

POSITION DUTY STATEMENT

PM-0924 (REV 01/2022)

CLASSIFICATION TITLE Research Data Analyst II	OFFICE/BRANCH/SECTION District 9 Surveys	
WORKING TITLE GIS Analyst	POSITION NUMBER 909-205-5731-xxx	REVISION DATE

As a valued member of the Caltrans leadership team, you make it possible for the Department to provide a safe and reliable transportation network that serves all people and respects the environment.

GENERAL STATEMENT:

Under the direction of the Senior Transportation Surveyor, the incumbent will perform a wide variety of geographic information systems (GIS) work. The incumbent will perform research and analysis based on GIS, geospatial database management, and Computer Aided Design and Drafting (CADD) techniques and methodologies. With journeyman level of knowledge the incumbent will independently study, analyze and develop conclusions based on the spatial analysis of various subjects some of which are land use, land surveying, and project development. The incumbent learns and maintains a working knowledge of GIS Software and related technologies in desktop, mobile and cloud platforms.

CORE COMPETENCIES:

As a Research Data Analyst II, the incumbent is expected to become proficient in the following competencies as described below in order to successfully perform the essential functions of the job, while adhering to and promoting the Department's Mission, Vision, Values, Strategic Imperatives and Goals. Effective development of the identified Core Competencies fosters the advancement of the following Leadership Competencies: Change Commitment, Risk Appetite, Self-Development/Growth, Conflict Management, Relationship Building, Organizational Awareness, Communication, Strategic Perspective, and Results Driven.

- **Creativity and Innovation:** Thinks beyond the confines of traditional models to recognize opportunities, seek creative solutions and take intelligent risks. (Strengthen Stewardship and Drive Efficiency - Innovation)
- **Decision Making:** Makes critical and timely decisions. Takes charge. Supports appropriate risk. Makes challenging and appropriate decisions. (Strengthen Stewardship and Drive Efficiency - Pride)
- **Continuous Professional Development:** Seeks to obtain knowledge and improve performance while supporting others in doing the same. (Cultivate Excellence - Engagement)
- **Problem-solving and Decision-making :** Identifies problems and uses logical analysis to find information, understand causes, and evaluate and select or recommend best possible courses of action. (Safety First - Integrity)
- **Relationship Building:** The ability to develop and maintain internal and external trust and professional relationships, which includes listening and understanding to build rapport. (Cultivate Excellence - Equity)
- **Organizational Awareness:** Contributes to the organization by understanding and aligning actions with the organization's strategic plan, including the mission, vision, goals, core functions, and values. (Cultivate Excellence - Engagement)
- **Communication:** Expresses oneself clearly in all forms of communication. Gives feedback and is receptive to feedback received. Knows that listening is essential. Keeps others in the Division and other functional units informed as appropriate. (Safety First - Integrity)
- **Planning and Results Oriented:** Organizes and executes work to meet organizational goals and objectives while meeting quality standards, following organizational processes, and demonstrating continuous commitment. (Strengthen Stewardship and Drive Efficiency - Pride)
- **Computer literacy and application:** Appropriate knowledge of computer applications and other tools necessary to successfully perform tasks. (Strengthen Stewardship and Drive Efficiency - Innovation)

TYPICAL DUTIES:

Percentage	Job Description
Essential (E)/Marginal (M) ¹	
40% E	Incumbent performs journeyman level geographic information systems (GIS) research and analysis on project development in support of the D9 Surveys and Project Delivery. This research and analysis may be complex in nature, utilizing geographic information systems (GIS) methods and techniques which include python scripting, java scripting, development of geospatial data, imagery, applications, tools and models. Incumbent uses this research and analysis to identify and assess spatial data and application needs. Using sound conclusions the incumbent develops applications, data management plans, and innovative technology based solutions to meet these needs.

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35%	E	Incumbent designs, develops and maintains geospatial databases using complex geographic information systems (GIS) methods and techniques for D9 GIS. The incumbent will gather the information to populate these databases from Department geospatial, project management, and asset management databases as well as other authoritative sources such as CADD drawings and PLSS databases. These data sources can consist of both modern and legacy types.
15%	E	Incumbent designs, develops and maintains geographic information systems (GIS) services utilizing the Departments Enterprise GIS system operated and maintained by the HQ GIS unit. Working in conjunction with the HQ GIS unit the incumbent will use journeyman knowledge of server based geographic information systems (GIS) systems to publish and create Internet based geographic information systems (GIS) web maps. Incumbent assists in intranet/internet and mobile based mapping applications.
5%	M	Incumbent performs research and statistical studies to determine the need for data collection applications. Utilizing existing geographic information systems (GIS) data collection applications, existing and new survey data the incumbent designs, develops and maintains D9 Surveys GIS applications.
5%	M	Incumbent provides ArcGIS desktop and geographic information systems (GIS) tool training specific to Caltrans data and participates in outreach to identify user needs. The incumbent engages in partnership activities within D9 Caltrans, Caltrans HQ, local government agencies and other partners related to the development of geospatial data and products. Incumbent will prepare reports and correspondence based on conclusions of the research and analysis performed using spatial analysis from geographic information systems (GIS).

