

Consultant Prequalification Manual

Consultant Prequalification Manual Governs the Qualifications of Professional Consultants to Perform Work for the State of Georgia Department of Transportation

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I. Purpose

The responsibilities of this unit include the procurement of consultant services for design and any related work performed by architectural and engineering firms including firms providing other ancillary services to support design work. In addition, this unit formalizes the required process and procedures that should be utilized for the qualification of professional consultants prior to contracting with the Georgia Department of Transportation. This unit also handles all the administrative functions relating to appeals and debarment of consultants for area classes awarded and for services contracted. Activities such as maintaining and supporting the database of consultant information and updates to policy and procedure guidelines that govern consultant applications request are also a part of the responsibilities for prequalification.

II. Definitions

The following terms as used in these Regulations, shall have the following meanings unless the text thereof indicates to the contrary.

- A. "Consultant" as used herein shall mean an individual or firm seeking a contract to perform professional services for the Department of Transportation of the State of Georgia.
- B. "Commissioner" as used herein shall mean the Commissioner of the Department of Transportation of the State of Georgia.
- C. "Department" as used herein shall mean the Department of Transportation of the State of Georgia.
- D. "Consultant Prequalification Committee" as used herein shall mean a Committee consisting of seven members, all of whom shall be active full-time employees of the Department, of which at least five shall be registered professional engineers. In addition, the Director of Preconstruction shall also be a member, and shall be chairman. The members of the Committee shall each be assigned by the chairman to represent portions of the classes of work for which prequalification of consultants is desired. Classes of work shall generally be represented by Committee members with commensurate work experience. All members shall be recommended by the Chief Engineer, and appointed by the Commissioner.
- E. "Professional" as used herein shall mean an individual who has been educated and who has received advanced training in a specialized field or discipline of work, and has demonstrated an ethical and competent practice in said field. This individual must be a permanent, full time employee of the firm seeking prequalification. For any area of work regulated by Georgia Law, the individual must be registered in accordance with rules and regulations as administered in the Office of the Secretary of State.
- F. "Professional Accountant" shall refer to a duly registered Certified Public Accountant (CPA).
- G. "Review Committee" as used herein shall mean a committee consisting of not less than three members, all of whom shall be active full-time employees of the Department. The Chief Engineer shall be a member and shall be the chairman. The other members may be appointed by the Commissioner from the remaining Division Directors of the Department. The Committee shall elect a secretary from its membership who shall keep a complete record of the proceedings and decisions of the Committee.

- H. "Chief Engineer" as used herein shall mean the chief engineer of the Department as provided for in O.C.G.A. 32-2-42(b).
- I. "Suspension" as used herein shall mean a provisional condition whereby a consultant's prequalification status is temporarily removed for a specified period of time; until their proper disposition can be determined. All suspensions will be determined on a case by case nature. A suspension can be for unsatisfactory work performance or any other violations of contractual agreements and Department policies.

III. Qualification Process

Applications for qualification with the Department shall be submitted using forms and procedures established by the Department.

- A. The Consultant's application shall be examined by the Prequalification Committee to determine the Consultant's ability to perform one or more of the classes of work set forth in below. The Department shall issue to qualified consultants a CERTIFICATE OF QUALIFICATION with an expiration date indicated thereon which shall be three years from the first month in the calendar year in which the consultant was found qualified to perform any of the several classes of work. The Department reserves the right to limit its initial qualification period to the remainder of the consultant's current fiscal year, and prequalification will be required in accordance with III.B below.

Should the consultant be dissatisfied with the decision of the Prequalification Committee as to the assigned class(es) of work, the consultant may file an appeal from the decision with the Review Committee as provided in Section V of this Procedure.

- B. Each certified consultant who desires to maintain qualification status shall initiate and submit a renewal application every three (3) years. This renewal application shall be submitted within three (3) months prior to the anniversary of the initial qualification for a Class of Work. This submittal shall include all changes of personnel, updated work experience of the key personnel and the firm, and other information as requested in the application forms.

IV. Minimum Qualification Standards by Class of Work

The following criteria apply to the qualification of consultants.

- A. Any consultant firm requesting qualification with the Department for a class of work that is governed by the Secretary of State shall be registered as an engineering or surveying firm accordingly with the Secretary of State.
- B. If the practice of work described by a class of work is governed by the Secretary of State, the individual, firm, and/or appropriate full-time employees thereof must be registered with the governing board designated for the profession by the State and shall have all appropriate licenses and registrations required by Georgia Law.

- C. No professional or key person may be listed as a bona fide employee of more than one firm currently qualified with the Department; meaning, as a bona-fide employee, one may not at any time provide services as an employee for any other firm that is registered with The Georgia Department of Transportation and cannot be considered for prequalification as an individual firm. If such an employee was previously employed by a firm currently qualified with the Department, the application must indicate the date that such employee was hired by the applicant. The employee shall show in writing (documented) proof that they have been deleted from the manpower capability listing of the firm with which they were previously employed, and such deletion may affect the qualification status of the previous employer.
- D. The Department recognizes joint ventures for purposes of qualifying consultants to do work for the Department. Qualification of a joint venture will not qualify each individual professional or each individual firm for services separate and apart from the joint venture services.
- E. Financial information may be required upon request of the Consultant Prequalification Committee. Audited financial statements may be required.

V. Suspension of Certification

The Department may suspend or revoke the certification of qualification of consultants qualified to perform work for the Department for good cause. Causes for Suspension of qualifications include but are not limited to: unacceptable performance evaluation, failure to maintain an adequate accounting system, Suspension as defined in the Federal Acquisition Regulations (FAR), and adverse actions taken by the Office of Secretary of State, State Board of Registration for Professional Engineering and Land Surveyors. Suspension of qualification in one area class may result in suspension of qualification in all area classes.

- A. The Department will notify a consulting firm in writing if their qualification status has been revoked or suspended and cite specific reasons why this action was taken. After the firm receives their suspension notification they may choose from the following actions:
 - 1) If a firm wishes to appeal, they should make a formal appeal in writing to the Chairperson of the Appeals Committee within thirty days (30) from the receipt of the suspension letter. The Chief Engineer shall serve as the Chairperson of the Appeals Committee. If the decision of the Chief Engineer supports the original judgment of the Director of Preconstruction, the firm will not be allowed to reapply for prequalification in the area class for a period of no less than one year from the date of their notification.
 - 2) If the Appeals Committee rules that the suspension is valid based on the evidence provided and the firm desires to seek a higher appeal, they may do so in writing to the Deputy Commissioner. The decision of the Deputy Commissioner shall be final.

- 3) If a firm is reinstated after a period of suspension and a second suspension is issued, their ineligibility for this area class will be for a minimum of three (3) years and possibly indefinite depending on the severity of the violation.
- 4) If a firm on suspension wishes to be reinstated in the suspended area class, it shall submit a Plan of Correction to the Department no less than three months before possible reinstatement. At the time of reinstatement, the firm shall submit documentation showing the corrective measures implemented. The Department shall review the Firm's documentation along with any additional documentation from on-going deliverables and make a determination to reinstate or extend suspension.
- 5) If the firm's prequalification certification expires during the suspension period they can only reapply after the suspension ends. If an application of renewal is submitted, it must include a copy of their corrective plan that was reviewed and approved by the Department.

Minimum Qualification Standards by Class of Work

1. Transportation Planning

a. Class 1.01--State-Wide Systems Planning

This class of work is defined as the determination of the optimum transportation system needed to serve specific state-wide corridors or the entire state, taking into consideration all modes of transportation. Basic elements of this class of study are data collection, evaluating traffic capacity, engineering feasibility, interchanges, comparison of cost to benefits, modeling, alternate systems tests and cost estimates. The work may also include ecological and community value determinations, attitude and economic surveys and others. Although recommendations as to the type, number and approximate location of facilities are to be made under this class of work, the class does not include determination of the precise location or the design of facilities or systems. Qualification for this class of work will generally require a large professional staff with an extremely broad background in all aspects of transportation planning.

(1) Adequacy of Personnel

NOTICE: All "PROFESSIONALS" are required to be Georgia Registered.

At least two professionals are required. These professionals may be two Transportation Planners; one Transportation Planner and one professional Civil Engineer; or two professional Civil Engineers. One of the professionals is required to perform independent checks of data, calculations and reports of the other. The number of professional and technical support personnel must be recorded and updated.

(2) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class either by the individual, the firm, and the bona fide employees thereof.

