

DRAFTING TECHNICIAN SERIES

PREAMBLE

Group Definition

The Drafting Technician series is designed to include all those positions which involve civil engineering, architectural drafting and cartography. Positions involve several types of drafting including drafting plans of roads, drainage channels, community layouts, various types of buildings and structures, surficial and subsurface mapping, elevation profiles, surveys, land use maps, equipment and furniture layouts, signage, charts, diagrams and graphs. Use of mechanical equipment may be required. These and related drafting duties are performed by Drafting Technicians at any or all of the first four levels.

Assignment to any position classified in this series requires successful completion of a recognized drafting program.

Drafting Technician 1 – DM1

This is the recruitment level in which personnel who are newly graduated from a drafting training program will be placed. Persons who have some drafting experience equivalent to formal training, but have not successfully completed a training program will also be placed at this level. It is expected that persons at this level will be exposed to as wide a variety of drafting techniques and projects as possible in the training process. Employees at this level work under close supervision.

Drafting Technician 2 – DM2

This is the first working level of the series. Incumbents classified at this level begin to function more independently on more complex projects and under less stringent supervision. This level is used for positions which responsibilities are those of a Technician 2 and for classifying employees who are underfilling a Drafting Technician 3 position and being trained to fill that position. Work at this level is frequently repetitive and normally of a more routine nature, even though the work may be part of a highly complex drafting project.

Drafting Technician 3 – DM3

This is the full working level for most positions. Incumbents in these positions function at a high level of production and accuracy, with periodic general reviews of their work as to progress and a more detailed check by a supervisor upon its completion. Work done by incumbents of this level is as varied as the work of the drafting operation and includes both routine work and work of considerable complexity. Technicians hired into positions at this level will have at least five years of preferably related experience. Experience will have been broad enough that an incumbent will be able to select the most appropriate technique, colours and equipment and may suggest alternatives to suggested layout or design, all within established guidelines. This is the first level at which supervision, in the form of technical instruction and work assignments, may be given to more junior Drafting Technicians.

Drafting Technician 4 – DM4

This level includes two principle types of functions. A position may be classified at this level based on either or both functions. This is the first level of continuous and sustained technical supervision of a drafting unit or where an incumbent performs highly technical drafting of

exceptional complexity. Continuous and sustained supervision means that the incumbent is accountable for all the work of a group of subordinate drafting personnel including assigning, prioritizing and reviewing their work and performance. Exceptionally complex duties require that the work being done is the most complex done in the whole drafting operation, and that the incumbent performing the work possesses a higher level of technical knowledge and expertise in a specific area in order to perform the work. Longevity in a position involving complex drafting, or occasionally advising on problems involving drafting does not qualify an incumbent to be reclassified to this level.

Drafting Technician 5 – DM5

This level is assigned to positions designated as technical and administrative head of a medium size drafting operation. It also includes those positions which are designated as assistant head of a larger drafting operation.

Positions have specific supervisory/management/technical responsibilities similar to those of the Drafting Technician 6. Incumbents must co-ordinate the activities of the operation including organizing staff, allocating, prioritizing and reviewing the work of subordinates, providing technical advice and instruction to subordinates and professionals. Incumbents in these positions will supervise other drafting technicians including levels 3 and 4.

DRAFTING TECHNICIAN 1

GENERAL

This is a junior drafting level where an incumbent is required to perform relative simple drafting tasks of a routine nature. An employee at this level is under close supervision and functions at a training and/or junior working level.

TYPICAL DUTIES

Under close supervision, compiles, plots and drafts simple plans and maps related to serial, ground and legal land surveys; geology; architecture; engineering; community planning; forestry, soil research or conservation; park development and facilities.

Plots simple contours, profiles, cross-sections and site plans.

Using rough notes or detailed instructions, prepares simple charts, graphs and diagrams some of which may be used to illustrate departmental publications and reports.

Traces final copies from rough plans and drawings using freehand or mechanical lettering.

Following detailed instructions, drafts revisions to existing plans, drawings and maps and enlarges or reduces drawings to appropriate scale.

Performs other related duties as assigned.

