SYSTEMS ADMINISTRATOR AND PROGRAMMER (GIS)

DISTINGUISHING FEATURES OF THE CLASS: This is specialized technical work of a moderately complex nature involving responsibility for analyzing needs and designing, developing and/or modifying computer programs pertaining to specialized applications in the area of Geographic Information Systems (GIS) and the development of computer-generated maps and GIS databases. The work is performed under the general supervision of the Director, GIS. Does related work as required.

TYPICAL WORK ACTIVITIES:
Develops, designs and writes complex computer programs for ArcGIS Server and related web applications, especially as they pertain to specialized user needs;

Resolves computer-related problems (i.e., troubleshoots), including but not limited to those pertaining to hardware and software, as needed;

Oversees and maintains the GIS database (i.e., ArcSDE) on SQL Server platform by editing, deleting, and updating database records, troubleshooting problems, and ensuring quality control;

Meets with outside consultants with respect to the development of GIS applications;

Evaluates and recommends use of vendor software packages;

Reviews, tests, and revises existing GIS programs;

Reviews database files and reports, legal and service-related requirements, etc. in order to resolve problems and improve systems;

Provides input in the development of policies and procedures by gathering information and making effective recommendations;

Provides assistance to the general public in the viewing of existing mapping products by retrieving maps, explaining maps, answering questions, etc.;

Prepares computer-generated maps and other GIS related materials for County personnel and the public, as needed;

Researches and provides input for the acquisition of GIS hardware and software, when needed, and evaluates and makes recommendations regarding the use of vendor software packages;

Attends workshops and seminars on emerging GIS technology.

FULL PERFORMANCE KNOWLEDGE, SKILLS, ABILITIES AND PERSONAL CHARACTERISTICS:
Thorough knowledge of the principles and practices of computer program development and modification, especially as they apply to GIS; thorough knowledge of applicable programming languages (e.g. Javascript, Flex, Asp.net, Visual Basic, ArcGIS Server API); thorough knowledge of GIS-related hardware and software; thorough knowledge of the principles and practices of Geographic Information Systems (GIS), as applicable to County, municipal and regional government; good knowledge of management information and data processing principles as they pertain to GIS; good knowledge of software applications used by County departments*; ability to develop and design complex computer programs, as they pertain to GIS; ability to analyze database requirements of a variety of computer applications and designs; ability to understand and interpret complex written materials; ability to prepare written reports; ability to communicate effectively, both orally and in writing; ability to establish and maintain cooperative relations with others.

MINIMUM QUALIFICATIONS: A Bachelor's degree in Computer Science, Computer Information Systems, Management Information Systems (MIS), Geographic Information Systems (GIS), or comparable curriculum <u>and</u> three (3) years of experience developing, designing and/or writing computer programs, at least two (2) years of which must have substantially included the use of GIS technology in a large scale government, corporate or academic setting.

NOTES:

1. A Master's degree in Computer Science, Computer Information Systems, Management Information Systems (MIS), Geographic Information Systems (GIS), or comparable curriculum may be substituted for one (1) year of the required experience.

2. A certificate in Geographic Information Systems (GIS) may be used to substitute for one (1) year of the required experience in GIS technology.

*To be demonstrated during the probationary period.