Class 1.02--Urban Area and Regional Transportation Planning

This class of work consists of making a comprehensive study of all factors affecting total transportation within a defined urban or regional area, forecasting future transportation needs for a 20 or 30 year period and developing a recommended plan for meeting these needs. Included in this class of work are data collection, modeling, alternate systems tests and cost determinations. Consideration of ecological and community value factors may also be involved. This class of work does not include determination of the precise location of a transportation facility, nor does it include preparation of construction plans for highways, bridges, drainage systems, subways, monorails or other physical features of transportation systems.

(1) Adequacy of Personnel

At least two professionals are required. These professionals may be two transportation planners; one transportation planner and one professional Civil Engineer; or two professional Civil Engineers. One of the professionals is required to perform independent checks of data, calculations and reports of the other. The number of professional and technical support personnel must be recorded and updated.

(2) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class either by the individual, the firm, and the bona fide employees thereof. Applicant must have general knowledge of current transportation demand modeling software.

b. Class 1.03--Aviation Systems Planning

This class of work consists of evaluating the adequacy of the existing airport system for large areas of the State or for the entire State, the determination of future needs, and the formulation of recommended plans for future development which will be compatible with other transportation planning within the State and with the airport plans of adjoining states and the nation. Typical elements of this class of work include inventory of existing airports, collection of other necessary data, modeling, examination of ecological and socio-economic features of the system, and forecast of demands for five, ten and twenty year periods. This class of work is limited to making general recommendations as to locations and types of airport facilities. It does not include determination of precise locations or the design of the facilities.

(1) Adequacy of Personnel

At least two professionals are required. One of the professionals is required to perform independent checks of data, calculations and reports of the other. Number of professional and technical support personnel must be recorded and updated.

(2) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class either by the individual, the firm, and the bona fide employees thereof.

c. **Class 1.04--Mass and Rapid Transportation Planning**

This class of work is concerned with solutions to problems involving the movement of people and commodities efficiently, economically, safely and comfortably. Modes of transportation include air, bus, rail, waterways and pipelines and such other modes determined to be technologically adequate. This class of work may include the comparison and selection of the best system among several alternatives as well as improvement or expansion of existing systems. This class of work may include system planning, system operations, and terminal and vehicle design.

(1) Adequacy of Personnel

At least one professional is required. Number of professional and technical support personnel must be recorded and updated.

(2) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class either by the individual, the firm, and the bona fide employees thereof.

d. **Class 1.05--Alternate Systems Planning**

This class of work includes the evaluation of alternate transportation systems, taking into consideration various modes of transportation. It also includes studies of individual corridors for specific transportation improvements, including but not limited to railroads, waterways, and terminal transfer facilities. The work involves evaluating traffic capacity, engineering feasibility, comparison of cost to benefits and the social, economic and environmental impacts of proposed transportation improvements or systems to the extent necessary to select the best improvement or system. This class of work is limited to the evaluation of various alternatives for transportation improvement and does not include the detailed design nor the determination of the precise location of a facility.

(1) Adequacy of Personnel

At least one professional is required. This professional may be a transportation planner or a professional Civil Engineer. Number of professional and technical support personnel must be recorded and updated.

(2) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class either by the individual, the firm, and the bona fide employees thereof.

e. **Class 1.06--Environmental Studies**

This class of work is defined as the estimation of the effects of proposed transportation improvements on the cultural, physical and social environments.

Factors assessed include effects on natural resources; erosion and sedimentation; wildlife habitat and migration; air, water and soil pollution; noise levels and aesthetics; human social and cultural patterns; and human and animal comfort and well-being. This work is limited to the study of the environmental and ecological effects of proposed transportation improvements. Factors assessed do not include determination of traffic capacity or engineering feasibility, nor involve the design of the transportation improvement.

General - (Applies to subclasses 1.06(a) through 1.06(f))

(1) Professional Status

Professional status is not regulated by Georgia Law. Through the evaluation of applicant's educational background, past record and capability of satisfactorily completing environmental documentation for transportation projects, the Department will determine "Professional Status."

(2) Adequacy of Personnel

Applicant's number of environmental professionals and technical support personnel must be recorded and updated.

Subclass 1.06(a) NEPA Documentation

Satisfactory NEPA transportation experience must be demonstrated in the activities required by this subclass either by the individual, the firm, or the bona fide employees thereof.

Subclass 1.06(b) History

Professional qualifications for architectural historian are defined by the Secretary of the Interior Guidelines and are published in 36CFR Part 61. These guidelines set forth several minimum criteria for being qualified to conduct a Section 106 assessment. Qualifications include: (a) a principal investigator who meets the minimum qualifications as defined by the Secretary of the Interior; (b) a staff sufficient in size and experience to carry out the proposed work; (c) a demonstrated ability in carrying out this work.

Personnel should have at least two years of experience in performing all phases of Section 106 assessments including fieldwork (survey), resource identification, resource evaluation and mitigation. This would include use of background documentation (courthouse research, county surveys, maps, site files, context studies, etc.), supervision, HABS/HAER documentation and photography.

Subclass 1.06(c) Air Studies

The personnel must have training and proficiency in current air quality modeling, some may include: CALINE3, CAL3QHC and MOBILE 6.0. Applicants must have licensed copies of the software. Personnel must demonstrate experience (listing of transportation related projects) in using the modeling for highway transportation projects.

Subclass 1.06(d) Noise Studies

The personnel must have training and proficiency in current noise modeling, some may include: STAMINA 2.0, OPTIMA, and TRANSPORTATION NOISE MODEL (TNM) 2.5. Applicant must have licensed copies of the software. Personnel must demonstrate experience (listing of the transportation related projects) in using the modeling for highway transportation projects.

Subclass 1.06 (e) Ecology

Personnel must demonstrate experience in successfully completing wetland, stream, other waters of the U.S. delineation; identification of migratory bird habitat; identification of essential fish habitat; and the completion of Threatened and Endangered species surveys, to include coordination with USFWS and the U.S. Army Corps of Engineers. Ecological project managers must demonstrate having provided documentation necessary for both U.S. Army Corps of Engineers Nationwide and Individual permits, resulting in obtaining such permits. Ecological project managers must also demonstrate having provided documentation necessary for a stream buffer variance, resulting in obtaining such variances.

Subclass 1.06(f) Archaeology

Professional qualifications for archaeology are defined by the Secretary of the Interior Guidelines and are published in 36CFR Part 61. These guidelines set forth several minimum criteria for being qualified to conduct a Section 106 assessment. Qualifications include: (a) a principal investigator who meets the minimum qualifications as defined by the Secretary of the Interior; (b) a staff sufficient in size and experience to carry out the proposed work; and (c) a demonstrated ability in carrying out this work.

The principal investigator must have:

- A Master's Degree in Archaeology, Anthropology, or a closely related field;
- At least one year of full-time professional experience or equivalent specialized training in archaeological research, administration or management within the southeastern region of the United States which for purposes of this prequalification is defined as the states of Arkansas, Florida, Georgia, South Carolina, North Carolina, Virginia, Kentucky, Tennessee, Alabama, Mississippi, and Louisiana;
- At least four months of supervised field and analytical experience in general North American archaeology; and
- Demonstrated the ability to carry archaeological research to completion.

Personnel should have at least two years of experience in performing all phases of Section 106 assessments including fieldwork (survey), resource identification, resource evaluation and mitigation. This would include use of background documentation (courthouse research, county surveys, maps, site files, context studies, etc.), excavation (phase III), supervision, testing (phase II), documentation and photography. The ability to professionally accomplish satisfactory studies in archaeology requires advanced knowledge of the material culture and environmental parameters of the region in which the archaeologist is working. In order to carry out adequate archaeological assessments in Georgia, the consultant must demonstrate expertise and a working knowledge of the prehistoric and historic archaeological cultural history and material culture of the southeastern region of the United States and a working familiarity of the environmental parameters existing within this geographical area. In addition to the qualifications set forth in the Secretary of the Interior's Guidelines for persons serving as Principal Investigators for archaeology, the consultant should demonstrate at least two years of field experience working in and must be located within the southeastern region of the United States.

Subclass 1.06 (g) Freshwater Aquatic Surveys

Personnel must demonstrate sufficient ability to survey for and identify freshwater fish, mussel and snail species. Sufficient experience must be demonstrated, which includes documented field-time, and the ability to correctly execute survey methods and locate and correctly identify federally threatened and/or endangered freshwater fish, mussel and snail species. Furthermore, personnel must demonstrate experience in the safe-care and handling of threatened and/or endangered freshwater fish, mussel and snail species. Personnel familiar with southeastern freshwater fish, mussel and snail species but not with federally listed species in Georgia, must demonstrate that they are working in cooperation with an expert who has experience with the appropriate listed species. Personnel shall demonstrate familiarity with all applicable provisions of **Chapter 4 of Title 27 of the Official Code of Georgia Annotated** relating to fish.

