Surveyor

FLSA Status: Covered (30000223-30000225) / Exempt (30000226)
Bargaining Unit: District Council of Trade Unions (DCTU)

General Summary

Positions in this broad class use survey equipment and methodologies to produce accurate survey data and staking for construction projects.

Surveying Aide I - 30000223

Distinguishing Characteristics

The entry level of this class typically performs basic surveying duties and assists more senior levels. It is distinguished from the Utility Worker class by its focus on performing surveying functions requiring an underlying knowledge of the mathematics involved in engineering and surveying calculations.

Typical Duties/Examples of Work

1. Assists more senior levels in the set up and use of survey field equipment.
2. Assists with the reduction of field notes.
3. Files and indexes information in the public land survey system.
4. Maintains records and equipment; carries out all required safety procedures.
5. Performs related duties as assigned.

Required Knowledge, Skills and Abilities

Knowledge of: basic tools, processes and techniques of surveying; algebra, geometry and trigonometry

Ability to: maintain records; file and index information in the public land survey system; communicate effectively; establish and maintain effective working relationships with co-workers; work constructively in a team

Skill in: use of surveying equipment; following safety procedures

Special Requirements

Valid state driver’s license; other licenses or certifications may be required.

Classification History:
Adopted: 2-03-99:
Class created as a result of DCTU Classification and Compensation Study 1998-99. This class is composed of the following classes:
3120 Surveying Aide I Adopted 03-15-77
Revised 08-25-89
June 2009 - Change Job Class number from 3120 to 30000223, due to system change.

Surveying Aide II - 30000224

Distinguishing Characteristics

The journey level of this class typically performs surveying duties and assists a survey party chief in organizing and conducting survey jobs. It is distinguished from the Surveying Aide I class by its proficiency in the use of survey equipment, performance of engineering and survey calculations, and capability of carrying out certain survey projects in the absence of a party chief.

Typical Duties/Examples of Work

1. Operates survey instruments and equipment including total stations, GPS receivers, levels, lasers, data collectors, and hand held computers.

2. Downloads field data onto computer; converts data; edits data and creates files for distribution through data network.

3. Interprets construction plans and benchmark data; keeps level notes; checks notes, sketches and calculations prepared by others; records data and drafts field notes under the direction of the party chief.

4. Assists party chief in setting up and organizing survey jobs; continues projects in the absence of the party chief, as assigned; interpret work requests and recommends features to include in preliminary design surveys.

5. Researches legal documents; retraces published surveys; searches for monuments of record; files and indexes information in the public land survey system; provides survey information to professional surveyors and the public.

6. Maintains records and equipment; carries out all required safety procedures; trains less experienced staff and temporary workers.

7. Performs related duties as assigned.

Required Knowledge, Skills and Abilities

Knowledge of: tools, processes and techniques of surveying; algebra, geometry and trigonometry

Ability to: assist with organizing survey jobs; communicate effectively; establish and maintain effective working relationships with co-workers; work constructively in a team

Skill in: reducing and editing field data

Special Requirements

Valid state driver's license; other licenses or certifications may be required.

Classification History:
Adopted: 2-03-99:
Class created as a result of DCTU Classification and Compensation Study 1998-99. This class is composed of the following classes:
3121 Surveying Aide II Adopted 03-15-77
Revised 08-25-89
June 2009 - Change Job Class number from 3121 to 30000224, due to system change.

Survey Project Support Technician - 30001079

Distinguishing Characteristics

This classification typically serves a technical and administrative support role for a moderate to large Survey Section. It is distinguished from the Surveying Aide II class by its requirement for GIS, CAD and additional computer skills and by typically not working in the field. It is distinguished from the Surveyor I class by its support rather than leadership role.

Typical Duties/Examples of Work

1. Researches survey sitesand provides field packets and office project folders with relevant survey notes, private surveys, aerial plots, utilities, survey control points, benchmark data and GPS information; researches and provides mapping staff with relevant GIS background data using MicroStation, AutoCAD Land Desktop or ArcMap software.

2. Provides technical and administrative support to survey section; serves as timekeeper; creates and maintains Excel macros; provides basic human resource information; maintains petty cash; responsible for safety clothing reimbursements.

3. Prepares and files utility locate requests and tracks responses from utility companies; forwards utility as-built information to requestor; arranges and coordinates utility locates on private property with private locators.

4. Prepares Brass Screw Replacement Surveys; researches relevant surveys and works with field crew to obtain monument ties; mathematically compares found monuments with existing information; coordinates with County for filing and tracks progress throughout the process.

5. Maintains office records including electronic records; indexes, scans, archives and distributes records as required.

6. Designs and maintains record management and database systems; performs process improvements on the existing database systems; creates, maintains and upgrades online Benchmark Database.