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

The incumbent works under the general supervision of a Senior Transportation Surveyor (Branch Chief). The incumbent may also serve in a lead capacity. This position does not supervise other employees.

KNOWLEDGE, ABILITIES, AND ANALYTICAL REQUIREMENTS

This position requires the ability to independently and successfully perform complex research and analysis projects involving various types of digital spatial data, techniques, and methodologies associated with geographic information systems (GIS). The position requires the ability to work cooperatively and effectively with others. The position requires general understanding of journeyman level research and statistical methods. The work is complex, frequently requiring innovation, flexibility, good organization, teamwork and problem solving skills.

A RDA II must have a journeyman knowledge of GIS techniques and methodologies to develop data, tools, and models. The RDA II must also have a journeyman understanding of cartographic principles as applied to GIS products and delivery. RDS II must have general knowledge and understanding of CADD drawings and datums and the Public Land Survey System (PLSS).

The following are the knowledge, abilities, and analytical requirements necessary for this position:

- Experience with Environmental Systems Research Institute, Inc. (ESRI) enterprise and desktop GIS software products;
- Communicate effectively at a level required for successful job performance;
- Interact in a professional manner with all levels of department staff;
- Compiles, makes or revises geospatial products, maps, charts, and diagrams;
- Exercises good judgment in providing assistance, consultation, and communication with all levels of departmental staff and management, including external entities such as consultants or vendors;
- Assists in mentoring other staff who may be less knowledgeable or less experienced in GIS technology;
- Advanced knowledge of GIS software and strong familiarity with relational database design as it applies to GIS software;
- Strong knowledge of cartographic principles, spatial analysis, and databases;
- Analyze situations accurately and take effective action;
- Ability to train team members and end users on GIS data and applications;
- Ability to conduct research into GIS issues and products as required;
- Prepare reports;
- Understand and practice current Safety procedures as described in the Code of Safe Surveying Practices and the Caltrans Illness and Injury Prevention Program;
- Recognize and immediately report any possible hazards or safety violation that may adversely affect property, employees, or the general public.
- Ability to work independently and without direct supervision.

RESPONSIBILITY FOR DECISIONS AND CONSEQUENCES OF ERROR

The incumbent is expected to assume responsibility for the work performed. Decisions may be routinely reviewed by supervisor or lead worker. Sound judgment as it relates to Geographic Information Systems, and Caltrans project development procedures

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is required. Inaccurate or incomplete work may result in added costs, or litigation, and reflect negatively on the Survey Program and the Department.

PUBLIC AND INTERNAL CONTACTS

The employee will routinely contact other Caltrans personnel, surveying/engineering consultants, personnel from other State agencies, personnel from other government agencies and the public.

PHYSICAL, MENTAL, AND EMOTIONAL REQUIREMENTS

Employee may be required to sit for long periods of time using a keyboard and video display terminal. He or she may also be required to move large or cumbersome plans and diagrams from one location or another. He or she may be required to stand for periods of time operating survey instruments or office devices such as optical scanners. May be required to drive long distances.

WORK ENVIRONMENT

Employees will work in a climate-controlled office under artificial lighting. Incumbent may be required to travel and work outdoors and when doing so can expect to be exposed to traffic, dirt, noise, uneven surfaces, and extreme heat or cold. Telework may be available in addition to office work at an assigned location. The amount and availability of telework and/or office work will be determined by the Department based on the functions of each position.

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.)

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

POSITION DUTY STATEMENT

PM-0924 (REV 01/2022)

CLASSIFICATION TITLE Research Data Analyst I	OFFICE/BRANCH/SECTION District 9 Surveys	
WORKING TITLE GIS Analyst	POSITION NUMBER 909-205-5729-xxx	REVISION DATE

As a valued member of the Caltrans leadership team, you make it possible for the Department to provide a safe and reliable transportation network that serves all people and respects the environment.

GENERAL STATEMENT:

This is the entry, recruiting and developmental classification. Under direct supervision, incumbents perform basic research, data gathering, scheduled report maintenance, and statistical work in one or more areas of a broad range of subject matters, utilizing structured and unstructured data from existing reports and resources for statewide business improvement. Incumbents are assigned duties and responsibilities commensurate with their background and training. Work at this level is characterized by a reliance on proven techniques and methodologies and usually involves assignments in areas where a comparable body of knowledge and experimentation exists.