(1) Professional Status

Not regulated by Georgia Law. "Professional Status" will be determined by the Department through evaluation of the applicants' permits, past record, experience and capabilities in this class of work.

(2) Adequacy of Personnel

At least one professional who has obtained a section 10(a)(1)(A) recovery permit from the U.S. Fish and Wildlife Service and a scientific collecting permit from the Special Permit Unit of the Wildlife Resources Division of the Georgia Department of Natural Resources which has been issued to the person that will be conducting the surveys is required. The section 10(a) (1) (A) recovery permit must allow the permittee to handle federally threatened and/or endangered freshwater fishes and mussels in Georgia. The scientific collecting permit must allow the permittee to handle freshwater fishes, mussels, and snails in Georgia. Number of professional and technical support personnel must be recorded and updated.

f. **Class 1.07--Attitude, Opinion and Community Value Studies**

This class of work consists of collecting and interpreting data as to public opinions, attitudes and community values by means of questionnaires administered by mail, telephone or personal interview. It involves also the design of questionnaires and the analysis of results. Typical professional personnel required would include psychologists, sociologists, statisticians, mathematicians, demographic specialists and economists.

(1) Professional Status

Not regulated by Georgia Law. "Professional Status" will be determined by the Department through evaluation of applicant's past record, experience and capability in this class of work.

(2) Adequacy of Personnel

Number of professional and technical support personnel must be recorded and updated.

(3) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class either by the individual, the firm, and the bona fide employees thereof.

g. **Class 1.08--Airport Master Planning**

This class of work consists of determining the extent and nature of airport development needed at a specific existing or proposed publicly owned airport. The planning is to be based on short, intermediate and long-range (approximately five, ten and twenty year) aeronautical service demands of the area which the airport development is intended to serve. The planning may be concerned with the expansion and modernization of existing airports or with the establishment of new airports. It will include the location and nature of existing and proposed airport facilities and of their proposed modifications and extensions. The location of existing and proposed non-aviation areas and their existing improvements will also be included.

This class of work does not include the detailed design of airport facilities.

(1) Adequacy of Personnel

At least one professional is required. Number of professional and technical support personnel must be recorded and updated.

(2) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class either by the individual, the firm, or and the bona fide employees thereof.

h. **Class 1.09--Location Studies**

This class of work is defined as all those professional and technical efforts required to provide engineering location studies of alternative corridors, engineering feasibility, corridor alternates, design assumptions, participation in location public hearings, define the recommended alternate and preparation of location study report. Also required will be the gathering of data and preparation of a report to be presented at the location public hearing to assure the public that adequate consideration has been given to relocation of people and businesses. The class of work may require coordination with other consultants doing environmental studies and traffic and revenue studies.

(1) Adequacy of Personnel

At least two professionals are required. A professional for this area class would be a Professional Engineer, currently licensed to practice in and by the State of Georgia. One of the professionals is required to perform independent checks of data, calculations and reports of the other. Number of professional and technical support personnel must be recorded and updated.

(2) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class either by the individual, the firm, and the bona fide employees thereof.

i. **Class 1.10--Traffic Studies**

This class of work is defined as the gathering of traffic data on the existing system in and near a proposed corridor and the assignment of traffic to the new facility and the corridor for present and design years. Close coordination may be required with other consultants doing location studies

(1) Adequacy of Personnel

At least two professionals are required. A professional for this area class would be a Professional Engineer, currently licensed to practice in and by the State of Georgia. One of the professionals is required to perform independent checks of data, calculations and reports of the other. Number of professional and technical support personnel must be recorded and updated.

(2) Past Record, Experience, and Capability

k. **Class 1.11—Traffic and Toll Revenue Studies**

This class of work is defined as those professional and technical efforts (planning, engineering, actuarial, economic and business) required to develop traffic and toll revenue studies. Areas of expertise shall include various levels of study and complexity including exploratory, preliminary and investment grade. Consultant shall have proven track record with regard to the development of toll facility traffic projections, stated preference surveys, travel demand and micro simulation modeling, value of time estimates, willingness to pay estimates, assignment of toll rates, diversionary impacts, ramp-up, macroeconomic forecasting, land-use evaluations, financial feasibility and pricing policy.

(1) Adequacy of Personnel

At least two professionals are required. One of the professionals is required to perform independent checks of data, calculations and reports of the other. Number of professional and technical support personnel must be recorded and updated.

(2) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class either by the individual, the firm, and the bona fide employees thereof.

Satisfactory experience must be demonstrated in the activities required by this class either by the individual, the firm, and the bona fide employees thereof.

l. **Class 1.12--Major Investment Studies**

This class of work consists of conducting studies which address transportation needs on a corridor or sub-area scale, and which will likely lead to high type transportation investments. They will have a substantial capital investment and a regional transportation impact. Included in this class of work are problem definition, alternative solution definition and evaluation techniques, proactive citizen involvement throughout the study, analysis of costs, benefits and financing, environmental analyses at a level suitable for use in draft environmental impact studies, air quality analyses, evaluations of final alternatives, and study documentation.

(1) Adequacy of Personnel

At least two professionals are required. These professionals may be two Transportation Planners; one Transportation Planner and one professional Civil Engineer; or two professional Civil Engineers. One of the professionals is required to perform independent checks of data, calculations and reports of the other. The number of professional and technical support personnel must be recorded and updated.

(2) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class by the individual, the firm, or the bona fide employees thereof. Applicant must have general knowledge of the Major Investment Studies requirements as stated in the Intermodal Surface Transportation Efficiency Act of 1991, and subsequent guidelines.

m. **Class 1.13 Non-Motorized Transportation Planning:**

This class of work consists of the evaluation of bicycle and pedestrian needs related to safety, mobility and accessibility, and the development of plans that meet these needs. Included in this class of work are data collection and analysis, route planning (including consideration of impacts to other modes of traffic), comparison of cost to benefits and consideration of the social, economic and environmental impacts of proposed improvements. This class of work includes planning and evaluation of on-street and off-street bicycle facilities, walkways and crossing treatments, however does not include preparation of construction plans for bicycle and pedestrian facilities, highways, bridges, drainage systems or other physical features of transportation systems.

(1) Adequacy of Personnel

At least two professionals are required. These professionals may be two transportation planners; one transportation planner and one professional Civil Engineer; or two professional Civil Engineers. The number of professional and technical support personnel must be recorded and updated.

(2) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class either by the individual, the firm, or the bona fide employees thereof.

2. Intermodal and Mass Transit Operations

j. **Class 2.01--Mass Transit Program (Systems) Management**

This class of work is defined as the overall management of a mass or rapid transit system from concept to operational readiness. The Program Management Consultant will be the principal coordinator between the state, local and federal agencies, and the affiliated consultants and contractors; and will have an established management organization staffed with technical, economic, quality control, systems safety, environmental, sociological, marketing, and other disciplines as necessary for all phases of work involved. The Program Management Consultant will be responsible for program control and integration, including: work definition and plans, schedule implementation and critical path methodology, cost control; and the development of program procedures and guidelines. The Program Management Consultant will have the capability to prepare and negotiate contracts for services and hardware, supervise and inspect construction and installations, test and check out components and the integrated system, issue reports, prepare operation and maintenance manuals, and provide an overall evaluation of system performance.

(1) Adequacy of Personnel

At least one professional is required. Number of professional and technical support personnel must be recorded and updated.

(2) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class either by the individual, the firm, and the bona fide employees thereof.

k. **Class 2.02--Mass Transit Feasibility and Technical Studies**

This class of work is defined as performing studies related to the management, operation, design, and equipment requirements of existing or proposed intra-city modes of transportation (excepting private automobiles, but including bus, rail, and water and state of the art devices). The Feasibility and Technical Studies Consultant will have an established project management and technical staff to organize the study and objectives; determine travel demand and system economics; determine social and environmental constraints and impact; evaluate alternative routes; develop and participate in programs for community support; determine compatibility with regional transit and development plans; and recommend management and operation methods, operating equipment, facilities, support and maintenance equipment. The Feasibility and Technical Consultant will prepare interim and final reports, and prepare applications for capital and/or demonstration grants from state and federal agencies.

(1) Adequacy of Personnel

At least two professionals are required. One of the professionals is required to perform independent checks of data, calculations and reports of the other. Number of professional and technical support personnel must be recorded and updated.

