



**TRANSPORTATION CABINET**  
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**Steven L. Beshear**  
Governor

**Michael W. Hancock, P.E.**  
Secretary

## **MEMORANDUM**

**TO:** Michael L. Hill, P.E.  
Director  
Division of Professional Services

**FROM:** Jeff Jasper, P.E.  
Director  
Division of Highway Design 

**DATE:** January 26, 2012

**SUBJECT:** New Prequalification Categories:  
Basic Traffic Engineering Design  
Advanced Traffic Engineering Design and Modeling

Attached you will find the requirements for two new prequalification categories that will be managed by the Division of Highway Design. We plan to make these available for use by project managers beginning on July 1, 2012. Please post these on your website and make engineering consulting firms aware of these new categories.

In order to qualify for the Basic Traffic Engineering Design category, a firm must have staff attend a short workshop hosted by our Division. This workshop will have its initial offering in April, 2012. Depending on demand, a subsequent workshop may be offered this year. Firms may submit their request for prequalification at any point during the year that they choose.

Thank you for your assistance.

JDJ:BAS

Attachment



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# Traffic Engineering Prequalification for Division of Highway Design

January 2012

## **Basic Traffic Engineering Design**

The purpose of this prequalification is to determine if a firm has the capability to perform basic traffic engineering analysis for roadway design projects, such as determining capacity for a facility, the appropriate number of travel lanes, appropriate intersection control, and the need and design of auxiliary lanes, signals, and passing lanes. The firm shall submit a stand-alone prequalification document or a distinct, separate section of a prequalification document addressing the following requirements:

1. **Firm Experience:** A firm shall have at least one (1) engineer licensed in Kentucky. The licensed engineer shall have demonstrated capabilities by education and/or experience to perform basic traffic engineering analysis. The level of knowledge and experience shall be demonstrated by providing information about projects pertaining to the categories listed below. It is helpful to include the role of the firm and some detail about the traffic engineering design aspect of the project. Experience that current staff had on projects with another firm or agency may be included. For work performed for clients other than KYTC, include the contact information of the individual directly responsible for managing the project.
  - a. Highway Capacity Manual (HCM) and Highway Capacity Software (HCS): capacity and LOS procedures for roadways and intersections
  - b. Determination of appropriate intersection traffic control including intersection alternatives comparison analysis using performance measures
  - c. Evaluation and design of auxiliary lanes based on the KYTC Auxiliary Lane design guidance.
  - d. Access management principles: functional area of an intersection; spacing of driveways, signals, median openings, and intersections
  
2. **Staff:** Professionals with direct experience knowledge of traffic engineering principles should be included as part of the submittal. The following information is required.
  - a. List of all engineers and other staff involved in traffic engineering design. For each staff member, include the following:
    - i. Name
    - ii. List years of experience in traffic engineering design.
    - iii. Documentation that each listed staff member attended the KYTC Basic Traffic Engineering Design course.
    - iv. List educational, professional and relevant training credentials that demonstrates proficiency in traffic engineering design. It is recommended, but not required, that the firm have at least one full-time staff member registered as a Professional Traffic Operations Engineer (PTOE) through the Transportation Professional Certification Board, Inc.
    - v. List and describe applicable projects and the staff member's direct role on each project. Projects from a previous company or agency may be applicable.

Renewal: KYTC will consider performance on past and current projects when deciding whether to approve a firm's request to renew prequalification status. In addition, an officer of the firm must affirm in writing that qualified personnel identified in previous submittals for prequalification still remain in that same capacity. All changes must be submitted as part of the annual request for renewal.

# Traffic Engineering Prequalification for Division of Highway Design

January 2012

## **Advanced Traffic Engineering Design and Modeling**

The purpose of this prequalification is to determine if a firm has the capability to perform advanced traffic engineering analysis for roadway design projects, including microsimulation and corridor signal analysis. The firm shall submit a stand-alone prequalification document or a distinct, separate section of a prequalification document addressing the following requirements:

1. The firm must currently be prequalified in Basic Traffic Engineering to be eligible. Provide the date of approval for prequalification of Basic Traffic Engineering Design.
2. The firm must have at least one full-time staff member registered as a Professional Traffic Operations Engineer (PTOE).
3. **Signal Systems Operations:**
  - a. List staff that has knowledge and experience in the design of traffic signal systems.
  - b. List and describe projects in which staff applied signal system design concepts.
  - c. Identify software owned by the firm and staff that has experience in applying that software for developing signal timing plans.
  - d. Optionally, include experience in the operation, retiming, and maintenance of signal systems.
4. **Microsimulation Modeling:** A listing of preferred microsimulation software can be found on Highway Design's webpage under Resources » Software and Support.
  - a. List microsimulation software packages owned by the firm.
  - b. List staff trained in using each software and years of experience using each. Demonstrate staff member's proficiency in developing, calibrating, and using microsimulation models.
  - c. Project experience:
    - i. List at least three projects that current staff was involved in which microsimulation was used in the development of a highway design. Experience current staff had on projects with another firm or agency may be included.
    - ii. For each project, include how the model was used to make project decisions and how it was used for public involvement (when applicable).

Renewal: KYTC will consider performance on past and current projects when deciding whether to approve a firm's request to renew prequalification status. In addition, an officer of the firm must affirm in writing that qualified personnel identified in previous submittals for prequalification still remain in that same capacity. All changes must be submitted as part of the annual request for renewal.