

Classification and Qualification STANDARDS

Drafting Series

Class Title	Class Code	Date Revised	FLSA
<i>Drafting Aid</i>	3022	01-01-1978	<i>Non-Exempt</i>
<i>Drafting Technician I</i>	3023	01-01-1978	<i>Non-Exempt</i>
<i>Drafting Technician II</i>	3024	01-01-1978	<i>Non-Exempt</i>

Classification Standard Reformatted: 06-01-2013

OVERVIEW:

Incumbents in the Drafting Series perform drafting work required in the preparation of architectural, mechanical, civil and electrical drawings.

Positions are assigned to classifications in this series on the basis of the level of complexity and responsibility of the work performed and in the qualifications required to perform the work; scope and level of difficulty of drafting assignments and the level of knowledge and skills required; the range of duties assigned; the nature and degree of supervision received and exercised; the nature and purpose of personal contacts; and the kind and degree of initiative and judgment required.

Drafting Aid – Entry level for this series. The work performed is of a routine and repetitive nature and provides an opportunity to gain the skill and to utilize the terminology, processes and equipment beyond that learned in school. Assignments are made on the basis of specific instruction and the work is closely supervised during progress and finished work is checked for accuracy, adequacy and quality of work. Incumbents are normally expected to develop the necessary skills and qualifications for, and be promoted to, the next higher classification within about two years. However, some positions, due to the routine and repetitive nature of the drafting work performed, will continue to be allocated to this classification.

Drafting Technician I – Incumbents in this classification possess full journey level drafting skills, knowledge and abilities. Instructions received vary depending upon whether the assignment is of a recurring nature or one having features not previously encountered. Recurring assignments are generally defined in terms of the results expected and incumbents are expected to utilize relevant procedures and guidelines in accomplishing them. There is little requirement for design at this level.

Drafting Technician II – Incumbents perform a wide range of complex and responsible independent drafting assignments that include a requirement to perform complex and responsible design work. While the design work performed does not require the level of professional skills, knowledge and abilities typically associated with graduate architects or engineers, the incumbents, through extensive work experience, will have acquired the ability to exercise judgment in the selection of alternatives in the design function of conceiving, planning or proportioning structures or devices to satisfy performance, cost, safety, size, strength, durability, predictability and other requirements. Such work assignments require that incumbents make extensive use of standardized tables, manuals, etc., and in addition, search out and compute special purpose data as needed. As a matter of course, the emphasis of such work assignments shifts from being one of primarily graphic portrayal to one which includes graphic portrayal to communicate design originated by the draftsman. In addition, incumbents typically lead one or more draftsman(s) and/or Student Assistants who perform drafting duties.

DRAFTING AID

Under immediate supervision, incumbents perform routine drafting work required in the preparation of simple architectural, mechanical, civil and electrical drawings; does tracing, maps and drawings, as required.

Incumbents work from detailed preliminary sketches or instructions and prepare simple construction or section drawings; assist in the preparation of working drawings and modify master college drawings to reflect as-built conditions of buildings, utilities or systems; perform simple calculations necessary to properly dimension drawings, determine simple lists of materials and the size and dimension of storage cabinets, shelves, etc. to be installed in buildings; maintain files on construction drawings and make copies and tracings of these items. Incumbents may undertake additional drafting assignments which may include the preparation of maps, charts, and diagrams and the plotting of buildings, parking lots and athletic fields. They assist others in making field investigations or perform such investigations personally when the data to be collected involve such items as measuring parking lots or athletic fields already constructed.

MINIMUM QUALIFICATIONS:

Knowledge and Abilities:

General knowledge of drafting methods and the symbols used in architectural, civil, mechanical and electrical drawings; working knowledge of algebra, trigonometry and geometry.

Ability to legibly draw and modify simple construction and section drawings from detailed preliminary sketches or instructions; prepare charts and diagrams; plot buildings, parking lots and athletic fields; make simple investigations; do other simple drafting work; make mathematical calculations.

Education:

Associate of Arts degree or equivalent with an emphasis on coursework in drafting technology, engineering or related disciplines. One year of specialized drafting experience which has demonstrated that the applicant has acquired and successfully applied the knowledge and abilities shown above may be substituted for the required education.

DRAFTING TECHNICIAN I

Under general supervision, incumbents perform skilled drafting work required in the preparation of architectural, mechanical, civil and electrical drawings, including the more routine design work which may be required.