(2) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class either by the individual, the firm, and the bona fide employees thereof.

l. **Class 2.03--Mass Transit Vehicle and Propulsion System**

This class of work is defined as the development of state of the art or beyond land and water vehicles or devices, associated propulsion or drive system, and vehicle sub-systems related to its operation. The basic elements of this class of work require a capability to perform comparative, technical, economic and environmental analysis of state of the art systems; and to design, model, build, install, test, analyze, demonstrate and evaluate prototype or innovative mass and rapid transit concepts. The management and technical staff will be responsive to program objectives, including cost, quality control, systems safety, environmental impact, interfacing sub-systems, sub-contracting for services and hardware, and the preparation of technical and operational reports.

(1) Adequacy of Personnel

At least two professionals are required. One of the professionals is required to perform independent checks of data, calculations and reports of the other. Number of professionals and technical support personnel must be recorded and updated.

(2) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class either by the individual, the firm, and the bona fide employees thereof.

m. **Class 2.04--Mass Transit Controls, Communications and Information Systems**

This class of work is defined as the modification of existing or the design, installation and checkout of new automatic or manual operation controls and signals, communications, operational equipment information, and public information displays. The Controls, Communications and Information Systems Consultant will have an established project management and technical staff to perform independent work, or work in support of the Program Management Consultant. This class of work will include the design of vehicle and public traffic control systems: fail-safe controls for operating equipment; remote and local display of information for equipment operation; malfunction detection; position location; proximity detection; system security and safety; open and closed loop communications with operational elements and the public; and automated ticketing, fare collection, or billing systems.

(1) Adequacy of Personnel

At least two professionals are required. One of the professionals is required to perform independent checks of data, calculations and reports of the other. Number of professional and technical support personnel must be recorded and updated.

(2) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class either by the individual, the firm, and the bona fide employees thereof.

n. **Class 2.05--Mass Transit Architectural Engineering**

This class of work is defined as the design and construction supervision of single purpose and multi-modal structures, including site planning. The Architectural Engineering Consultant will have an established project management and technical staff to provide complete design of terminals, shelters, maintenance and storage facilities, operational buildings, etc., designed and sited in consonance with program plans, existing or planned environs, and for the security of the facility and the users.

(1) Professional Status

Registration as a Professional Engineer with the Georgia State Board of Professional Engineers.

(2) Adequacy of Personnel

At least two professionals are required. One of the professionals is required to perform independent checks of data, calculations and reports of the other. Number of professional and technical support personnel must be recorded and updated.

(3) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class either by the individual, the firm, and the bona fide employees thereof.

o. **Class 2.06--Mass Transit Unique Structures**

This work is defined as the design of guide ways, tunnels, bridges over-under passes, monorails, and other unique structures required for a transit system, including necessary foundation/sub-soil investigation.

(1) Professional Status

Registration as a Professional Engineer with the Georgia State Board of Professional Engineers and Land Surveyors or as an Architect with the Georgia State Board of Architecture.

(2) Adequacy of Personnel

At least two professionals are required. One of the professionals is required to perform independent checks of data, calculations and reports of the other. Number of professional and technical support personnel must be recorded and updated.

(3) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class either by the individual, the firm, and the bona fide employees thereof.

p. **Class 2.07--Mass Transit Electrical and Mechanical Systems**

This class of work is defined as the electrical and/or mechanical design, specifications, installation and checkout of utilities, HVAC, stationary power sources or substation, power transmission, lighting, etc., associated with selected equipment and/or facilities. The Electrical and Mechanical Consultant will be responsive to the project manager for that particular class of work.

(1) Adequacy of Personnel

At least one professional in area class of work is required. Number of professional and technical support personnel must be recorded and updated.

(2) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class either by the individual, the firm, and the bona fide employees thereof.

q. **Class 2.08--Mass Transit Operations Management and Support Services**

This class of work is defined as a service to a mass or rapid transit public authority as a management and technical consultant for the day-by-day operation of the system. The Operations Consultant will advise, or provide direct services as determined, in public affairs, marketing, financial operations, maintenance, planning, scheduling, equipment and system modifications, regional interfaces, and other operational aspects in order to maintain an economically sound and dependable transit system and/or to provide recommendations for expanded services.

(1) Professional Status

Not regulated by Georgia Law. "Professional Status" will be determined by the Department through its evaluation of the applicant's past record and experience in this class of work.

(2) Adequacy of Personnel

Number of professional and technical support personnel must be recorded and updated. At least one professional in area class of work is required.

(3) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class either by the individual, the firm, and the bona fide employees thereof.

r. **Class 2.09--Airport Design**

This class of work is defined as including the design and construction supervision of new and modifications to existing runways, taxiways, aircraft parking aprons, lighting systems and airport approach aid facilities to meet state, local and federal requirements. The airport design consultant will have specific knowledge and experience in the Federal Aviation Administration Airport Grant Program as it relates to the design of runways, taxiways, aircraft parking areas and lighting systems. Experience in airport approach aids is desirable but not required. The consultant must be capable of conducting analysis related to feasibility and acceptability of new types of facilities and new equipment to improve airport operations.

(1) Adequacy of Personnel

NOTICE: All "PROFESSIONALS" are required to be Georgia Registered.

At least two professionals are required with P.E. certification and aviation design experience. Number of professional and technical support personnel must be recorded and updated.

(2) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class either by the individual, the firm, and the bona fide employees thereof.

s. **Class 2.10--Mass Transit Program (Systems Marketing)**

This class of work is defined as the marketing of a mass or rapid transit system. The marketing consultant will be the principal coordinator between the state, local, and federal agencies, and the affiliated consultants, and will have an established management organization staffed with marketing, technical, economic, environmental, sociological, and other disciplines as necessary for all phases of work involved. The Program Marketing Consultant will be responsible for program control and integration, including transit market research, product planning, pricing, promotion, information delivery techniques, and the development of program procedures and guidelines. The Program Marketing Consultant will have the capability to prepare and negotiate contracts and agreements for marketing services, develop, supervise, inspect and evaluate marketing strategies, issue reports, prepare marketing manuals and provide an overall evaluation of marketing program performance.

(1) Adequacy of Personnel

At least one professional in area class of work is required. Number of professional and technical support personnel must be recorded and updated.

(2) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class either by the individual, the firm, and the bona fide employees thereof.

3. Highway Design Roadway

a. Class 3.01--Two-lane or Multi-lane Rural Highway Design

This class of work encompasses projects generally with free or controlled access, rural type drainage and minimum conflicts with utilities.

(1) Professional Staff

Registration as a Professional Engineer with the Georgia State Board of Professional Engineers and Land Surveyors and proven proficiency in the field of Civil Engineering.

(2) Adequacy of Personnel

At least two professionals are required. One of the professionals is required to perform independent checks of data, calculations and reports of the other. Number of professional and technical support personnel must be recorded and updated.

(3) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class either by the individual, the firm, and the bona fide employees thereof.

b. Class 3.02--Two-lane or Multi-lane Urban Highway Design

This class of work encompasses projects generally in urban areas with urban type drainage including storm sewers, and moderate conflicts with utilities.

(1) Professional Staff

Registration as a Professional Engineer with the Georgia State Board of Professional Engineers and Land Surveyors and proven proficiency in the field of Civil Engineering.

(2) Adequacy of Personnel

At least two professionals are required. One of the professionals is required to perform independent checks of data, calculations and reports of the other. Number of professional and technical support personnel must be recorded and updated.

(3) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class either by the individual, the firm, and the bona fide employees thereof.

c. Class 3.03--Two-lane or Multi-lane Widening and Reconstruction, with Curb and Gutter and Storm Sewers in Heavily Developed Commercial, Industrial and Residential Urban Areas

This class of work encompasses projects in urban areas and includes municipal type highways, roadways or streets, and design studies including accommodation of utilities, generally free access highways, roadways or streets with curb and gutter including storm sewers.

(1) Professional Staff

Registration as a Professional Engineer with the Georgia State Board of Professional Engineers and Land Surveyors and proven proficiency in the field of Civil Engineering.

(2) Adequacy of Personnel

At least two professionals are required. One of the professionals is required to perform independent checks of data, calculations and reports of the other. Number of professional and technical support personnel must be recorded and updated.

(3) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class either by the individual, the firm, and the bona fide employees thereof.

d. Class 3.04--Multi-lane Rural, Limited Access Expressway Type Highway Design

This class of work encompasses highway plans and related design studies including plans for the adjustment of utilities crossing the facility, for multi-laned, rural limited access expressway type highways.

(1) Professional Staff

Registration as a Professional Engineer with the Georgia State Board of Professional Engineers and Land Surveyors and proven proficiency in the field of Civil Engineering.

(2) Adequacy of Personnel

At least two professionals are required. One of the professionals is required to perform independent checks of data, calculations and reports of the other. Number of professional and technical support personnel must be recorded and updated.

