



PRINCIPAL GIS ANALYST

JC: 000067
PB: G
FLSA: Exempt

PC: 890
BU: AFSCME (31)
Created: October 2012
Revised: June 2015

*Class specifications are intended to present a descriptive list of the range of duties performed by employees in the class. Specifications are **not** intended to reflect all duties performed within the job.*

DEFINITION

Provides project development, support, and maintenance for BART's Enterprise Geographic Information System (GIS); duties will include, but are not limited to, Field Data Collection, Field to Office GIS Workflow, Post Processing, Differential Correction, Survey Control, Data Conversion, Editing, Oracle data Management, Geostatistical Analysis and overall maintenance of all geographic layers.

CLASS CHARACTERISTICS

This is the advanced journey level classification. Positions at this level possess a specialized, technical or functional expertise within the area of assignment or may exercise lead supervision over assigned lower level staff. Employees are typically assigned significant responsibilities above the journey level and often exercise independent judgment in the performance of all duties.

REPORTS TO:

This position reports to the Manager of Information Systems or his/her designee.

EXAMPLES OF DUTIES - *Duties may include, but are not limited to, the following:*

1. Provides analysis and statistical data and maps to support District projects; responds to requests for EGIS data; audits and approves data from BART and external data providers; provide QA/QC for all incoming geospatial data.
2. Provides technical expertise for difficult types of map related software and hardware, including setting up ArcGIS Servers, File Geodatabases, Oracle client and ArcSDE Enterprise database connections, AutoDesk Suites; develops and maintains EGIS website and hardware requirements.

3. Drafts Security Sensitive Information (SSI) in GIS; maintains Security Sensitive Information (SSI) Datasets in GIS; develops GIS related Facility Standards; provides general maintenance for the District's Enterprise Geographic Information System.
4. Manages projects, budgets and personnel; assists with negotiations of professional service agreements; supervises contractors, interns, and professional service contracts; provides research for management decision, encounters and identifies risks for management decisions.
5. Actively participates in Department Working and Technical Groups.
6. Provides Tier 1 Technical Support for BART employees using ArcGIS Software.
7. Inputs and analyzes GIS data under the direction of the Manager of Information Systems – GIS.
8. Assists in the design, integrity, and security of GIS system architecture, data model development, and maintenance procedures to support highly accessible base maps, layers targeted for individual departments and agencies, and procedures for data publication to many departments; ensures GIS application performance and functionality.
9. Assists in developing training and implementation techniques for end users. Creates written GIS processes for other GIS staff and end users.
10. Provides support to BART Office of the CIO Enterprise Projects and Knowledge Management Strategies and implements programs; participates in professional meetings at BART regarding District EGIS applications; coordinates IT activities to support the Office of the CIOI attends professional meetings and conferences.
11. Prepare clear, concise written reports and correspondence relative to GIS activities.
12. Provide any and all other job functions as directed by the Manager of Information Systems - GIS.

QUALIFICATIONS

Knowledge of:

- Modern Field Survey Techniques and Procedures.
- Stationary & Mobile LiDAR Best Management Practices.
- ArcGIS Desktop 10x (ArcCatalog, ArcToolbox, ArcGlobe, ArcScene, ArcReader).

- ArcGIS Desktop 10x Extensions (Spatial, 3D, Network, Geostatistical, Maplex, Publisher, Schematics).
- ArcGIS Server 10x.
- ArcGIS Server 10x Extensions (Spatial, 3D, Network, Geostatistical, Image).
- ArcPad 10x.
- ArcGIS Explorer Online/Desktop.
- ArcGIS Online for Organizations.
- ArcSDE w/ Oracle.
- AutoDesk 2012/13.
- Topcon Field Tools.
- Survey Pro.
- Aerial LiDAR & Photogrammetry Best Management Practices.

In addition to meeting the minimum qualifications, the candidate will demonstrate skills, experience and knowledge of the following:

- 1. ESRI ArcGIS Software Suite**
- 2. AutoDesk Software Suite**
- 3. File Geodatabase & Oracle ArcSDE Enterprise Database**
- 4. Survey & Drafting Best Management Practices**
- 5. Geospatial Error Analysis & Mitigation**
- 6. The preparation of clear & concise letters, memorandums and compiling quantitative and qualitative reports.**
- 7. Personal & project organization & planning to effectively set and meet goals/deadlines.**

Skill in:

- Operation of Robotic Total Station.
- Operation of Phase Based Stationary Laser Scanner.
- Operation of RTK GPS Equipment.
- Operation of GPS Equipment using ArcPad.
- Ability to register LiDAR Point Cloud Data with Survey Control.
- Contract Document Technical Review.
- Geospatial Error Analysis.
- Survey Process Review.
- Survey Control Best Management Practices.
- Converting Disparate Data Files to ESRI File Geodatabase Format in an Oracle ArcSDE Environment.
- ESRI 10x Desktop/Mobile/Server Products.
- GPS Field Data Collection.

- Preparation of clear and concise letters, memorandums and compiling quantitative and qualitative reports.
- Strong verbal and written communication skills.
- Demonstrated ability to perform complex GIS tasks using the latest industry tools.

MINIMUM QUALIFICATIONS

Education:

A Bachelor's degree in GIS, Geomatics, Engineering, Construction Management, or a related field from an accredited college or university

Experience:

Two (2) years of (full-time equivalent) verifiable GIS analyst experience.

Other Requirements:

Possession of a valid California driver's license and a satisfactory driving record.
Possession of a Land Survey in Training Certificate (LSIT) or Professional Land Surveyor Certificate (PLS) is preferred.

Substitution:

Additional professional experience as outlined above may be substituted for the education on a year-for-year basis. A college degree is preferred.

WORKING CONDITIONS

Environmental Conditions:

Office environment, exposure to computer screens.

Physical Conditions:

May require maintaining physical condition necessary for sitting for prolonged periods of time.

EEOC Code: 02

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