Incumbents work from preliminary sketches and design notes and prepare complete design and construction drawings for minor construction projects or modification of existing structures or systems: these drawings may be of small buildings, parking lots, irrigation systems or utility systems and may include such details as foundations, wall sections, floor plans, elevations and electrical and mechanical systems. Incumbents may also be required to prepare lists of materials derived from the scaled drawings. Incumbents make field investigations where the data sought are easily obtainable, such as the location and dimension of utilities, for incorporation into design or as-built drawings and may also perform routine surveying work on parking lots, athletic fields and other projects of similar nature. In addition, they maintain the master file of campus drawings and provide factual information on its contents. Incumbents may also lead student assistants who perform routine drafting, tracing and lettering assignments.

MINIMUM QUALIFICATIONS:

Knowledge and Abilities:

Thorough knowledge of the drafting methods, materials techniques, instruments and symbols used in architectural, mechanical, civil and electrical drawings; general knowledge of engineering mathematics; general knowledge of the methods used in quantity estimating; working knowledge of the preparation of building plans, elevations, and perspective drawings.

Ability to legibly and accurately draw and modify construction and section drawings from rough sketches, verbal instructions and odd drawings; prepare charts and diagrams; plot buildings, parking lots, athletic fields, and other minor construction projects or modifications; analyze space requirements and report findings; make routine

surveys and do other moderately complex drafting work; make engineering calculations; establish and maintain cooperative working relationships with students, co-workers and others.

Experience:

Equivalent to two years of progressively responsible drafting experience which demonstrate possession of the knowledge and abilities listed above.

Education:

Associate of Arts degree or equivalent with extensive coursework in drafting technology, engineering and related disciplines is required. One year of specialized drafting experience which has demonstrated that the applicant has acquired the fundamental knowledge and abilities of a draftsman may be substituted for the required education.

DRAFTING TECHNICIAN II

Under general supervision, incumbents perform complex drafting work, including complex design work required in the preparation of architectural, mechanical, civil and electrical drawings.

Incumbents work from rough notes or sketches, and prepare complete, detailed design, including both new construction and building alterations, and mechanical and electrical systems; utilize accepted engineering formulae in making involved computations necessary for properly dimensioning drawings, in preparing lists of materials determined from dimensioning calculations made from scale drawings, and in determining alternatives of design such as size, load capacities, strengths, etc. As part of the design function, incumbents determine acceptable material substitutes and may prepare construction cost estimates for simple construction or alteration projects. Incumbents make field investigations taking on-site measurements, making sketches and collecting data such as specifications for laying out parking lots and athletic fields; alteration, improvement, maintenance and repair of buildings and facilities and as-built status of completed projects. These field investigations include the operations of transit and level in simple land leveling to determine grade elevations, set alignment and grade stakes, and balance quantities for cut and fill. Incumbents modify master campus building and utility drawings to reflect the as-built condition. As custodians of the master file of campus drawings, incumbents provide authoritative information and interpretation of the contents of these files for specifications material substitutions, location of utilities, etc., to trade craftworkers, off-campus bidders on construction projects, faculty, staff, and students. Incumbents may also be required to prepare maps, charts and tracings. In addition, incumbents may lead lower level drafting technicians and/or student assistants who perform routine drafting, tracing and lettering assignments.

MINIMUM QUALIFICATIONS:

Knowledge and Abilities:

Comprehensive knowledge of the drafting methods, materials, techniques, instruments and symbols used in architectural, mechanical, civil and electrical drawings; general knowledge of engineering mathematics; thorough knowledge of the calculation of difficult dimensioning, and the methods used in quantity estimating; working knowledge of the various materials used in building construction; working knowledge of the laws, ordinances and other regulations applicable to building construction, maintenance and repair.

Ability to make engineering calculations; plot drawings from field notes; work independently and complete difficult drafting assignments; legibly and accurately draft detailed architectural renderings, drawings and design; analyze space requirements; use a transit and level and perform surveying related to simple land leveling; make clear and concise oral and written reports; plan and direct the work of others; ability to lead others; acquire rapidly a general knowledge of the building codes of the State of California; establish and maintain cooperative working relationships with staff, faculty, students and others.

Experience:

Equivalent to four years of progressively responsible drafting experience including two years at the journey level preparing complete design and construction drawings for minor construction projects or for modification of existing structures or systems.

Education:

Associate of Arts degree or equivalent with extensive coursework in drafting technology, engineering or a related discipline. One year of specialized drafting experience, which has demonstrated that the applicant has acquired and successfully applied the fundamental knowledge and abilities of a draftsman, may be substituted for the required education.