(3) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class either by the individual, the firm, and the bona fide employees thereof.

e. Class 3.05--Design of Urban Expressway and Urban Interstate

This class of work encompasses design studies and reports, preparation of complete construction plans for urban expressway or urban interstate projects and includes plans for adjustment of utilities crossing the facility.

(1) Professional Staff

Registration as a Professional Engineer with the Georgia State Board of Professional Engineers and Land Surveyors and proven proficiency in the field of Civil Engineering.

(2) Adequacy of Personnel

At least two professionals are required. One of the professionals is required to perform independent checks of data, calculations and reports of the other. Number of professional and technical support personnel must be recorded and updated.

(3) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class either by the individual, the firm, and the bona fide employees thereof.

f. Class 3.06--Traffic Operations Studies

This class of work includes studies of existing traffic problems within an urban area and determination of the most effective ways to improve traffic flow and safety, largely by the application of traffic engineering techniques and other corrective measures. It includes street and signal inventories, intersection and crossing diagrams, highway lighting information at high night accident locations, analysis of accident records, traffic counts, travel times, parking practices, and laws and ordinances affecting transportation. This class of work is limited to generalized description and schematic layouts of the proposed improvements, and specifically does not include the preparation of construction plans nor the writing of specifications.

(1) Adequacy of Personnel

At least one professional is required. Number of professional and technical support personnel must be recorded and updated.

(2) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class either by the individual, the firm, and the bona fide employees thereof.

t. **Class 3.07--Traffic Operations Design**

This class of work includes the preparation of construction plans and/or specifications for the improvements such as those proposed in class of work 3.06 above. It includes design of improvements oriented to relieving major traffic problems including signalization, pavement marking, and signing.

(1) Adequacy of Personnel

At least two professionals are required. A professional for this area class would be a Professional Engineer, currently licensed to practice in and by the State of Georgia. Number of professional and technical support personnel must be recorded and updated. Prequalification may be considered for a firm with only one Professional Engineer, if the individual can document 15 or more years of applicable experience.

(2) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class by the individual(s), who must be bona fide employee(s) thereof.

g. **Class 3.08--Landscape Architecture**

This class of work is defined as the preparation of plans, specifications, reports, and/or studies directed toward achieving maximum harmony between the transportation corridor and the general landscape through techniques such as: preservation of aesthetically pleasing existing land features, improvements oriented toward enhancing compatibility with existing surroundings, and creative utilization of the corridor to provide a satisfactory mesh with adjacent lands.

It includes work such as investigation, reconnaissance, research, site planning and design ultimately leading to the construction and development of aesthetically pleasing and functional settings and approaches for structures, roadways, walkways, trails, wayside parks, rest areas, and other appurtenant features, and includes such detailed plans as planting, irrigation, lighting, grading and drainage as they relate to aesthetics and the landscape. It does not entail judgment of engineering factors or preparation of engineering plans.

(1) Professional Staff

Registration with the Georgia Board of Landscape Architects.

(2) Adequacy of Personnel

At least one professional is required. Number of professional and technical support personnel must be recorded and updated.

(3) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class either by the individual, the firm, and the bona fide employees thereof.

h. Class 3.09--Traffic Control Systems Analysis, Design and Implementation

This class of work involves the use of electrical engineering, electronics engineering, computer science, and traffic engineering to analyze, design and implement traffic control systems which provide an area-wide, coordinated approach to traffic control. It includes system performance and cost analysis, system hardware and software design, development of management plans, supervision of system installation and operation, system testing and "debugging", system documentation, and the training of operating personnel.

(1) Adequacy of Personnel

At least two professionals are required. One of the professionals is required to perform independent checks of data, calculations and reports of the other. Number of professional and technical support personnel must be recorded and updated.

(2) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class either by the individual, the firm, and the bona fide employees thereof.

J. Class 3.10— Class 3.10-Utility Coordination

This class of work primarily entails the coordination of utility owner/facility issues on federally funded transportation projects and providing professional engineering services necessary to ensure that utility impacts will not delay the Department's project schedule. To this end, utility facility conflict identification and resolution are significant tasks involved with this area class. Other activities associated with this class of work are utility relocation design, and utility impact avoidance/mitigation training.

(1) Professional Staff

a) Registration as a Professional Engineer who:

- a) Is currently licensed to practice by the Georgia State Board of Professional Engineers and Land Surveyors and has proven proficiency in the field of Civil Engineering with emphasis on transportation and utility design.
- b) Has knowledge of and experience with related federal, state, and local utility and transportation laws and regulations; AASHTO Design Standards; professional engineering standards; project management; and cost estimating related to transportation projects and utility relocations.

(2) Adequacy of Personnel

- a) At least one professional engineer meeting the requirements as stated in item one (1) above is required.
- b) At least one key personnel must have a minimum of 4 years experience performing utility coordination activities on transportation projects.

- c) At least one key personnel must demonstrate a strong working knowledge of the GDOT's Plans Development Process (PDP), plan presentation requirements, and GDOT Utility Accommodation Policies and Standards.
 - d) At least one key personnel must have a strong working knowledge of roadway, and utility construction practices.
 - e) At least one key personnel must demonstrate a strong working knowledge of Subsurface Utility Engineering (SUE) and its application to increase engineering value to transportation projects.
 - f) Must have sufficient personnel to prepare engineering plans, reports and specifications to the Department's Electronic Data Guidelines and SUE Standards. Must have sufficient personnel to accommodate multiple projects simultaneously. The number of professional and technical support personnel must be recorded and updated.
- (3) Equipment
- a) Must have adequate equipment to prepare engineering plans, reports and specifications to the Department's Electronic Data Guidelines and SUE Standards.
- (4) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class either by the individual, the firm, and the bona fide employees thereof.

k Class 3.11--Architecture

This class of work is defined as the design and preparation of plans of transportation related buildings such as safety rest area buildings, truck weighing station buildings, toll booths, toll processing centers, and welcome centers. The architect may be required to furnish construction supervision.

(1) Professional Staff

Registration as a Professional Engineer with the Georgia State Board of Professional Engineers and Land Surveyors or as an Architect with the Georgia State Board of Architecture.

(2) Adequacy of Personnel

At least two professionals are required. One of the professionals is required to perform independent checks of data, calculations and reports of the other. Number of professional and technical support personnel must be recorded and updated.

(3) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class either by the individual, the firm, and the bona fide employees thereof.

l **Class 3.12--Hydraulic and Hydrological Studies (Roadway)**

This class of work includes large-scale studies of drainage basins, stream diversions or alternate route analysis to optimize highway locations over bodies of water or marsh areas. Activities must be based on all appropriate federal, state and local municipality procedures for collecting, analyzing and modifying hydraulic and hydrologic data. The Consultant shall indicate experience with flood routing procedures and computer programs.

(1) Professional Staff

Registration as a Professional Engineer with the Georgia State Board of Professional Engineers and Land Surveyors and proven proficiency in the field of Civil Engineering.

(2) Adequacy of Personnel

At least two professionals are required. One of the professionals is required to perform independent checks of data, calculations and reports of the other. Consultant must have professional and technical support personnel of adequate number to gather data, including surveys, and perform analyses within a reasonable contract time frame. A minimum of one drafter is required. Number of professional and technical support personnel must be recorded and updated.

(3) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class either by the individual, the firm, and the bona fide employees thereof. Experience in the use and application of the computer programs "HY8" (for culverts), and "HEC -RAS" is required.

m. **Class 3.13--Facilities for Bicycles and Pedestrians**

This class of work is defined as the production of competently engineered bicycle and pedestrian plans and related R/W, utility and design plans which conform with the acceptable design guides or criteria and which meet the specific requirements of the Georgia Department of Transportation or the Federal Highway Administration.

(1) Professional Staff

Registration as a Professional Engineer with the Georgia State Board of Professional Engineers and Land Surveyors and proven proficiency in the field of Civil Engineering or as a Landscape Architect with Georgia Board of Landscape Architects.

(2) Adequacy of Personnel

At least one professional engineer or one landscape architect is required. Number of professional and technical support personnel must be recorded and updated.

(3) Past Record, experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class, or area classes 3.01, 3.02, or 3.03, either by the individual, the firm, or the bona fide employees thereof.

n. **Class 3.14 - Historic Rehabilitation**

This class of work is defined as the historic rehabilitation work for historic structures.

(1) Professional Staff

Registration as a professional architect in Georgia is required plus the equivalent of two years of full time experience in historic architectural practice, with proven ability to meet the Secretary of the Interior's Standard for Rehabilitation.

(2) Adequacy of Personnel

At least one professional is required. The number of professional and technical support personnel must be recorded and updated.

