridge QC/QA Plan). ABNA is proud of its transportation planning & design service provided for the *Jefferson National Expansion Memorial's Arch Grounds* improvements which included a *Land Bridge over I-44*. Also we are leading the way with blended LiDAR surveys which merge LiDAR point clouds from multiple platforms e.g. aerial, mobile, and static. Significant projects include the *High Speed Rail between Chicago and St. Louis*, *Natural Bridge Great Streets* in St. Louis County, *Boone Bridge Design/Build* project, *Blanchette Bridge Rehabilitation* and *St. Louis' Central Business District Streetscape* Improvements. Our Construction Management Department continues to offer clients key management services as the owner's representative overseeing construction projects on many federally funded projects such as, *Jefferson County's Stroup Road Bridge* and non-federally funded projects such as the *Missouri Department of Natural Resources' St. Francois State Park Entrance Road* and *Bridge over Coonville Creek*.

This experience, our commitment to using innovating approaches and our vast transportation knowledge qualifies ABNA to provide our clients unprecedented professional services.

TRANSPORTATION EXPERIENCE

In the last several years, ABNA has had the opportunity to work on numerous federally funded roadway projects including the *Jefferson National Expansion Memorial's Park over the Highway*, *Missouri's Route 115* (Natural Bridge Road) Great Streets Project, The City of St. Louis' *Washington Avenue*, Phase 3 Streetscape Project and their *Central Business District Streetscape* Project, MoDOT New I-64 Design/Build, the *New Mississippi River Bridge*, *MetroLink*, *Illinois Route 3*, the *Lindbergh Tunnel*, and reconstruction of the *I-90/Lee Street Interchange* for the Illinois Tollway as a prime consultant.

Non-roadway projects include several projects associated with the Chicago to St. Louis High-Speed Rail, various airport, and trail projects.

Structural Engineering

One of ABNA's largest groups is Structural Engineering. Their experience includes design of all types of roadway structures, buildings, parking facilities, specialty foundations, pump stations, flood walls, retaining walls, gates, box culverts, dams, walled channels, drop structures and energy dissipaters. In addition to design, ABNA provides structural inspections of bridges and tunnels as well as load ratings.



STRUCTURAL EXPERIENCE

Some of ABNA's recent projects include the *Lee Street Bridge over I-90* for the Illinois Tollway, subconsultant support for *MoDOT's Poplar Street Bridge Slide, Poplar Street Approach Ramps, Walnut Street Bridge over I-44, Land Bridge over I-44*, and the *Pine Street Bridge over I-44, Route 141 Bridge over Creve Coeur Creek*, and the *I-70 Blanchette Memorial Bridge* over the Missouri River. ABNA was also selected for four (4) bridge replacement projects as part of MoDOT's Safe & Sound 800 Bridge Program. These bridges included Route TT Bridge over Slough Creek in Saline County, Route M over Bridge Creek in Carroll County, Route W over Moniteau Creel in Howard County, and Route FE over Edmondson Creek in Saline County. Some of our local agency projects include Jefferson Counties Mapaville-Hematite Bridge over Little Creek Tributary, Wilson Hollow Bridge over a Tributary to the Big River and specialty foundation design for the City of St. Louis' Washington Avenue, Phase 3 Streetscape project and Kiener Plaza.

Construction Management

We offer many construction related services including estimating, value engineering, construction staking, testing for plumbness of steel and forms, concrete, soil & asphalt testing, project inspection and field engineering. We can also provide support for scheduling and QA/QC documentation. ABNA's Construction Services, Construction Management and Engineering staff includes experienced civil engineers and geologists, NBIS, in addition to technical support personnel.



