CLASS SPECIFICATION
Mapping Data Technician I

FLSA Status: Covered
Union Representation: City of Portland Professional Employees Association (COPPEA)

GENERAL PURPOSE

Under general supervision, performs specialized computer mapping assignments to process electronic survey data to a finished format for use in a engineering design group; designs horizontal survey control networks using GPS technology; maintains electronic data in a retrievable file format structure for archiving and easy retrieval; and performs related duties as assigned.

DISTINGUISHING CHARACTERISTICS

Mapping Data Technician I's are responsible for performing moderate to difficult mapping and data processing tasks using independent judgment and specialized technical knowledge. Incumbents produce survey base maps and 3-D computer mapping files, assist survey field staff in the efficient collection of field data, produce stake-out routines and files of proposed project features for construction, and translate data into different formats.

Mapping Data Technician classifications are distinguished from engineering, CAD and GIS technician classifications in that incumbents in the former class have greater responsibility for coordinating and translating the flow of data between the survey and engineering, GIS and CAD teams.

ESSENTIAL DUTIES AND RESPONSIBILITIES

1. Processes raw survey field data into survey base maps and 3-D computer mapping files; prepares, develops, edits and revises base maps; reconciles datum differences and imports-exports data layers; combines survey data, GIS data, as-built utility data to prepare 3D base maps in various formats such as CAiCE, AUTOCAD, and Microstation on PC workstations.

2. Develops and maintains programs, systems and routines to assist field staff in the efficient staking out of proposed features; designs, plans, and processes Geographical Positioning System (GPS) observations into final coordinate values for use as survey control; develops models of proposed features from construction plans and organizes these features into a set of staking routines; imports GPS reference points and establishes and orients data used for project control.

3. Plans surveys to map and gather GIS data on topographic features, including input of data into GIS base map.

4. Creates surface models in 3-D computer mapping files from gathered survey data and creates profiles for alignments of proposed features.

5. Provides technical support for field operations by providing surveying staff with guidance on data collection standards and formats necessary for the orderly development of base maps;

provides instruction in the use of hand-held computers to collect data from survey measuring instruments and to provide information on staking routines.

6. Creates libraries and feature tables to represent existing field conditions.

7. Field checks base maps and survey data.

8. Obtains survey and right of way data from government agencies.

MINIMUM QUALIFICATIONS

Knowledge of:

1. GPS applications and control networks.

2. Geographic information system concepts, practices and techniques, including computer mapping.

3. Surveying techniques and practices including knowledge of control networks and GPS technology.

4. Terminology, methods and techniques used in surveying base maps and records.

5. Mathematics used in plan and geodetic surveying, including state plane coordinates used for surveying and mapping.

6. Use of word processing, spreadsheet and database software.

7. File structures, network neighborhoods and specific software such as GIS, AUTOCAD, MICROSTATION, FORESITE, CAiCE, and other related PC workstation software, tools and applications.

8. State and local surveying laws.

9. Basic construction practices including plan interpretation.

10. Set up and use of modern surveying instruments such as electronic theodolites, GPS systems, total stations, and electronic levels and data collectors.

11. City operating policies and departmental work procedures and quality standards.

Ability to:

1. Acquire, compile, and organize complex survey data sets.

2. Assign work, provide technical guidance and advice, and train survey personnel in data collection standards and stakeout applications.

3. Conduct field investigations and inspections; collect field data and analyze and make recommendations regarding data.

4. Operate a computer and use a variety of programs; maintain technical files both electronic and manual; utilize specialized engineering, drafting, measuring, surveying, or electronic tools, materials and equipment.

5. Use safety precautions when working at field sites.

6. Read and interpret various kinds of maps, and engineering drawings, construction plans, and other technical materials and documents, such as specifications, engineering manuals, surveying tables, computer manuals, trade journals, equipment instruction manuals, state and federal guidelines.

7. Clearly present technical information in oral, written, graphic or other forms;

8. Perform detailed work thoroughly, neatly, accurately and efficiently.

9. Establish and maintain effective working relationships with bureau management and staff.

Training and Experience:

A typical way of obtaining the knowledge, skills and abilities outlined above is graduation from high school, trade, or vocational school, supplemented by courses in engineering technology; and two years of progressively responsible engineering, GIS, CAD, or surveying technician experience; or an equivalent combination of training and experience. Experience in a public agency is preferred

Licenses; Certificates; Special Requirements:

A valid state driver's license may be required for certain assignments.

PHYSICAL AND MENTAL DEMANDS

Persons with disabilities may be able to perform the essential duties of this class with reasonable accommodation. Reasonable accommodation will be evaluated on an individual basis and depend, in part, on the specific requirements for the job, the limitations related to disability and the ability of the hiring bureau to accommodate the limitation.

Class History:

Adopted:	06-06-02	New class Mapping Data Technician (6026) created as part of the COPPEA Classification and Compensation study.
Revised:	08-01-06	Spec history updated to reflect pre-2001 COPPEA Study history. Spec formatting modified.
Revised:	08-07-06	Revised FLSA status from "Non-exempt" to "Covered."
Revised:	08-01-08	Renamed from Mapping Data Technician to Mapping Data Technician 1.

June 2009 - Change Job Class number from 6026 to 30000327, due to system change.