(3) Past Record, experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class, either by the individual, the firm, or the bona fide employees thereof.

o. **Class 3.15-Highway Lighting**

This class of work is defined as the design and preparation of lighting plans for roadways, bridges, interchanges, tunnels, safety rest areas, truck weighing stations, park and ride lots and similar transportation facilities for vehicular and/or pedestrian traffic.

(1) Professional Staff

Registration as a Professional Engineer with the Georgia State Board of Professional Engineers and Land Surveyors and proven proficiency in the field of Illumination for area and roadway lighting and proven proficiency in the field of Electrical Engineering as related to the requirements of this class.

(2) Adequacy of Personnel

Either:

A.) One licensed professional Electrical Engineers with sufficient proven experience in the field of illumination OR

B.) One licensed Electrical Engineer and an additional professional with sufficient proven experience in field of illumination is required.

Number of professional and technical support personnel must be recorded and updated.

(3) Past Record, Experience and Capability

Satisfactory Experience must be demonstrated in the activities required by this class by the bona fide employees of the firm.

p. Class 3.16-Value Engineering

This class of work includes the study of transportation related projects or selected processes by multi-disciplined teams to determine the most cost effective and value added use of resources to accomplish the given functions.

(1) Professional Staff

Registration as a Professional Engineer who:

- Is currently licensed to practice in any state.
- Is a Certified Value Specialist (CVS) by SAVE International with experience in the value engineering process and team leadership related to transportation projects as evidenced by having conducted a minimum of five transportation related value engineering studies, including one freeway project exceeding \$25 million initial estimated cost; and
- Has attended a minimum of two transportation related value engineering classes in the last five years; and
- Has knowledge of and experience with federal, state, and local regulations, AASHTO Design Standards, public involvement, professional engineering standards, project management, and cost estimating related to transportation projects.

(2) Adequacy of Personnel

At least one (1) professional; A professional for this area class would be a currently Professional Engineer in any state. Meeting the requirements as stated in item one above is required.

Must have sufficient production staff to perform transportation related value engineering team leadership, produce final value engineering study reports, and teach classes on the principles and practices of value engineering

(3) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class by the individual, the firm, and the bona fide employees thereof.

q. Class 3.17 - Design of Toll Facilities Infrastructure

This class of work encompasses design studies and reports, preparation of complete construction plans for toll facilities and toll-related infrastructure. It includes items such as toll plazas, toll booths, toll

gantries, toll gates, toll-related ITS, toll systems, tolling technology, managed lane facility design, toll road design and toll-related infrastructure including systems associated with open road tolling. Consultant shall be capable in recommending management and operation methods, operating equipment, facilities, support, and maintenance equipment.

(1) Professional Staff

Registration as a Professional Engineer with the Georgia State Board of Professional Engineers and Land Surveyors and proven proficiency in the field of Civil Engineering.

(2) Adequacy of Personnel

At least two professionals are required. One of the professionals is required to perform independent checks of data, calculations and reports of the other. Number of professional and technical support personnel must be recorded and updated.

(3) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class either by the individual, the firm, and the bona fide employees thereof.

4. Highway Structures

c) **Class 4.01--Minor Bridge Design**

This class of work is defined as the production of competently engineered bridge plans which conform to acceptable design standards and which meet the specific requirements of the Georgia Department of Transportation or the Federal Highway Administration. It includes preparation of construction plans for non-complex bridge structures generally using simple or continuous spans of reinforced concrete, pre-stressed concrete, or steel with pile bent foundations or spread footings.

(1) Professional Status

Registration as a Professional Engineer with the Georgia State Board of Professional Engineers and Land Surveyors and proven proficiency in the field of Civil Engineering.

(2) Adequacy of Personnel

At least two professionals are required. One of the professionals is required to perform independent checks of data, calculations and reports of the other. Number of professional and technical support personnel must be recorded and updated.

(3) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class either by the individual, the firm, and the bona fide employees thereof.

d) Class 4.02--Major Bridge Design

This class of work is defined as the production of competently engineered bridge plans which conform with acceptable standards and which meet the specific requirements of the Georgia Department of Transportation or the Federal Highway Administration. This category specifically includes preparation of construction plans for high level structures with underwater piers, complex interchange structures with curved girders, post tension structures, or other major non-movable bridge structures.

(1) Professional Staff

Registration as a Professional Engineer with the Georgia State Board of Professional Engineers and Land Surveyors and proven proficiency in the field of Civil Engineering.

(2) Adequacy of Personnel

At least two professionals are required. One of the professionals is required to perform independent checks of data, calculations and reports of the other. Number of professional and technical support personnel must be recorded and updated.

(3) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class either by the individual, the firm, and the bona fide employees thereof.

e) Class 4.03--Movable Span Bridges Design

This class of work is defined as the production of competently engineered bridge plans which conform with acceptable design standards and which meet the specific requirement of the Georgia Department of Transportation or the Federal Highway Administration, specifically relating to preparation of construction plans for bascule or other movable span bridges.

(1) Professional Staff

Registration as a Professional Engineer with the Georgia State Board of Professional Engineers and Land Surveyors with proven proficiency in the field of Civil Engineering.

(2) Adequacy of Personnel

At least two professionals are required. One of the professionals is required to perform independent checks of data, calculations and reports of the other. Number of professional and technical support personnel must be recorded and updated.

(3) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class either by the individual, the firm, and the bona fide employees thereof.

f) Class 4.04--Hydraulic and Hydrological Studies (Bridges)

This class of work includes large scale studies of drainage basins, stream diversions or alternate route analysis to optimize highway locations over bodies of water or marsh areas

where bridge or culvert openings are located. These studies must include the sizing of bridge and culvert openings and their locations, and the modifying of FEMA floodways and performing scour analysis as required. Experience in the use and application of the computer programs "WSPRO", "HY8" (for culverts), and "HEC - RAS" and familiarity with the "HEC II computer program are required. Activities must be based on all appropriate federal, state and local municipality procedures for collecting, analyzing and modifying hydraulic and hydrologic data.

(1) Professional Status

Registration as a Professional Engineer with the Georgia State Board of Professional Engineers and Land Surveyors with proven proficiency in the field of Civil or Structural Engineering.

(2) Adequacy of Personnel

At least two professionals are required. One of the professionals is required to perform independent checks of data, calculations and reports of the other. Consultant must have professional and technical support personnel of adequate number to gather data, including surveys and perform required analyses within a reasonable contract time frame. A minimum of one drafter is required. Number of professional and technical support personnel must be recorded and updated.

(3) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class either by the individual, the firm, and the bona fide employees thereof.

g) Class 4.05—Bridge Inspection

This work is defined as safety inspection of bridges in accordance with Code of Federal Regulations Title 23, Part 650, Subpart C – National Bridge Inspection Standards as well as specific requirement of the Georgia Department of Transportation. This category specifically includes detailed inspection and documentation of bridges on the public road system.

(1) Professional Staff

Registration as a Professional Engineer with the Georgia State Board of Professional Engineers and Land Surveyors and proven proficiency in the field of Civil Engineering.

(2) Adequacy of Personnel

At least one professional, registered as a Professional Engineer with the Georgia State Board of Professional Engineers and Land Surveyors that is experienced in bridge design and/or bridge inspection standards is required to review and certify inspection data, load rating, and drawings as required by the Georgia Department of Transportation.

Any individual in immediate charge of a bridge inspection team shall possess at least one of the following minimum qualifications.

- (a) Be registered as a Professional Engineer with the Georgia State Board of Professional Engineers and Land Surveyors and three years of experience in safety bridge inspection assignments in a responsible capacity.
- (b) Have a minimum of five years of experience in safety bridge inspection assignments in a responsible capacity and have completed a comprehensive training course based on the “Bridge Inspectors Training Manual”, which has been developed by a joint Federal-State task force.
- (c) Maintain current certification as a Level III or IV Bridge Safety Instructor under the National Society of Professional Engineers program for National Certification in Engineering Technologies (NICET).

The number of professional and technical support personnel must be reported and updated.

(3) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class either by the individual, the firm, and the bona fide employees thereof.

5. Topography

h) Class 5.01--Land Surveying

This class of work includes the determination of boundaries of tracts of land by the laying off or the measurement of the lengths and directions of lines forming the boundaries of the tract.

(1) Professional Status

Registration as a Land Surveyor with the Georgia State Board of Professional Engineers and Land Surveyors.

(2) Adequacy of Personnel

At least one professional is required. Number of professional and technical support personnel must be recorded and updated.

(3) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class either by the individual, the firm, and the bona fide employees thereof.

