

## The Maryland-National Capital Park and Planning Commission

TITLE: Senior CADD/GIS Technician                      GRADE: 16              DATE: 8/5/2020  
SERIES: Information Technology              CODE: 1357      EEO: Technician      FLSA: Non-Exempt

### Class Definition:

Under direction, performs advanced technical mapping and specialized graphics work. Produces maps, charts and other graphics through use of Computer Aided Design and Drafting (CADD) and Geographic Information System (GIS) technologies. Work involves preparing videos, 2- and 3-Dimensional (2-D/3-D) CADD images and graphics and other advanced materials for special presentations. Serves as a technical resource to staff on drafting, mapping and graphics related issues, confers with planning staff to determine requirements, identifies, collects and converts data (as needed) and information needed to prepare maps and other materials. Some work may be confidential or sensitive. The work contributes to the accuracy, adequacy, timeliness and other facets of CADD and GIS support of the unit or work program of assignment. Applies considerable knowledge of the principles, methods, practices and equipment of modern design and drafting, GIS layering/mapping and graphic representation. Performs various types of data analyses and makes the full range of CADD/GIS calculations. Interacts with people inside and outside the organization to exchange information, coordinate, instruct, guide and advise. Performs other duties, as assigned.

Work is assigned in terms of functions, priorities, requirements of specific assignments. The incumbent independently plans and carries out the work in conformance with these parameters, established policies, procedures and accepted practices of the field of work, and resolves commonly encountered problems by selecting and applying, or adapting and adjusting, the applicable guides. The incumbent is to keep the supervisor informed and seeks assistance for unusual matters. Work is expected to be accurate – the incumbent is held responsible for results, and is evaluated in terms of quality, quantity, timeliness, teamwork, customer service and other factors.

### Examples of Important Duties:

#### 1. CADD and Graphics

- Supports major, multi-disciplinary work program and uses computer aided software (CADD or GIS) in support of departmental staff of planners, architects, engineers, landscape architects, surveyors and cartographers in the development of master plans, functional plans, site plans and project plans.
- Researches and analyzes site plans and other drawings. Analyzes graphic problems and data. Determines appropriate techniques to accomplish objectives. Researches information to be mapped from various records and official documents.
- Generates maps from GIS databases and supports data translations to/from CADD data.

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- Prepares maps to scale using legal descriptions, ownership information and other information pertaining to topography, variances, restrictions and closures. Plots angles and closures; draws curvilinear and irregular features with CADD technology.
- Coordinates large drawing/mapping/graphics projects including exercise of responsibility for tracking and reporting progress and ensuring accuracy of work.
- Posts record plats using CADD, Coordinate Geometry (COGO) software, traditional drafting media, or other appropriate technique(s).
- Prepares special displays, graphics, charts, video documentation and other drawings for regular assignments as well as key meetings and presentations. Uses computer software and other media/tools. Creates special 2-D and 3-D images and graphics using CADD and graphics software; uses advanced graphics techniques.
- Maintains hard copies of products and various files.

### 2. Geographic Information Systems (GIS)

- Produces complete original maps with thematic overlay and completes documentation using a variety of GIS software. Prepares and updates GIS databases by collecting, reviewing, digitizing, and entering data (property boundaries, political boundaries, infrastructure layers, land use data, planimetric data, topographic data, set-backs) into GIS databases. Collects information from planners, contractors, official documents/ records and other sources for incorporation into GIS databases. Reviews source data to be entered into the database and to check for accuracy. Converts data, if necessary, from non-digital maps and raw data into digital form using specialized software and enters other data elements.
- Checks and evaluates the compliance of consultants' planimetric, topographic and property map deliverables with GIS contract specifications.
- Provides training in procedures for maintaining and updating GIS databases and tables. Coordinates large projects including responsibility for tracking and reporting on work progress and ensuring accuracy of work.
- Participates in developing and documenting procedures and techniques for entering and manipulating GIS data.
- Uses databases, spreadsheets and other applications to complement information in GIS.
- Posts record plats using COGO software.

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- Performs GIS digital map maintenance routines (layer creation, feature coding, attributing, annotating and adding record plat information) using standard GIS software such as ArcView, Quantum GIS and ArcPro. Creates scripts or modifies existing scripts.
- Performs (or assists in) quality control checks.

### 3. Other

- Prepares and provides reports of project methods and status. Uses document management systems, including the Enterprise Asset Management (EAM) system.
- Trains other staff, including less experienced technicians, in use of mechanical and computerized drafting, graphics and GIS methods and techniques; may provide ongoing technical advice and assistance to other technicians.
- Stays informed of the field of work and associated materials, methods and practices.
- Communicates and interacts effectively with business contacts; establishes and maintains or enhances working relationships, including teamwork, with internal and external contacts. Communicates and coordinates with staff regarding project requirements, expectations, work status; communicates and coordinates with vendors, suppliers, and members of the public to provide property information/data, maps.
- Uses and performs operator level maintenance on large format copiers, plotters, cameras and related equipment. Ensures adequate supplies, recommends procurement of equipment and materials, ensures adequate vendor maintenance service and arranges for repairs.

### Important Worker Characteristics:

- A. Considerable knowledge of: (1) principles, methods, practices and equipment of modern design and drafting, GIS layering/mapping and graphic representation including, but not limited to: acquisition, compilation, development and maintenance of map products, graphic design, CADD and GIS hardware and software (e.g., AutoCAD, ArcGIS and Adobe products) to produce artistic renderings, detailed drawings of spaces and layered maps from source data, sketches, prints and verbal instructions, large format plan scanners and copiers, and document management systems; (2) CADD, GIS and cartographic standards for drawings/maps; (3) numerical comprehension and computation sufficient to determine or verify and portray exact elevations, sizes, angles and other design /mapping measurements, and to make other calculations; and (4) Commission organization, policies, and procedures.\*

*\*Typically acquired or fully developed primarily after employment in this job class.*

