Mohammad Majd, P.E.

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Profile

Structural engineer with seven years of experience in bridge design and analysis. Demonstrated ability to complete design calculations, finite element analysis, and other complicated tasks.

Experience

Structural Engineer, Ammann & Whitney | Philadelphia, PA | 2013 - 2016

• *18th Street over Vine Street Expressway Replacement* - oversaw the final design of a single span steel girder bridge over the I-676 Vine Street expressway. Designed or checked all bridge components including girders, concrete deck, steel intermediate diaphragms, concrete end diaphragms, bearing pads, and utility supports.

• *Wayne Junction Viaduct Rehabilitation* - worked on a team to plan the rehabilitation of a curved 15-span bridge along Route 1 in Philadelphia, PA. Programmed several custom VBA applications to automate existing and proposed rating calculations.

• *Spring Garden over I-76 Rehabilitation* - performed load calculations and analyses for existing and proposed conditions. Prepared bar schedules for widened deck sections. Designed steel brackets and connections to support proposed light poles.

• *I-84 over Mad River Analysis* - analyzed the cross-frames of a severely skewed structure under construction and live loads. Built 3D models using LARSA-4D and analyzed locked-in cross-frame forces resulting from FIT erection techniques.

• *Ben Franklin Bridge Walkway* - completed steel connection, splice, and concrete pier design of a curved pedestrian bridge adjacent to the Ben Franklin Bridge.

Bridge Designer, Specialty Engineering | Bristol, PA | 2009 – 2013

• *Betsy Ross Interchange Design/Rehabilitation* - performed the analysis and rating of multiple curved steel girder ramps. Gave recommendations to rehabilitate girders, diaphragms, and piers to satisfy current design standards. Performed steel girder, prestressed concrete girder, and deck design for additional proposed ramps.

• *Market Street Arch Bridge Rehabilitation* - completed the analysis and rating of a closed spandrel concrete encased steel rib arch bridge using STAAD.Pro software.

Education

Drexel University | Philadelphia, PA | 2004-2010

BS - Civil Engineering, MS - Structural Engineering

Skills

CAD & Design Packages

STAAD, SAP2000, LARSA-4D, MathCAD, PennDOT Design Programs (STLRFD, PSLRFD, BAR7, ABUT5, PAPier), AutoCAD, MicroStation

Programming Languages/Frameworks

Proficient in Ruby, Javascript, Ruby on Rails, HTML, CSS, SQL, Excel. Experience with Python, Matlab, R, Excel VBA.