

POSITION DUTY STATEMENT

PM-0924 (REV 7/2014)

CLASSIFICATION TITLE Research Program Specialist I (GIS)	OFFICE/BRANCH/SECTION Office of Data Services & Technology/GIS Branch	
WORKING TITLE Research Program Specialist I (GIS)	POSITION NUMBER 913-155-7418-914	EFFECTIVE DATE

As a valued member of the Caltrans team, you make it possible for the Department to provide a safe, sustainable, integrated, and efficient transportation system to enhance California's economy and livability. Caltrans is a performance-driven, transparent, and accountable organization that values its people, resources and partners, and meets new challenges through leadership, innovation and teamwork.

GENERAL STATEMENT:

Under the direction of a Research Manager II (GIS), GIS Branch Manager, the incumbent performs Geographic Information Systems (GIS) work in support of the Office, and helps fulfill the Branch's responsibility for implementing strategies to improve the technical aspects of planning and project delivery and coordinating with other Offices and Divisions regarding GIS technology needs. Working closely and collaboratively with a diverse team of GIS researchers, transportation planners, transportation engineers, and information technology professionals, the incumbent will play a principal, often leading, role in providing enterprise GIS technology tools and services to Caltrans Districts and Divisions.

TYPICAL DUTIES:

Percentage Essential (E)/Marginal (M) ¹	Job Description
55% E	Provide technical support for Caltrans enterprise server GIS environment- the technology elements of the Caltrans Spatial Data Infrastructure (CT-SDI). Overall duties will include active participation in the planning, design, and coordinated implementation of enterprise level GIS Web Services and geodatabases to help meet the Department's needs for integration with spatial and non-spatial information management systems and processes. Focusing on GIS technology implementation, the incumbent will perform both leading roles and internal consulting roles as a subject matter expert on project teams with DRISI and IT Project Managers, lead System Software Specialists in the Caltrans IT Infrastructure Division, the Google Earth Enterprise team, technology consultants, external agencies and Caltrans partners. Provide administrative support for ArcGIS Online (AGO), ensuring AGO publishers and users maintain and periodically refresh maps and applications in group accounts. Research and provide technical recommendations on data sharing issues and interoperability opportunities within Caltrans and with other agencies.
15% E	On an ongoing basis, maintain knowledge and maintain expertise in the use of both commercial and Open Source server GIS tools mentoring both Office of Data Services & Technology (ODST) and other Caltrans staff in its use, including cartography, map tiling, and data structure. Provide technical expertise and support in the implementation of Web Map Service and Web Feature Services.
10% E	Work with end users, project managers, and IT business analysts to document and distribute business use case studies and lessons learned reports. Document best practices in the use of GIS tools to support and improve Caltrans business processes. Provide presentations and training sessions to business groups within the Department.
10% E	Utilize an in-depth understanding of GIS design, business logic, and technologies used in GIS to lead Department efforts in the integration of Geographical Information Systems. In collaboration with the Transportation System Information, ODST/GIS Branch staff, develop and assist with implementation of quality assurance plans and checks for GIS data creation or integration performed by district and metropolitan planning organization (MPO) staff.
5% E	Communicate research findings. Document and provide orientation and training as needed for new and updated applications.
5% M	Participate in Caltrans' GIS strategic planning, implementation, and standards development.

ADA Notice

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¹ESSENTIAL FUNCTIONS are the core duties of the position that cannot be reassigned.
MARGINAL FUNCTIONS are the minor tasks of the position that can be assigned to others.

SUPERVISION OR GUIDANCE EXERCISED OVER OTHERS

This position does not supervise other employees.

KNOWLEDGE, ABILITIES, AND ANALYTICAL REQUIREMENTS

KNOWLEDGE OF: Techniques, methodologies, principles and procedures of digital spatial data entry, storage, analysis and output; familiarity with enterprise GIS in the context of the Zachman Enterprise Architecture Framework; multi-tier or multi-layer (n-Tier) architectures and the Open Systems Interconnection model (OSI); programming techniques for geographic analysis and applications; data base design and management techniques; concepts of and terms used in engineering and planning; project management and application development methodologies and tools; Microsoft Outlook, Microsoft Office suite, and relational database management systems such as Oracle database 11g or PostGIS SQL.

ABILITY TO: Independently and successfully perform complex research and analysis projects involving various types of digital spatial data and techniques and methodologies associated with GIS, use of both Commercial and Open Source off the shelf (COTS) GIS tools (e.g. Geoserver, Environmental Systems Research Institute Inc. (ESRI) GIS software for both desktop and server environments as well as familiarity with CADD). The incumbent also will need to be equally able in the use of office automation tools such as FME desktop and server products, handling of various administrative matters and responsibilities, prepare reports and present information publicly; communicate effectively, establish and maintain friendly and cooperative relations with those contacted, successfully follow direction and complete assignments, and keep the Branch Chief informed and involved.

ANALYTICAL REQUIREMENTS: Analyze business needs to determine requirements. Analyze requirements to determine alternative solutions. Analyze alternative solutions to determine preferred solution. Analyze project management and application design and development methodologies and tools to improve efficiency and cost effectiveness.

RESPONSIBILITY FOR DECISIONS AND CONSEQUENCES OF ERROR

Failure to use sound judgment and maintain professionalism in the execution of the duties of this position could result in damage to the credibility or success of GIS activities, the Division of Transportation System Information or the Department. This could limit the effectiveness of the GIS Branch in its relationships with other Caltrans' units, external agencies and the public.

PUBLIC AND INTERNAL CONTACTS

This position has contacts with GIS users and others in headquarters divisions and districts. There will be occasional contact with GIS professionals from public agencies and the private sector to coordinate statewide efforts and share experience and knowledge.

PHYSICAL, MENTAL, AND EMOTIONAL REQUIREMENTS

The incumbent may be required to sit for long periods of time using a keyboard and video display terminal. Some bending, stooping, kneeling and light lifting is required to operate specialized equipment used for data gathering. Also, the incumbent must have the ability to develop and maintain cooperative working relationships, respond appropriately to difficult questions and situations, and display respect for others in all contact opportunities.

WORK ENVIRONMENT

The incumbent works primarily in a climate controlled office environment under artificial and natural lighting. On occasion the incumbent will be required to travel.

I have read, understand and can perform the duties listed above. (If you believe you may require reasonable accommodation, please discuss this with your hiring supervisor. If you are unsure whether you require reasonable accommodation, inform the hiring supervisor who will discuss your concerns with the Reasonable Accommodation Coordinator.)

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EMPLOYEE (Print)

EMPLOYEE (Signature)

DATE

I have discussed the duties with, and provided a copy of this duty statement to the employee named above.

SUPERVISOR (Print)

SUPERVISOR (Signature)

DATE