

PART I

DEPARTMENT OF EDUCATION
STATE OF HAWAII

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Class Specifications for:

DRAFTING AID AND DRAFTING TECHNICIAN SERIES

Series Definition:

This series includes all non-professional and technical positions in which the primary function is the supervision, review and/or preparation of drawings for the purpose of documenting and communicating engineering, architectural or cartographic ideas and information. Positions in this series require skill in the application of drafting techniques and knowledge of drafting methods and procedures, as well as technical knowledge and abilities in the collection, selection, computation, adjustment, processing and evaluation of source materials to be used in the preparation of drawings or maps.

Drafting positions in the State government are primarily found in the following functional areas: (1) Organizations in which the functions include the planning, design, construction, maintenance, and/or repair of public structures and facilities, outdoor recreational facilities, water, sewage and flood control systems and facilities, and/or land surveying; and (2) Organizations in which functions require maps, charts, drawings, etc., for special purposes such as land court proceedings, right-of-way appraisal and acquisition, tax assessment, and political or public informational purposes.

Drafting positions require a common core of knowledge and skills, including knowledge of algebra, geometry and trigonometry in order to perform the mathematical computation required in converting basic data into the form needed in the preparation of graphic plans; skill in maintaining applicable line weights and widths and uniformity of similar features, details and symbols; artistic ability and skill in using lines and shades to give an effect of depth, height and breadth, or to direct attention to specific portions of drawings; and knowledge of the use of the various standard drafting instruments and tools. Such skills and knowledge are typically learned in high school or post-high school courses in mathematics, mechanical drawing and drafting, and/or intensive on-the-job training and experience.

At the upper levels, drafting technicians tend to specialize in technical subject-matter areas requiring knowledge of related regulations and special techniques as well as some practical knowledge of the principles and practices in a specialized field of engineering, architecture or physical science. In some of these areas, the career pattern becomes stabilized within the specialized area and there is little movement of personnel across specialty lines.

Use of Specialty Titles:

Recognizing a pattern of specialization, the title for levels II will be Drafting Aid and levels III and IV will be Drafting Technicians, respectively; for level V and above, the use of parenthetical specializations is required. These do not necessarily represent mutually exclusive areas of specialization and do not cover all possible areas but rather those which presently exist. The title Drafting Technician (Engineering) covers a wide range of drafting positions, including those which involve a combination of specialized drafting areas, such as is found in certain planning and drafting functions; however, in the event that an area of specialization (not herein recognized) becomes primary, to the extent that specialized knowledge and experience may need to be considered in recruitment and placement (for example, Drafting Technician [Electronic], or Drafting Technician [Mechanical]), such specializations may be added.

The following specialty titles are for use at levels V and above:

Drafting Technician (Engineering) – Includes positions whose primary function involves the drafting of profiles, cross-sections, plans and details for airport, harbor and highway planning, design, construction and maintenance projects, water and sewage systems, flood control, irrigation and drainage systems, parks, and other such engineering structures and facilities, and the preparation of maps, charts, graphs and illustrative materials directly relating to such projects. This specialization may also be used in “mixed” positions, where no other drafting specialization is applicable.

Drafting Technician (Architectural) – Includes positions whose primary function involves the drafting of floor plans, elevations, perspective drawings, sections, and architectural details of buildings and related structures.

Drafting Technician (Structural) – Includes positions whose primary function involves drafting work on girders, beams, columns, riveted and welded joints, concrete reinforcing, and other elements of steel, concrete, timber and other structures, including bridges, buildings, dams, wharves, piers, tunnels, retaining walls, tanks and towers, pedestrian facilities and other such structures.

Drafting Technician (Cartographic) – Includes positions which involve as a primary function, the compilation, drafting, revising and editing of maps and charts, and the collection, selection, computation, adjustment, processing and evaluation of source material to be used in such maps and charts.

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Determination of Levels:

Grade level distinctions are based upon differences in scope and complexity of the following classification factors:

- (1) Nature and variety of work;
- (2) Supervision received;
- (3) Guidelines available;
- (4) Originality and judgment required;
- (5) Personal work contacts;
- (6) Recommendations, decisions, and commitments made;
- (7) Supervision exercised; and
- (8) Knowledge and abilities required.