Applicant must have the equipment necessary to perform this class of work.

i) Class 5.02--Engineering Surveying

This class of work is concerned with making physical measurements to obtain both horizontal and vertical distances for use in the planning, design and construction of engineering projects. It includes route surveys for transportation facilities, precise horizontal and vertical traversing based on the State Plane Coordinate System and the National Geodetic Survey datum, topographic surveys to determine the relief of a particular tract of land, and hydrographic

surveys to determine the shore and bank of bodies of water, and depths at particular points.

(1) Professional Status

Registration as a Land Surveyor with the Georgia State Board of Professional Engineers and Land Surveyors.

(2) Adequacy of Personnel

At least one professional is required. Number of professional and technical support personnel must be recorded and updated.

(3) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class either by the individual, the firm, and the bona fide employees thereof.

Applicant must have the equipment necessary to do this class of work.

j) Class 5.03--Geodetic Surveying

This class of work includes making precise surveys over areas of such considerable extent that the curvature of the earth must be considered. It includes traversing (based on the State Plane Coordinate System), triangulation, trilateration, precise leveling and astronomic direction finding.

(1) Professional Status

Registration as a Land Surveyor with the Georgia State Board of Professional Engineers and Land Surveyors.

(2) Adequacy of Personnel

At least one professional is required. Number of professional and technical support personnel must be recorded and updated.

(3) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class either by the individual, the firm, and the bona fide employees thereof.

Applicant must have equipment necessary to do this class of work.

k) Class 5.04--Aerial Photography

This class of work includes taking precision quality photographs from air camera station(s) which are suitable for subsequent photogrammetric mapping, and planning studies.

(1) Professional Status

Not regulated by Georgia Law. "Professional Status" will be determined by the Department through evaluation of the applicant's past record, experience and capabilities in this class of work.

(2) Adequacy of Personnel

Number of professional and technical support personnel must be recorded and updated.

(3) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class either by the individual, the firm, and the bona fide employees thereof. Applicant must have the equipment necessary to do this class of work.

l) Class 5.05--Aerial Photogrammetry

This class of work includes obtaining information about physical objects and environment through processes of recording, measuring and interpreting photographic images and electromagnetic energy. It includes derivation and production of topographic maps and surveys based on measurements and information obtained from aerial photographs.

(1) Professional Status

Not regulated by Georgia Law. "Professional Status" is determined by DOT through the evaluation of the applicant's past record, experience and capabilities in this class of work.

(2) Adequacy of Personnel

At least one professional is required. Number of professional and technical support personnel must be recorded and updated.

(3) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class either by the individual, the firm, and the bona fide employees thereof. When the Department does not have a history of experience with the consultant, the applicant must prove qualifications; references will be checked.

Applicant must have the equipment necessary to do this class of work.

m) Class 5.06--Topographic Remote Sensing

This class of work entails basically, the acquisition of information that is derived by the collection of energy data emitted or reflected from or through the earth's surface. The data reduction phase of such work involves expertise in the interpretation and analysis of recorded data by individuals in one or more of the following disciplines: civil engineering (e.g. soil and hydrology); geology; soil science; photogrammetry and several specialized areas of biological

science, geography and urban and regional planning.

(1) Professional Status

Not regulated by Georgia Law. "Professional Status" is determined by Department of Transportation through the evaluation of the applicant's past record, experience and capabilities in this class of work.

(2) Adequacy of Personnel

At least one professional is required. Number of professional and technical support personnel must be recorded and updated.

(3) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class either by the individual, the firm, and the bona fide employees thereof. When the Department does not have a history of experience with the consultant, the applicant must prove qualifications; references will be checked.

Applicant must have the equipment necessary to do this class of work.

n) Class 5.07--Cartography

This class of work involves expressing graphically, by the use of maps and charts, the known physical features of the earth's surface including the works of man and his varied activities. Such variations may be in black and white or in multicolor. Cartography invariably includes assembly, evaluation, selection, rejection and presentation of data.

(1) Professional Status

Not regulated by Georgia Law. "Professional Status" will be determined by the Department through the evaluation of the applicant's past record, experience and capabilities in this class of work.

(2) Adequacy of Personnel

Number of professional and technical support personnel must be recorded and updated.

(3) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class either by the individual, the firm, and the bona fide employees thereof.

a. Class 5.08—Overhead/Subsurface Utility Engineering (SUE)

This class of work is defined as the engineering processes that involve managing certain risks associated with accurately and comprehensively identifying, characterizing, and mapping overhead and underground utility facilities. The major activities include utility records research, mapping, designating, utility impact analysis, locating, and data management. Other activities associated with

this class of work are utility relocation design, coordination, and training. These activities, when coordinated with utility owners, Department personnel, and surveyors, provide high quality utility information for use during project development, design, and construction. These activities should conform to standards and guidelines as described in FHWA and ASCE Subsurface Utility Engineering publications in conjunction with the Department's current standards, guidelines, and processes and SUE scope of services.

(1) Professional Status

Registration as a Professional Engineer with the Georgia State Board of Professional Engineers and Land Surveyors and proven proficiency in the field of Civil Engineering with emphasis on transportation and utility design.

Registration as a Land Surveyor with the Georgia State Board of Professional Engineers and Land Surveyors and proven proficiency in the field of route surveying with emphasis on designating utilities.

(2) Adequacy of Personnel

At least two professionals, one of each as stated in item one (1) above are required. One of the professionals is required to perform independent checks of data, calculations, plans and reports of the other.

At least two designators are required.

At least one key personnel must demonstrate a strong working knowledge of the Department's current Plans Development Process (PDP).

Must have sufficient personnel to prepare engineering plans, reports and specifications to the Department's current Electronic Data Guidelines and SUE Standards.

Must demonstrate to have sufficient personnel to accommodate multiple projects simultaneously.

The number of professional and technical support personnel must be recorded and updated.

(3) Equipment

Must have adequate equipment to demonstrate the ability to designate both metallic and non-metallic types of underground utility facilities in accordance with the current ASCE standard CI/ASCE 38-02 "Standard Guidelines for the Depiction of Existing Subsurface Utility Data".

Must have adequate equipment to demonstrate the ability to locate underground utility facilities in a minimally intrusive manner.

Must have adequate equipment to demonstrate the ability to accurately and efficiently survey and reduce field information.

Must have adequate equipment to prepare engineering plans, reports and specifications to the Department's current Electronic Data Guidelines and SUE Standards.

Must have adequate equipment to accommodate multiple projects simultaneously.

(4) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class either by the individual (s) who are bona fide employees for the firm thereof.

6. Soils, Foundation, and Material Testing

o) Class 6.01(a) – Soil Survey Studies

This class of work includes a comprehensive evaluation of soil and rock conditions along a roadway alignment and recommendations on use of these materials in roadway construction as well as providing guidance for mitigating conditions that could affect construction or performance of the roadway. This class of work typically involves large scale drilling tasks, materials sampling and materials testing. This class of work also involves specialized studies such as stability analysis and settlement analysis. In addition this class requires knowledge and ability to recognize and mitigate geological problems such as sinkholes, landslide prone earth masses, and corrosive soils and rock mass stability.

(1) Adequacy of Personnel

At least one professional is required. Number of professional and technical support personnel must be recorded and updated.

(2) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities requires by this class either by the individual, the firm, and the bona fide employees thereof.

p) Class 6.01(b)--Geological and Geophysical Studies

This class of work includes comprehensive considerations, leading to a solution of highway location or relocation problems, based on known characteristics of foundation materials or a determination of the physical qualities of unknown or uncommon new foundation materials. This class of work may involve large scale geological survey programs, utilizing outcroppings of basement materials, combined with drilling tasks and geophysical techniques.

(1) Adequacy of Personnel

At least one professional is required. Number of professional and technical support personnel must be recorded and updated.

(2) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class either by the individual, the firm, and the bona fide employees thereof.

q) Class 6.02--Bridge Foundation Studies

This class of work includes determination of one or more specific sites or alternate sites for a structure, usually a bridge, where soil characteristics must be known for the design of footings or where settlement must be predicted to determine construction methods, surcharge

requirements or the necessity of scheduling construction over extended time periods.

(1) Adequacy of Personnel

At least two professionals are required. One of the professionals is required to perform independent checks of data, calculations and reports of the other. Number of professional and technical support personnel must be recorded and updated.

(2) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class either by the individual, the firm, and the bona fide employees thereof.

r) **Class 6.03--Hydraulic and Hydrologic Studies (Soils & Foundation)**

This class of work includes large-scale studies of drainage basins, stream diversions or alternate route analyses to optimize highway locations over bodies of water or marsh areas where ground water would seriously affect sub grades and foundation conditions.

(1) Adequacy of Personnel

At least two professionals are required. One of the professionals is required to perform independent checks of data, calculations and reports of the other. Number of professional and technical support personnel must be recorded and updated.