QUALIFICATIONS

Knowledge, Abilities and Skills

Knowledge of drafting techniques and practices and the care and use of drafting instruments.

A good knowledge of high school mathematics.

Ability to understand and follow detailed instructions.

Ability to produce neat and accurate work and relate well within the work environment.

Education, Training and Experience

Successful completion of a recognized drafting training program.

DRAFTING TECHNICIAN 2

GENERAL

This is the intermediate working level where an incumbent is required to perform drafting of moderate complexity. An employee at this level works under general supervision on repetitive tasks while new assignments receive more detailed instruction. Work assignments are subject to general review while in progress and a more thorough review on completion.

TYPICAL DUTIES

Under general supervision, compiles, plots and drafts plans and maps related to aerial, ground and legal land surveys; geology; architecture; engineering; community planning; forestry; soil research or conservation; park development and facilities.

Plots plan profiles, transit lines, cross-sections, mass diagrams and maps from field notes and/or computer output.

Performs routine map work including preparation of base maps and updating existing maps, and may include the use of basic scribing techniques.

Traces and redraws diagrams and drawings.

Prepares moderately complex construction information, drawings and layouts; e.g. timber bridges, structures, park facilities, signage, furniture and equipment layout.

Refers to catalogues, specifications, handbooks and precedent drawings.

May be required to assist with field projects.

Performs other related duties as assigned.

QUALIFICATIONS

Knowledge, Abilities and Skills

A good knowledge of basic drafting techniques, practices and equipment.

Thorough knowledge of high school mathematics.

Ability to produce neat and accurate work under general supervision.

Ability to understand and follow instructions and display some initiative.

Ability to relate well within the work environment.

Ability to acquire a basic understanding of survey, architecture and/or engineering principles as applied at the Drafting Technician 2 level.

Education, Training and Experience

Successful completion of a recognized drafting training program and a minimum of two years' drafting experience.

DRAFTING TECHNICIAN 3

GENERAL

This is the fully experienced working level where an employee performs complex drafting of a high standard of quality and an acceptable level of production. An employee receives general supervision from a senior drafting technician or professional level and has latitude for initiative regarding drafting techniques used within established guidelines. An incumbent may have technical responsibility for a project or segment of a large project with limited administrative responsibility. An employee at this level may be required to assist in the instruction of more junior drafting personnel.

TYPICAL DUTIES

Performs several or all of topographic mapping, corrections and drawings of maps for publication, photo-interpretation, plan metric, geological mapping, graphs and illustrations. Works from catalogues, texts and books, precedent drawings, with plans and certificates from Land Titles offices, and with statistical information.

Performs complex mathematical computations.

Prepares complex drawings related to civil, mechanical, electrical and structural engineering and architecture, e.g.:

- residential, industrial, or commercial subdivisions and/or development plans
- construction and location plans for highways and interchanges
- water treatment plans, pumping stations, pipelines, bridges, structures and drainage and flood control works
- mechanical equipment modifications and layout
- park development plans and working drawings of park facilities and/or services
- limited access drawings
- complete construction information for all sizes of building projects, using current construction techniques
- prepares directional signage drawings, furniture and equipment layout.

Assists and instructs other drafting personnel with technical problems.

Provides technical supervision on projects within acceptable standards.

May prepare scale models for display.

May perform field work related to a specific project.

Performs other related duties as assigned.

QUALIFICATIONS

Knowledge, Abilities and Skills

Knowledge of current basic drafting techniques, practices and equipment.

An understanding of those survey, planning, engineering or architectural principles applicable to the work.

Thorough working knowledge of geometry and trigonometry.

Ability to prepare drawings and diagrams from statistical and narrative data.

May require a basic knowledge of computer coding, photo recognition, printing practices and related equipment.

May require knowledge and ability to represent the department before government officials and/or the public.

Knowledge, Abilities and Skills (continued)

May require some artistic ability for preparation of freehand drawings.

May require knowledge and ability related to interpretation of statutes, regulations and Orders-in-Council.

Ability to understand and follow instruction and display considerable initiative.

Ability to establish and maintain effective working relationships with all persons within the work environment.

Education, Training and Experience

Successful completion of a recognized drafting training program preferably supplemented with pertinent technical courses and a minimum of five years' drafting experience.

