

Robert N. Graeff, P.E.

76 Brian Avenue
Murphysboro, IL 62966
Phone: (618) 521-1836
Email: Robert.Graeff@illinois.gov

PROFESSIONAL EXPERIENCE

Illinois Department of Transportation (IDOT), District 9, Carbondale, Illinois June 1994-Present

Materials Engineer

September 2015-Present

Responsible for managing the District's materials selection and quality assurance of all materials and mixtures utilized in the construction and maintenance of the highway system. Review manpower needs and assignments, monitors testing procedures, approves substitutions for unavailable products or materials, approve geotechnical reports and foundation studies, reviews field and laboratory test results, reviews complex materials problems. Responsible for frequent contact with personnel from all District Bureaus and the Central Bureau of Materials and Physical Research regarding materials issues and the Central Bureau of Bridges and Structures regarding foundation issues. External contacts include materials supplies and producers, contractors, local government officials and FHWA representatives regarding materials problems of mutual concern. Occasional cooperative material inspection arrangements are also provided for the Department of Natural Resources, U.S Army Corps of Engineers, Illinois State Police, Capital Development Board and the Division of Aeronautics.

Geotechnical Engineer

August 2000-September 2015

Responsible for the evaluation and the interpretation of the subsurface investigation of proposed highway locations leading to design recommendations of structure embankment configuration. Structural foundations, subgrade and pavement design, soil removal and/or replacement, special treatments such as soil modification or stabilization. Responsible for the remediation of embankment failures, slope instability, subgrade stability and foundation bearing capacity issues.

Responsible for supervising the drilling of all soil borings by district staff, analyzing and logging soil information sufficient for foundation and/or pavement designs. Directed the budget and scheduled respective drilling staff to ensure the timely completion of design and plan preparation. Also responsible for the supervision of the nuclear density testing procedures and controls for hot mix asphalt pavement and earthen construction within the district.

Physical Test Engineer

March 2004-September 2015

Responsible for inspection, testing and acceptance of all material produced and used in the district for incorporation into construction and maintenance projects. This involves inspection, testing and acceptance of materials at the source of production and at the project location. Primarily responsible for preventing the incorporation of unapproved or rejected materials into IDOT and local agency projects, making analyses to determine the approval or rejection of materials that are borderline on specification limits and diplomatically working with producers, suppliers and Resident Engineers to ensure all materials have been inspected and certified.

Supervising Construction Field Engineer

May 2005-March 2006

Responsible for reviewing the validity of time extension and contract claims, determining the applicability of design features involving context sensitive designs, planning workload and personnel assignments. Ensured the proper staffing and motivation of subordinates to maintain a high quality of construction inspection and documentation. Acted as a main source of communication between the field personnel and the District Construction Engineer. Also conducted coordination meetings with representatives of local agencies, contractors, IDOT staff, railroad companies, utility companies and the Federal Highway Administration.

Resident Engineer**January 1998-August 2000**

Responsible for the supervision of subordinate staff and contractor personnel to construct various highway and structure improvements in accordance with the plans, contract specifications and special provisions. Supervised and performed construction layout, project surveying and documentation of contract quantities for payment.

Civil Engineer (Rotation)**June 1994-January 1998**

Assisted the Geotechnical Engineer with soils report evaluation and preparation, performed slope stability analysis for proposed structures, performed soil testing and operated a nuclear density gauge to monitor field compaction of earthen embankments and hot mix asphalt pavements.

Assisted the Mixtures Control Engineer with design and inspection of hot mix asphalt materials for use in highway road construction, daily inspection of various hot mix asphalt plans during production and evaluated contractor test results to ensure specification compliance for IDOT and local agency projects.

Assisted the Geometrics Engineer with reviewing design plans prepared by consulting engineers, development plans and specifications for resurfacing projects and prepared highway capacity analysis used to develop plans for various projects.

PROFESSIONAL TRAINING**National Highway Institute Classes**

- NHI 13133 – Construction of Portland Cement Concrete Pavements
- NHI 13212 – Soils and Foundations Workshop
- NHI 13236 – Earth Retaining Structures
- NHI 132034 – Ground Improvement Techniques

IDOT Specific Task Training Courses

- S33 – Standard Earth Density
- S11 – Bituminous Concrete Field Inspection
- S14 – Documentation of Contract Quantities
- S48 – Work Zone Safety
- S47 – Structural Fasteners
- S16 - Erosion Control
- S55-1 – Geotechnical Qualifications and SGR Approval
- S55-2 – Foundations
- ST 07 – Structural Geotechnical Report Preparation

Lakeland College- IDOT

- CET 021 – Aggregate Technician
- CET 029 – Hot Mix Asphalt Level I
- CET 023 – Hot Mix Asphalt Level II
- CET 026 – Nuclear Density

PROFESSIONAL DEVELOPMENT**Professional Advancement for Career Engineers****Executive Leadership Development Series****President, Illinois Association of Highway Engineers****Statewide Specification Committee****Transportation Research Board**

- Committee Member, Drilled Shaft Capacity and Weak Shales
- Committee Member, Subgrade Improvement

EDUCATION

Southern Illinois University, Carbondale, Illinois
Bachelor of Science in Civil Engineering

May 1994