CORE COMPETENCIES:

As a Research Data Analyst I, the incumbent is expected to become proficient in the following competencies as described below in order to successfully perform the essential functions of the job, while adhering to and promoting the Department's Mission, Vision, Values, Strategic Imperatives and Goals. Effective development of the identified Core Competencies fosters the advancement of the following Leadership Competencies: Change Commitment, Risk Appetite, Self-Development/Growth, Conflict Management, Relationship Building, Organizational Awareness, Communication, Strategic Perspective, and Results Driven.

- **Creativity and Innovation:** Thinks beyond the confines of traditional models to recognize opportunities, seek creative solutions and take intelligent risks. (Strengthen Stewardship and Drive Efficiency - Innovation, Pride)
- **Decision Making:** Makes critical and timely decisions. Takes charge. Supports appropriate risk. Makes challenging and appropriate decisions. (Strengthen Stewardship and Drive Efficiency - Pride)
- **Continuous Professional Development:** Seeks to obtain knowledge and improve performance while supporting others in doing the same. (Cultivate Excellence - Engagement)
- **Problem-solving and Decision-making :** Identifies problems and uses logical analysis to find information, understand causes, and evaluate and select or recommend best possible courses of action. (Safety First - Integrity)
- **Relationship Building:** The ability to develop and maintain internal and external trust and professional relationships, which includes listening and understanding to build rapport. (Cultivate Excellence - Equity)
- **Customer Focus:** Considers, prioritizes, and takes action on the needs of both internal and external customers. (Strengthen Stewardship and Drive Efficiency - Engagement)
- **Communication:** Expresses oneself clearly in all forms of communication. Gives feedback and is receptive to feedback received. Knows that listening is essential. Keeps others in the Division and other functional units informed as appropriate. (Safety First - Pride)
- **Planning and Results Oriented:** Organizes and executes work to meet organizational goals and objectives while meeting quality standards, following organizational processes, and demonstrating continuous commitment. (Strengthen Stewardship and Drive Efficiency - Equity)
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TYPICAL DUTIES:

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35%	E	Incumbent assists in the design, development and maintenance of geospatial databases using complex geographic information systems (GIS) methods and techniques for D9 GIS. The incumbent will gather the information to populate these databases from Department geospatial, project management, and asset management databases as well as other authoritative sources such as CADD drawings and PLSS databases. These data sources can consist of both modern and legacy types.
15%	E	Incumbent assists in design, development and maintenance of geographic information systems (GIS) services utilizing the Department's Enterprise GIS system operated and maintained by the HQ GIS unit. Working in conjunction with the HQ GIS unit the incumbent will use entry knowledge of server based geographic information systems (GIS) systems to publish and create Internet based geographic information systems (GIS) web maps. Incumbent assists in intranet/internet and mobile based mapping applications.
5%	M	Incumbent assists in research and statistical studies to determine the need for data collection applications. Utilizing existing geographic information systems (GIS) data collection applications, existing and new survey data the incumbent designs, develops and maintains D9 Surveys GIS applications.
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KNOWLEDGE, ABILITIES, AND ANALYTICAL REQUIREMENTS

This position requires the ability to learn and with guidance, independently and successfully perform complex research and analysis projects involving various types of digital spatial data, techniques, and methodologies associated with geographic information systems (GIS). The position requires the ability to work cooperatively and effectively with others. The position requires general understanding of entry level research and statistical methods. The work is complex, frequently requiring innovation, flexibility, good organization, teamwork and problem solving skills.

A RDA I must have an entry knowledge of GIS techniques and methodologies to develop data, tools, and models. The RDA I must also have an entry understanding of cartographic principles as applied to GIS products and delivery. RDS I must have general knowledge and understanding of CADD drawings and datums and the Public Land Survey System (PLSS).

The following are the knowledge, abilities, and analytical requirements necessary for this position:

Experience with Environmental Systems Research Institute, Inc. (ESRI) enterprise and desktop GIS software products;

Communicate effectively at a level required for successful job performance;

Interact in a professional manner with all levels of department staff;

Compiles, makes or revises geospatial products, maps, charts, and diagrams;

Exercises good judgment in providing assistance, consultation, and communication with all levels of departmental staff and management, including external entities such as consultants or vendors;

Assists in mentoring other staff who may be less knowledgeable or less experienced in GIS technology;

General knowledge of GIS software and strong familiarity with relational database design as it applies to GIS software;

Knowledge of cartographic principles, spatial analysis, and databases;

Analyze situations accurately and take effective action;

Ability to train team members and end users on GIS data and applications;

Ability to assist in research into GIS issues and products as required;

Prepare reports;

Understand and practice current Safety procedures as described in the Code of Safe Surveying Practices and the Caltrans Illness and Injury Prevention Program;

Recognize and immediately report any possible hazards or safety violation that may adversely affect property, employees, or the general public.

Ability to work independently and without direct supervision.

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EMPLOYEE (Print)

EMPLOYEE (Signature)

DATE

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SUPERVISOR (Print)

SUPERVISOR (Signature)

DATE