DRAFTING TECHNICIAN 4

GENERAL

An employee at this level is engaged in highly technical drafting work of exceptional complexity under limited direction and/or under delegated authority, will be required to exercise continuous and sustained technical supervision over a group of subordinates. An employee receives direction from a senior drafting technician or professional level. The Drafting Technician 4 differs from the Drafting Technician 3 by the greater degree of technical complexity and the co-ordinating responsibilities assigned.

TYPICAL DUTIES

Assigns and reviews work of subordinates and is responsible for their technical supervision, training and instruction.

Prepares highly complicated technical drawings, maps and layouts from sketch plans, field notes, statistics and computer data; e.g. base maps, land use maps, geological maps, property ownerships, construction information drawings, sub-division or park designs and development plans, grade separations and road design.

Maintains contact with Land Titles offices and representatives of towns and municipalities concerning development proposals.

May perform a considerable amount of field work relating to development proposals and sub-division approvals.

Draws study concepts and alternative designs for presentation.

Performs difficult mathematical calculations related to the work.

Orders and controls office supplies and is responsible for general office duties pertaining to correspondence and reports.

Training and development of other staff.

Performs other related duties as assigned.

QUALIFICATIONS

Knowledge, Abilities and Skills

A sound knowledge of current drafting techniques, practices and equipment and their application to the work.

Knowledge of survey, park or community planning, engineering or architectural and cartographic principles.

Thorough knowledge of trigonometry, geometry, etc.

Working knowledge of statistics.

Knowledge of photo-interpretation, printing practices, computer coding and related equipment.

Knowledge of and ability to interpret statutes, regulations, Orders-in-Council and other legal documents pertaining to the work.

Ability to organize, allocate and review the work of subordinates.

Ability to initiate work procedures within the position's objectives.

Ability to establish and maintain effective working relationships with all persons in the work environment.

Education, Training and Experience

Successful completion of a recognized drafting training program, preferably supplemented with pertinent technical courses and a minimum of seven years' drafting experience, most of which should be related.

DRAFTING TECHNICIAN 5

GENERAL

This is a responsible supervisory/management level where the major emphasis is the continuous co-ordination of a group of drafting personnel. An employee at this level will have multiple project supervision on a continuous basis. Reporting directly to a senior Drafting Technician or professional, an employee works within departmental objectives referring only unusual or major problems to the supervisor. This level includes employees who function as chief draft technician, supervising a medium size drafting operation. It also includes those positions which are designated as assistant head of a larger drafting operation.

TYPICAL DUTIES

Allocates and reviews the work of subordinates and is accountable for their supervision, instruction, discipline, performance appraisal and reports on their ability and progress.
Co-ordinates and schedules work in order to meet prescribed deadlines.
Checks all work produced by drafting staff to ensure drafting accuracy and compliance with standards.
Provides technical guidance and direction to subordinate drafting technicians.
Provides technical reference support to professional staff and may be required to undertake special assignments.
Compiles reports on status of projects.
Advises supervisor and subordinates regarding the maintenance and revision of standards.
Prepares freehand sketches for detailed work by others.
Determines the organization and use of drafting staff within the limits of established policy and to meet branch or departmental objectives.
Assists in the selection of staff.
Performs other related duties as assigned.

QUALIFICATIONS

Knowledge, Abilities and Skills

Extensive knowledge of current drafting techniques, equipment, working procedures, departmental specifications and subject matter related to the work.
Considerable knowledge of pertinent legislation and regulations.
Knowledge of the inter-actions of drafting, photogrammetry, cartography, printing practices and related equipment and computers.
Ability to organize, allocate and review the work of subordinates.
Ability to instruct and train subordinate drafting personnel.
Ability to establish and maintain effective working relationships within the work environment and with government officials and the public.
Ability to handle all administrative matters for the drafting office and co-ordinate and supervise the work of the group.

Education, Training and Experience

Successful completion of a recognized drafting training program, preferably supplemented with pertinent technical course, previous supervisory experience and a minimum of eight years' drafting experience, the major portion of which has been at a responsible drafting level. Some training in administration is desirable.