This series replaces the following State of Hawaii classes:

Draftsman	7.605
Engineering Draftsman I	7.615
Engineering Draftsman II	7.618
Engineering Draftsman III	7.620
Engineering Draftsman IV	7.625
Planning Draftsman I	7.630
Planning Draftsman II	7.632
Tax Map Draftsman I	7.635
Tax Map Draftsman II	7.640
Assistant Tax Maps Recorder	7.643
Draftsman and Map Maker	7.650
Architectural Draftsman I	7.660
Architectural Draftsman II	7.665
Architectural Draftsman III	7.668
Architectural Draftsman IV	7.670
Model Maker	7.800

DRAFTING AID II

8G.606

Duties Summary:

As a trainee, performs simple, routine drafting work under close supervision, and performs other duties as required.

Distinguishing Characteristics:

Positions in this class are trainee positions and are assigned simple and routine drafting tasks as part of a developmental process directed toward the learning of proper drafting techniques in an on-the-job training situation. Incumbents work under close supervision, receiving detailed instructions, and with frequent checks on work in process and on completion for accuracy, adequacy and neatness.

Examples of Duties:

Receives instruction in the use of drafting instruments and equipment and in proper drafting techniques. Does simple plotting, drawings and pencil tracings following specific instructions; does freehand lettering and receives instructions in the use of mechanical lettering devices; assists in filing of maps, records and plans.

Knowledge and Abilities Required:

Knowledge of: Basic algebra, geometry and trigonometry.

Ability to: Understand and follow written and oral instructions; make tracings and drawings; learn to use drafting instruments and do freehand lettering; make mathematical computations.

DRAFTING TECHNICIAN III

8G.607

Duties Summary:

Performs simple, routine drafting duties such as pencil tracings and simple drawings under general supervision, and moderately difficult tasks such as ink tracings and detail drawings under close supervision; and performs other duties as required.

Distinguishing Characteristics:

A drafting technician at this level works under general supervision on simple, routine or repetitive tasks, and as an advanced trainee, works closely with a higher-level drafting technician on more difficult and complex assignments, receiving specific and detailed instructions, and with work checked closely during progress and on completion

for adequacy, accuracy and quality of workmanship. Work at this level is more limited in variety and mental demands than that at the next higher level, involving simpler, more repetitive tasks, requiring less skill and accuracy, and is under closer supervision. Guides include plans, sketches, manuals and standard procedures, and are directly applicable to the work performed. Person-to-person contacts are usually with fellow workers to give and receive factual information.

Examples of Duties:

Makes tracings of maps, plans and structural parts; posts changes and additional information to existing maps and records; does lettering, coloring and shading; prepares simple graphs, schedules, diagrams and charts, where information is readily available and data easy to interpret; does arithmetical calculations which are spot-checked for accuracy. As an advanced trainee, assists higher-level drafting technicians with preparation of floor plans and elevations and drawing of building details, tracings, maps, records and plans; reduces and enlarges scaled drawings; tabulates information; indexes and makes minor alterations and corrections to tracings, maps and sketches; helps prepare illustrations, photographic slides and other reproductions for planning and other public informational purposes; files maps, tracings, records, plans and drawings.

Knowledge and Abilities Required:

In addition to the knowledge and abilities required at the next lower level, this level requires:

Knowledge of the nomenclature and conventional symbols of drafting, basic drafting techniques, and the general sources of engineering and drafting information. Ability to use standard drafting instruments and equipment; do freehand lettering and sketching; learn the procedures, practices and regulations applicable to the area of assignment.

DRAFTING TECHNICIAN IV

8G.608

Duties Summary:

Performs a variety of moderately difficult drafting work under general supervision and performs other duties as required.

Distinguishing Characteristics:

At this level, an incumbent independently performs a limited variety of drafting duties following standard procedures and well-defined work methods and not complicated by unusual features. Assignments which involve concepts, procedures and techniques which are familiar to the incumbent are made in terms of the objectives to be achieved and with general instructions as to accuracy required, special features or details involved, and suggested techniques and sources of information. Work is spot-checked in process and is reviewed on completion for technical adequacy, accuracy and workmanship. Judgment is required in such matters as recommending more advantageous views or scales, determining placement, shapes or size of symbols and features, and accentuation of features and symbols. Work contacts are similar to those at the previous level. Guides are also substantially the same as at lower levels, except that positions at this level require the use of judgment and resourcefulness in locating and referring to texts, manuals, tables and other data, and selecting and applying standard procedures.