Services include:

- Resident Engineering
- Scheduling
- Estimating
- In-place density tests on compacted fill material
- In-place density tests on asphalt
- Field test of concrete and casting
- In-place density tests on asphalt
- Lab compression testing of concrete cylinders in accordance with ASTM Procedures
- Testing and reporting
- Trimming of irregular client cast cylinders to meet ASTM requirements (only if required)
- Atterberg limits determination
- Marshall Stab. & Flow (ASTM D 1559)
- Extraction and gradation (ASTM D 2172)
- Bulk specific gravity
- Obtaining pavement core samples



CONSTRUCTION MANAGEMENT EXPERIENCE

ABNA has been fortunate to have had the opportunity to work on numerous challenging federally funded projects such as MoDOT's Boone Bridge Design/Build, The New Mississippi River Bridge, MoDOT New I-64 Design/Build, IDOT's I-55/Route 59 Interchange, and several MetroLink projects such as the Eads Bridge Retrofit and the Cross County Extension. ABNA recently completed construction management services for St. Louis' Washington Avenue Streetscape project and Franklin County's Herbst Road Bridge replacement project. On these projects ABNA was the prime consultant and performed all LPA construction management duties from Resident Engineer through laboratory material testing.

Surveying

ABNA has supported large and small projects alike by providing survey services such as route surveys, topographic surveys, cross-sections and profiles, and establishing existing, proposed centerline alignments, record research, boundary surveys and adjustments, plotting collected field information, establishing 1st and 2nd order controls, right-of-way monuments, land use determination, complex construction staking, layout and as-builts. ABNA's Survey Department consists of five survey crews, a field manager, a survey research technician, the survey manager and three additional licensed surveyors.

ABNA employs a wide array of survey equipment, which enables the expeditious completion of projects. These instruments include five full Trimble GPS units, five Nikon Total Station Units equipped with the latest TDS data Collectors, digital levels and a variety of other conventional survey equipment. Additionally, ABNA's survey staff have extensive experience in the use of state of the art software such as MicroStation, AutoCAD, GEOPAK, MapInfo, Manifold, STAR*NET TDS Survey Link, TopoDOT, and Trimble Geomatics Office. With 5 survey crews, ABNA can rapidly mobilize once work orders are received.



SURVEYING EXPERIENCE

Sample ABNA experience includes MoDOT's Route I-44 Meramec River Bridges, the Illinois Tollway's I-90/Lee Street Interchange, MoDOT Route 115 (Natural Bridge Road) Great Streets Project, City of St. Louis' North & South Broadway Streetscaping, several St. Louis Ward Improvement Projects, Metro's St. Clair County MetroLink Extension, IDOT's I-270 over Chain of Rocks Canal Bridge replacement project, and the MetroLink Cross county Extension.

Civil Engineering

ABNA's Civil Department has successfully provided the following services for both the private and public sector including such clients as Saint Louis University, Washington University, Bayer (formerly known as Monsanto) Corporation, and the Salvation Army to name a few. Services provided include:

- Campus Site Civil
- Utility Coordination
- Parking Lots
- ADA compliant sidewalks
- Grading
- Stormwater



Electrical Engineering

ABNA's Electrical Group provides general electrical engineering service which includes power demand determinations, voltage drop calculations, cable and conduit sizing, lighting photometrics and the preparation of construction plans, specifications and cost estimates. ABNA has completed a number of aesthetic, conventional and tunnel lighting projects for MoDOT, IDOT and the Illinois Tollway.

Services include:

- Feasibility Studies which include Operations and Maintenance Costs
- Photometric Design in accordance with IES Guidelines
- Lighting Equipment Selection
- Roadway, Intersection and Interchange Lighting
- Underpass and Tunnel Lighting

Geotechnical

ABNA has provided Geotechnical services to such clients as BJC Healthcare, Bayer (formerly known as Monsanto) Corporation, and St. Louis Metropolitan Sewer District.

ABNA's Geotechnical Department provides the following services:

- Subsurface Investigation
- Boring Studies
- Slope Stability Assessments
- Foundation Design
- Atterberg Limits Moisture Determination
- Soil Classification
- Moisture Density (Proctor)
- Sieve and Hydrometer Analysis
- Data Collection
- Report Preparation
- Evaluation of Historic Soil Resources
- Seismic