(2) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class either by the individual, the firm, and the bona fide employees thereof.

t. **Class 6.04(a) - Laboratory Materials Testing**

This class of work involves conducting tests in accordance with Department of Transportation approved specifications on aggregates, concrete (pipe, beam, or post products; cement; concrete additions including water or epoxies), bituminous materials including testing of field mixes, timber, metals, paints, rubber, roadway soils, clay, and/or masonry products.

(1) Laboratory Certification

Must possess AASHTO or ISO laboratory accreditation in specified area of materials testing.

(2) Professional Staff

Professional - Registration as a Professional Engineer with the State Board of Professional Engineers and Land Surveyors with proven proficiency in the field of Civil Engineering.

Technician - Certification with a National Certification Board with proven proficiency in specific area of testing. Technical personnel must be certified in specific area of testing when applicable.

(3) Adequacy of Personnel

At least two professionals are required. One of the professionals is required to perform independent checks of data, calculations and reports of the other. Number of professional and technical support personnel must be recorded and updated.

(4) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class either by the individual, the firm, and the bona fide employees thereof.

Class 6.04(b) - Field Testing of Roadway Construction Materials

This class of work involves conducting tests in accordance with Department of Transportation approved specifications on aggregates, concrete (pipe, beam, or post products; cement; concrete additions including water or epoxies), bituminous materials including testing of field mixes, timber, metals, paints, rubber, roadway soils, clay, and/or masonry products.

(1) Testing Methodology

Field sampling and testing will be performed in accordance with GDOT test procedures listed in the Sampling Testing and Inspection Manual, or when specified, AASHTO Sampling and Testing Methods.

(2) Professional Staff

Technician must possess current, GDOT-issued certification to perform acceptance testing on construction materials for the Department. Technician must demonstrate proven proficiency in specific area of testing. When applicable, Technician must possess current, National Certification Board-issued certification.

(3) Adequacy of Personnel

The number of technical personnel must be recorded and updated.

(4) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class either by the individual or the firm, and the bona fide employees thereof.

u. Class 6.05--Hazardous Waste Site Assessment Studies

This class of work includes large and small scale studies of existing or proposed right-of-way where potentially hazardous materials are suspected to exist under or above ground. These studies shall include physical testing and laboratory analysis to determine the types of hazardous materials present, an analysis of the danger caused by their presence, and an analysis of the potential liability of acquiring property with such substances present, and an analysis of what would be entailed in constructing a roadway facility safely in such an environment. The work may involve assisting the Department in negotiating appropriate settlements with the Environmental Protection Agency for the protection of future liability.

(1) Adequacy of Personnel

The site assessment shall be conducted under the supervision of a Professional Engineer or Professional Geologist with the qualifications to render the factual, legal and scientific judgments in the assessment report. If hazardous wastes are identified, the assessment report is to be supplemented by estimates by qualified engineers and environmental scientists to give a range of expected impacts on project plans, Environmental Protection Agency (EPA) clean up requirements, and costs.

(2) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated by references and records of prior site assessments negotiated with and accepted by the EPA.

7. General Management

a. Class 7.02--Financial Management

This class of work refers to consulting services performed by a CPA firm and may include, but not be specifically limited to, design and installation of accounting systems, construction of financial models, financial advisory services, performance of audits on the records and accounts of a third party in accordance with pertinent State and Federal regulations and guidelines.

(1) Professional Status

Certified Public Accountant, registered in Georgia.

(2) Adequacy of Personnel

At least one professional is required. Number of professional and technical support personnel must be recorded and updated.

(3) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class either by the individual, the firm, and the bona fide employees thereof.

8. Construction Supervision

a. Class 8.01--Construction Engineering

This class of work is defined as inspection and supervision of construction projects to insure construction is in accordance with the contract plans and specification. It includes the inspection of construction activities and the maintenance of project records in accordance with the Department's construction manual and appropriate Department and Federal Highway Administration policies and procedures. The construction activities may include grading, drainage, base paving, traffic control, erosion control, bridge construction, and retaining wall construction.

(1) Professional Staff

Registration as a Professional Engineer with the Georgia State Board of Professional Engineers and Land Surveyors and proven proficiency in the field of construction supervision for highway and bridge construction.

(2) Adequacy of Personnel

At least one professional is required. Number of professional and technical support personnel must be recorded and updated.

(3) Past Record, Experience, and Capability

Satisfactory experience must be demonstrated in the activities required by this class either by the individual, the firm, and the bona fide employees thereof. Applicant must demonstrate experience in inspection of the different phases of highway and bridge construction including experience in traffic control as required by the Manual on Uniform Traffic Control Devices (MUTCD).

9. Erosion, Sedimentation, and Pollution Control Plan Preparation and Implementation

a. Class 9.01 - Erosion, Sedimentation, and Pollution Control Plan (ESPCP) preparation to include the program formerly known as the Comprehensive Monitoring Program (CMP)

This class of work encompasses the use of engineering principles, accepted guidelines, and Best Management Practices in the preparation of erosion and sedimentation control plans compliant with State of Georgia general permit GAR100002 for all transportation projects with a disturbed area equal to or greater than one acre.

(1) Professional Status:

NOTICE: *All applicants must provide copies of GSWCC Level 1 & II Certification. Expiration dates of certificates must be legible.*

Registration as a professional licensed by the State of Georgia in the field of engineering, architecture, landscape architecture, forestry, geology, or land surveying; or certification as a Certified Professional in Erosion and Sediment Control (CPESC) with current certification by Certified Professional in Erosion and Sediment Control, Inc. After December 31, 2006, the professional in responsible charge of ESPCP preparation shall have obtained Level 2 certification as a "Certified Design Professional" pursuant to Georgia Code 12-7-19 (b).

(2) Adequacy of Personnel:

The licensed or certified professional must be the individual who will prepare the ESPCP.

(3) Past Record, Experience, and Capability:

The firm and the professional designated to perform this work must demonstrate having obtained the experience required to perform this class of work.

(4) The firm and the professional designated to perform this work must list any instances of noncompliance associated with ESPCP preparation.

b. Class 9.02 -Rainfall and Runoff Reporting

This class of work encompasses the recording of rainfall and the sampling and testing of runoff in accordance with accepted guidance documents on all projects with a disturbed area greater than one acre.

(1) Professional Status:

NOTICE: *All applicants must provide copies of GSWCC Level 1 & II Certification and GA DOT WECS Certification. Expiration dates of certificates must be legible.*

Certification as a Worksite Erosion Control Supervisor (WECS) with the Georgia Department of Transportation is required. After December 31, 2006, any person performing this class of work shall have obtained Level 1A certification as "Certified Personnel" pursuant to **Georgia Code 12-7-19 (b)**.

(2) Equipment:

The firm or the individuals must possess the equipment to measure rainfall, collect runoff samples, and analyze samples in accordance with methodology and test procedures established by 40 CFR Part 136 (unless other test procedures have been approved), the guidance document titled "NPDES Storm Water Sampling Guidance Document, EPA 833-B-92-001" and guidance documents that may be prepared by the EPD.

(3) Adequacy of Personnel:

Employees are required to perform independent checks of data, calculations and reports of the other. Number of personnel must be recorded and updated. A Quality Control/Quality Assurance program must be in place for this class of work.

(4) Past Record, Experience, and Capability:

Satisfactory experience must be demonstrated in the activities required by this class by the firm and the individuals designated to perform this work.

c. **Class 9.03 -Field Inspections for Compliance of Erosion and Sedimentation Control Device Installations**

This class of work encompasses all activities involved in the inspection of the installations of erosion and sedimentation control devices on all projects with a disturbed area greater than one acre.

(1) Professional Status:

NOTICE: *All applicants must provide copies of GSWCC Level 1 & 11 Certification and GA DOT WECS Certification. Expiration dates of certificates must be legible.*

Certification as a Worksite Erosion Control Supervisor (WECS) with the Georgia Department of Transportation and a proven proficiency in the field of construction inspection regarding highway and bridge construction is required. After December 31, 2006, any person performing this class of work shall have obtained Level 1A certification as “Certified Personnel” pursuant to Georgia Code 12-7-19 (b).

(2) Adequacy of Personnel:

All inspection personnel are required to be certified as WECS by the Georgia Department of Transportation.

(3) Past Record, Experience, and Capability:

Satisfactory experience and reporting of findings must be demonstrated in the activities required by this class by the firm and all inspection employees thereof. Applicant must demonstrate experience in inspection of the different phases of highway and bridge construction activities as related to compliance with erosion and sedimentation control law and Georgia Department of Transportation practice.

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