Brandon L. Buzzell, PE, SE

Bridge Department Manager

EDUCATION

B.S., Civil Engineering, University of Illinois at Urbana-Champaign, 1998

Joined Firm in 2009

Years of Experience: 27

REGISTRATIONS

Licensed Professional Engineer: Illinois, Wisconsin, Florida, and Texas

Licensed Structural Engineer: Illinois

CERTIFICATIONS

NBIS Certified Program Manager – Element, Illinois Department of Transportation and Wisconsin Department of Transportation

TRAINING

4-Day Training Course for Fracture Critical Inspection Techniques for Steel Bridges – FHWA/NHI, 2011

10-Day Training Course for Inspection of In-Service Bridges – FHWA/NHI, 2008

Brandon has a wealth of experience in the transportation and structural engineering fields and has performed bridge design work for IDOT, counties, municipalities, and agencies. He has served as Project Engineer and Project Manager on projects, and through his detailed and accurate plans, has developed a reputation as a producer of high-quality bridge plans. Brandon is a member of the ACEC-IL IDOT Bridge Committee.

REPRESENTATIVE PROJECTS

Buffalo Grove, IL

Raupp Boulevard Over Buffalo Creek (SN 016-6325) Phase I /II

Lead Structural Engineer for the replacement of a single-span precast deck beam bridge on closed concrete abutments, with a two-span slab bridge, using HBP funding. Structure included a new multi-use path, and special combination concrete railings were designed to match nearby bridges.

Round Lake, IL

MacGillis Drive Over Squaw Creek (SN 049-7701), Phase I and Phase II

Lead Structural Engineer for the removal and replacement of a single-span slab bridge with a single-span PPC Deck Beam bridge on integral abutments. Phase I and Phase II Engineering included, funded by STP-Bridge (formerly HBP). Included a decorative concrete parapet and railing.

Waukegan, IL

Mathon Drive/Grand Avenue Bridge Reconstruction (SN 049-2050)

Lead Structural Engineer for Phase I Report and Phase II Design for a superstructure replacement with a Group II Categorical Exclusion. The Grand Avenue structure consists of a four-span, continuous steel girder bridge approximately 70 feet wide and 350 feet long. The bridge spans a rail yard with nine sets of active railroad tracks below. Grand Avenue is a four-lane collector roadway and serves as the gateway to the City's Lake Michigan lakefront. The concrete median was removed to accommodate new on-street bicycle lanes connecting the City's downtown to the lakefront. STP funds were added to the project to reconstruct Pershing Road and to allow the construction of a new multi-use path. Coordination with local agencies, including IDOT, Illinois Commerce Commission, and the Union Pacific Railway, was ongoing throughout the project.

Waukegan, IL

Greenwood Avenue over Union Pacific Railroad

Project Structural Engineer for Phase I Engineering for the replacement of an existing three-span steel bridge. Starting with an in-depth bridge inspection, our engineers discovered severe section loss in the beam ends, leading to a Critical Finding report, an immediate load restriction, and eventual design and installation of temporary timber cribbing. The Phase I included a structure type study, bridge condition report, environmental review, preliminary design, and railroad coordination. The proposed structure is a single-span precast prestressed concrete beam bridge supported on MSE wall abutments. The span configuration was chosen to minimize impacts to nearby intersections while spanning the entire UPRR Right-of-Way.

LRFD Design of Concrete Superstructures (Three Days) – FHWA, NHI, 2007

LRFD Highway Bridge Design (Four Days) – University of Wisconsin, 2006

Wheeling, IL
Jeffery Avenue Bridge Replacement
Structural Engineer for Phase I Project Development Report for replacement of the structure with an anticipated Group II Categorical Exclusion. The Jeffery Avenue structure consisted of a single-span prestressed concrete deck beam bridge approximately 30 feet wide. The roadway over the structure carried an average daily traffic of less than 5,000. Existing cross sections at the structure were examined to satisfy federal guidelines for clearance, as they were substandard. Pedestrian safety and sidewalks were reviewed to determine recommendations adjacent to the structure. The existing floodplain model was utilized for Buffalo Creek. Because of the structural deficiencies, a full replacement was required. An evaluation of Type, Size, Location drawings, and bridge cross sections were completed. Coordination with local agencies, including Illinois Department of Transportation (IDOT), Illinois Department of Natural Resources (IDNR), and US Army Corps of Engineers (USACOE) was ongoing throughout the project.

Wheeling, IL
Wolf Road Bridge Rehabilitation
Structural Engineer to design a new sidewalk to the Northgate Parkway bridge to provide a safe pedestrian crossing for a nearby development. Our design team worked with the geometry of the existing concrete parapet, adding a raised sidewalk in front and a Type L aluminum railing at the top of the parapet. This created a safe 42-inch pedestrian railing height, while also matching the look of the existing sidewalk on the opposite side of the bridge. Pedestrian railings were added to the approaches to protect the steep embankment slopes, and the rail elements were painted to match the Village's chosen color for their other fixtures. Our team also provided construction engineering services, assuring that maintenance of traffic plans were followed and that the project stayed on schedule with no cost overruns.

Prairie Grove, IL
Justen Road Bridge Replacement
Lead Phase I Structural Engineer/Phase II Structural Engineer for the removal of the existing two-span bridge and replacement with a three-cell box culvert. The work consisted of installation of a cofferdam to provide a dry work area; temporarily rerouting the Fox River Tributary; removal of the existing structure including timber piling, undercutting the base to remove very weak soils, and replacing with porous granular embankment (PGE); and installation of a three 8-foot x 12-foot cells cast-in-place box culvert, with the two outside cells containing a weir to channel water through the main cell. Also created nesting ledges for the Eastern Phoebe birds, installation of permanent steel sheet piling wingwalls, roadway reconstruction, guardrail installation, and pavement striping.