7. Responds to citizen and governmental requests for information, inquiries or complaints regarding survey programs.

8. Performs related duties as assigned.

Required Knowledge, Skills and Abilities

Knowledge of: basic processes and techniques of surveying; algebra, geometry and trigonometry; operation and manipulation of GIS and CAD files;~~,~~ basic~~s~~ set up and maintenance of databases

Ability to: maintain records; file and index information; open, edit, and plot GIS and CAD files and create GIS datasets ~~subsets~~; communicate effectively; establish and maintain effective working relationships with co-workers; work constructively in a team

Skill in: using spreadsheet packages and database tracking tools; GIS, CAD and timekeeping software and files; communicating orally, electronically and in hardcopy; coordinating, balancing and prioritizing work tasks.

Classification History:
Adopted: 1-1-2009:

June 2009 - Change Job Class number from 3125 to 30001079, due to system change.

Surveyor I - 30000225

Distinguishing Characteristics

The senior journey level of this class typically serves as a survey party chief, and organizes and conducts survey jobs. It is distinguished from the Surveying Aide II class by responsibility for organizing and carrying out survey projects and leadership of survey parties.

Typical Duties/Examples of Work

1. Provides leadership to a survey crew in all phases of field survey work; assigns tasks, provides instruction, and monitors work.

2. Provides direction for field operations for setting benchmarks and horizontal control monuments for use by the City, consulting engineers, surveyors, and private industry in construction projects, such as for roads, sewers and bridges.

3. Conducts field surveys to determine and monument boundaries of parcels and easements acquired by the City.

4. Uses GPS to establish survey control for mapping, flood control planning, landslide repair, construction, and boundary location and monumentation.

5. Calculates grades and positions; determines lay out for and stakes projects in the field for contractors; determines level of precision necessary and determines methods to meet required precision.

6. Reviews and interprets construction plans; interprets and clarifies survey requests with engineers and makes suggestions regarding potential problems; assists inspectors or engineers with measurements and calculations to revise original plans if problems occur; makes field fits as necessary; communicates with engineers, inspectors, contractors and the public regarding projects.

7. Maintains accurate notes of all calculations and drawings of all work performed.

8. Ensures safety of crew at all times; determines and implements safety procedures; recognizes and minimizes hazards including traffic, hazardous materials, heavy construction equipment, and confined space entry.

9. Performs related duties as assigned.

Required Knowledge, Skills and Abilities

Knowledge of: tools, processes, techniques, and standard practices of boundary surveying; algebra, geometry and trigonometry; legal requirements for boundary work and rights of entry; construction practices; effective principles and practices of leadership

Ability to: plan and organize survey projects; respond to changing field conditions; learn and use new survey equipment and computer software; communicate effectively, both orally and in writing; schedule and assign the work of others

Skill in: use of advanced survey instruments; establishing safety procedures; reading maps and plans; leading a survey crew, including training, motivation, assigning and reviewing work

Special Requirements

Valid state driver's license; other licenses or certifications may be required.

Classification History:
Adopted: 2-03-99:
Class created as a result of DCTU Classification and Compensation Study 1998-99. This class is composed of the following classes:
3122 Surveyor I Adopted 03-15-77
Revised 08-25-89
Revised 02-01-94 (Updated special requirements and desirable qualifications)
June 2009 - Change Job Class number from 3122 to 30000225, due to system change.

Surveyor II - 30000226

Distinguishing Characteristics

The professional level of this class typically is licensed as a Professional Land Surveyor and directs the method and approach of surveys. It is distinguished from the Surveyor I class by its advanced technical expertise, advanced computer applications, and licensing requirement.

Typical Duties/Examples of Work

1. Provides technical leadership in boundary survey work; directs methods and approaches of surveys; may provide crew leadership as assigned; provides project coordination, and staffing and scheduling estimates for projects.

2. Consults with others on scope of projects to develop survey requirements.

3. Processes field data using design and analysis tools; establishes alignments and resolves boundary issues.

4. Provides computations for survey crews to use during preliminary design and construction; calculates easements.

5. Draws and creates survey maps; may sign, stamp and record drawings; writes deeds, legal descriptions, grants of easements and rights-of-way and other documents.

6. Researches and provides survey information to survey crews and professional surveyors and the public.

7. Performs related duties as assigned.

Required Knowledge, Skills and Abilities

Skill in: computer applications related to all aspects of surveying; planning survey projects and directing methods and approaches; reviewing and analyzing field data; performing boundary analysis and engineering/survey calculations; preparing maps and plans

Special Requirements

Valid state driver's license; Professional Land Surveyor license; other licenses or certifications may be required.

Classification History:
Adopted: 2-03-99:
Class created as a result of DCTU Classification and Compensation Study 1998-99. This class is composed of the following classes:
3123 Surveyor II Adopted: 03-15-77
Revised: 03-31-92
Revised: 04-22-97
Revised: 03-20-08 FLSA designation changed to exempt
June 2009 - Change Job Class number from 3123 to 30000226, due to system change.

Working Conditions

Work in this class is typically performed in an office environment with some field work at the Aide II and Surveyor II levels, and typically in a field environment at the other levels; some work is performed in an office environment. Incumbent is typically required

to negotiate rough terrain; to lift up to 50 pounds; to work outdoors in all weather conditions; to work in and around traffic.