

**POSITION DUTY STATEMENT**

DOT PM-0924 (REV 01/2025)

CLASSIFICATION TITLE <b>Research Data Analyst II</b>	OFFICE/BRANCH/SECTION D10 PPM/AM	
WORKING TITLE GIS/Web Development	POSITION NUMBER 910-100-5731-XXX	REVISION DATE 03/03/2025

As a valued member of the Caltrans team, you make it possible to improve lives and communities through transportation.

**GENERAL STATEMENT:**

Under the general supervision of the PPM/GIS Senior Transportation Engineer, the Research Data Analyst II (GIS/Web Development) main function is to independently develops and utilizes data analysis methodologies and technologies in support of District Program Project Management activities and Data Governance efforts. Incumbent is responsible for analytical duties including data investigation for use by Program Project Management and in support of District project delivery related issues including gathering, developing, implementing, and monitoring systems and procedures to assemble and structure necessary data; validating the accuracy of various types of data being reported; identifying relationships and trends to forecast potential risk; recognizing improvement opportunities; ensuring compliance with performance metrics, and supporting change in District programs and/or systems.

As part of the GIS unit, the incumbent independently performs complex data analysis in response to ad-hoc research and reporting requests to support District project delivery. The incumbent works closely and collaboratively with interdisciplinary teams of professionals, including information technology, transportation planning and engineering.

The incumbent assists in the development and maintenance of District project management support reporting tools, by utilizing various database tools including, but not limited to, Microsoft SQL Server Reporting Services (SSRS), ArcGIS Enterprise applications, Tableau, Microsoft Access, and Microsoft Excel.

**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.

**TYPICAL DUTIES:**

Percentage	Essential (E)/Marginal (M) <sup>1</sup>	Job Description
40%	E	Performs quantitative and qualitative data-driven research and statistical analysis applying a systematic, critical, and analytical approach to data collection and querying, mining and manipulation, and data quality determination in support of District Data Governance policies and procedures. Gathers, compiles, populates, edits, and interprets structured and unstructured data and creates, implements, troubleshoots and monitors data reporting tools (Microsoft SQL, Access, Excel, Tableau, others as needed), simulation models, and procedures to assemble and structure the necessary data. Maintain GIS and PPM web pages using Full-Stack web development knowledge and experience. Presents findings in a user-friendly format, such as tabulated, charts, or dashboards; makes comparisons with similar or historical data, and/or discusses the findings in writing. Independently performs complex data analysis in response to ad-hoc research and reporting requests utilizing business intelligence software programs (MS and Tableau) to query, validate, format, and organize structured and unstructured data to forecast trends and assess potential impacts.
20%	E	Develop and deliver GIS (Geographical Information Systems) mapping to management for sharing with internal and external partners. Ability to produce mapping to specific standards utilizing data gathered from various database and geo-database applications. Ability to repeatedly adhere to said standards. Assist in the creation of GIS metadata and data dictionary elements. Ability to work on GIS Enterprise.
10%	E	Prepare written data and technical reports. Create reports and documents utilized to assist customers in the Project Delivery process. Deliverables may include written data, GIS or other visual representations of findings.
10%	E	Provide training and support and professional development of the branch and district. Document and detail all tools and processes developed to create curriculum which will be used in training given by the incumbent and others.

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10%	E	Assist the Unit supervisor in solving data quality issues and recommends procedural change when appropriate.
5%	M	Provide backup for updates to the Project Reporting System.
5%	M	Utilizes Microsoft SQL based software applications and databases to maintain and update project data for use by multidisciplinary teams and functional units throughout the District.

<sup>1</sup>ESSENTIAL 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.

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**SUPERVISION OR GUIDANCE EXERCISED OVER OTHERS**

No supervisory duties but the incumbent may be asked to act in a lead-worker role on some of the projects. May function as a lead analyst on research projects.

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**KNOWLEDGE, ABILITIES, AND ANALYTICAL REQUIREMENTS**

Must have a strong understanding of basic statistical knowledge and business intelligence software applications including Microsoft Structured Query Language (SQL) databases, Microsoft SQL Server Reporting Services (SSRS), ArcGIS Enterprise applications, Tableau, Microsoft Access, Microsoft Excel, and Microsoft PowerBI. Full-Stack web development knowledge and experience. Must have an understanding of ESRI GIS methodologies and software. Knowledge of Data analysis methods and techniques including gathering and collection of structured and unstructured data, as well as general principles, concepts and terminology used in research; planning studies and investigations; trend analysis procedures; time management techniques to provide for efficient prioritization and completion of projects and assignments; software to prepare spreadsheet summaries, reports, charts, and tables; basic arithmetic and statistical techniques to analyze numerical data; and departmental policies and procedures; Microsoft Structured Query Language (SQL) server and SQL databases and related applications to maintain and update project data.

**ABILITY TO:** Utilize various types of digital data and techniques and methodologies associated with web, desktop, server, and mobile frameworks. The incumbent must be equally able to use office automation tools, handle various administrative matters and responsibilities, prepare reports and present information publicly. Must be able to research, gather, compile, and analyze structured and unstructured data; conduct and interpret descriptive statistical analyses using appropriate software to test research hypotheses and to formulate conclusions and recommendations; prepare research and statistical reports; analyze written and numerical data regarding general governmental problems; speak and write effectively; develop and evaluate alternatives, recommendations, solutions, and conclusions or approaches to research problems; manage a workload consisting of multiple projects and assignments; complete work under critical timelines to meet project objectives and deadlines; be objective and flexible to adapt to changes in priorities and work assignments; and gain and maintain the confidence and cooperation of others, collaborate, and work in multidisciplinary teams.

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

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**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 the Data Management, the Division of Program Project Management or the Department. This could limit the effectiveness of the Program Project Management Division in its relationships with other Caltrans units, external agencies and the public.

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**PUBLIC AND INTERNAL CONTACTS**

This position has contacts with various data experts and users within the District and Headquarters. There may be occasional contact with data professionals from public agencies and other private sector companies to coordinate statewide efforts and share experience and knowledge.

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**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.

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**WORK ENVIRONMENT**

The incumbent works primarily in a climate-controlled office environment under artificial and natural lighting. On occasion the

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incumbent is required to travel and conduct field work for data collection. Possession of a valid driver's license is required to operate a State owned or leased vehicle.

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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.)

I agree that by providing my electronic signature for this form, I agree to conduct business transactions by electronic means and that my electronic signature is the legal binding equivalent to my handwritten signature. I hereby agree that my electronic signature represents my execution or authentication of this form, and my intent to be bound by it.

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EMPLOYEE (Print)

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EMPLOYEE (Signature)

DATE

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

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SUPERVISOR (Print)

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SUPERVISOR (Signature)

DATE

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