Structural Grace, Inc

EHSAN ABDULLAH, PE

PROJECT ENGINEER

Since 1992, Ehsan Abdullah, PE, has provided design, inspection and rehabilitation services for bridges, highway structures, and light rail/rapid transit prestressed concrete guideway structures. Mr. Abdullah's experience ranges from the design of reinforced concrete, prestressed, post tensioned and steel plate and box girders to structural analysis and load rating of existing concrete, steel, timber, and truss bridges. His roadway experience includes detailed geometric design, modern roundabouts, drainage storm systems, intersections, and culvert design.

EDUCATION

Master of Civil Engineering, Univ of Nebraska

Bachelor of Science – Civil Engineering, University of Kabul

PROFESSIONAL ENGINEERING REGISTRATIONS

- Arizona–Civil (47832)
- Nebraska–Civil (E8894)

CERTIFICATIONS

Safety Inspection of In-Service Bridges (FHWA-NHI)

Fracture Critical Inspection (FHWA-NHI)

- ***Cordes Junction TI, Ramp S-S and Ramp N-N, ADOT, Yavapai County, Arizona.*** QA/QC Manager for the design review of two new 180-ft long 2-span bridges, Ramp S-S and Ramp N-N, for the Cordes Junction TI. Responsible for the review of the structural design of the superstructure, piers and foundations, including spread footings and drilled shafts. This project is being performed by the Alternate Delivery Method of CM@R.
- ***White and Turner Road, Major Investment Study, City of Maricopa, Arizona.*** Project Engineer for a bridge crossing the UPRR tracks and intersection of the Maricopa-Casa Grande Highway with White and Parker Road. Responsible for providing input on bridge geometry and typical bridge costs, as well as bridge plans and elevations for a maximum of three (3) alternatives to be advanced to an approximate 15% level of design.
- ***Phoenix Sky Train, Phoenix Sky Harbor International Airport, Phoenix, Arizona.*** Project Engineer during final design of the Phoenix Sky Train design build project, a predominantly elevated guideway system with seven stations. The system connects three terminals, two parking areas, a rental car center, and a ground transportation center with a light rail transit interface. The project is set to be designed in two stages. The design of stage one is complete and includes: 37 spans 3050 ft prestressed concrete u girders, 20 spans 2025 ft post tensioned concrete box girders and 17 spans 2780 ft of steel plate and steel box girders. Substructure consists of column, spread footing, footing on drilled shafts, and steel straddles.
- ***Higley Road Bridge Over Roosevelt Water Conservation District (RWCD) Floodway, Gilbert, Arizona.*** Project Engineer for improvements to Higley Road beginning at the East Maricopa Floodway (EMF) and ending 1,370 feet north. The improvements involved roadway, drainage, utilities, traffic, and bridge work. The project included design details and layouts for the 378-foot-long, six-span box beam EMF bridge and a 41-foot-long, single-span RWCD Canal bridge. As part of the bridge widening, six precast, prestressed box girders were added on both sides of the EMF bridge and 6 precast, prestressed, voided slab girders were added to the Canal bridge. New sidewalks were also added to both bridges and utilities conduits were relocated and placed in the sidewalks.
- ***S.R. 303L Bridge Review, Peoria, Arizona.*** Reviewer responsible for a complete independent check and calculation of single-span (AASHTO) Type VI girder bridge over Caterpillar Wash.
- ***Bridge Load Rating and Structural Evaluation, Nebraska.*** Load rating and structural evaluation of new and existing bridges in coordination with University of Nebraska and the FHWA. The project involved the structural evaluation and subsequent load rating of hundreds of steel, timber, concrete, and truss bridges and reporting the results to the National Bridge Inventory.
- ***Blair South, Blair, Nebraska.*** Project Manager and Lead Engineer for this $11.4 million project which included four miles of five lane roadway. Design included alignments and geometric design, sight distance, driveways, retaining walls, at-grade intersections and modern roundabout. A complete drainage system was designed, including inlets, manhole, ditches, and culverts, to collect the water from east side (hill side) and convey it to the other side under the road. Mechanically stabilized earth (MSE) walls were used to limit taking of the right-of-way, and a modern roundabout was designed to channelize traffic and reduce the speed of truck traffic entering the town. Prepared cost estimates, coordinated with the right-of-way division for obtaining easements and right-of-way, and coordinated with utilities to resolve conflicts.