The drafting technician at this level receives training in procedures, regulations and special techniques involved in the area of assignment preparatory to advancement in the organizational segment and/or the field of drafting specialization (e.g. architectural, engineering, cartographic, etc.).

Examples of Duties:

Performs skilled drafting in preparation of architectural or engineering plans from designs and sketches; does ink tracings of cadastral, planimetric, topographic, cultural, hydrographic and/or aeronautical lines and features on maps, and does freehand lettering. Prepares detail working drawings in accordance with designs and sketches prepared by design engineers or architects for the guidance of construction or maintenance activities and usually requiring a variety of alternate sectional views; corrects and revises existing maps, on the basis of legal documents, verbal or written instructions or other data, depending on the purpose of such maps; plots in ink on finished maps such details as symbols and locations of pole lines, railroads, highway systems and bridges; may plot field notes of surveys and make finished drawings and tracings for record or reproduction; collects data from files and records, and makes field examinations if necessary, to obtain measurements and other data required for maps or drawings; prepares sketches, perspective drawings, graphs and charts, and may prepare photographic or artistic presentations and layouts, posters, signs and visual aids, using various art media and color processing methods for illustrative purposes;

makes estimates of cost of materials; and performs other mathematical computations relating to drafting and mapping functions.

Knowledge and Abilities Required:

In addition to the knowledge and abilities required at the next lower level, this level requires:

A good knowledge of the nomenclature, conventional symbols and standard techniques of drafting, of the procedures, practices, regulatory issuance and sources of information relating to the area of assignment.

Must have ability to perform mathematical computations; prepare drawings and tracings to specified scale; do free-hand drawing and lettering, learn the specialized techniques and procedures characteristic of the area of assignment.

DRAFTING TECHNICIAN V

8G.609

Duties Summary:

Under general supervision performs fairly complex drafting work in an area of specialization and performs other duties as required.

Distinguishing Characteristics:

This is the qualified journeyman level for recurring, standardized drafting assignments, where incumbents are expected to perform all but the most complex and difficult drafting work in a specialized area. Assignments at this level are usually of a recurring nature, and the drafting technician utilizes directly relevant procedures, precedents and guidelines in accomplishing them; where assignments differ significantly from those previously encountered, the supervisor suggests the method of approach to be used, periodically appraises the progress of the assignment, and furnishes additional advice as needed. At this level, the drafting technician is usually considered a specialist in an area of drafting and is expected to know the special techniques, terminology, practices and regulatory issuances typical of that specialized area. Work assignments at this level require that the drafting technician make extensive use of standardized tables, manuals, and regulatory and procedural issuances, and search out and complete special purpose data as needed. Personal work contacts are similar to but

more extensive than those at previous levels, especially in positions requiring field investigations, which may require contacts with contractor or consultant personnel to give and obtain information.

Examples of Duties:

The following are illustrative only and not all-inclusive:

Drafting Technician (Engineering) - Under the general supervision of higher-level drafting technician or engineer, compiles engineering data and information for preparation or revision of drawings and maps or for record and statistical purposes; prepares detailed working maps, plans, systems networks and drawings for planning, design, construction and/or maintenance of highways, airports, harbors or other structures and facilities such as pipelines, pumping, drainage and sewage facilities, water tanks, retaining walls, etc.; plots center lines, topography, cross sections, profiles, property and rights-of-way boundaries; makes mathematical computations of distances, quantities, angles, curves, areas and traverses; modifies engineering drawings, computations and tracings; may make field investigations to obtain supplementary data.

Drafting Technician (Architectural) – Works under the general supervision of a higher-level drafting technician or architect; does architectural drafting, sketching and computation in the preparation of scaled architectural drawings and working plans for the construction, alteration and/or repair of buildings and structures of minor complexity; drafts floor plans, elevations, cross sections and detailed structural parts including foundations, footings, floorings, beams and columns, floor joists and roof trusses; assists with preparation of specifications, including material and cost estimates; makes field examinations to obtain measurements and other data, and makes field sketches required for the design or alteration of buildings and similar structures; may compute grade elevation from contour plans prepared by surveyors; draws layouts for plumbing and sewer systems, and for electrical wiring and lighting systems; makes physical inventory of existing buildings for use in planning and development projects; prepares sketches, perspective drawings, maps, graphs and charts for illustrative purposes; indexes and files plans and other documents.

Drafting Technician (Structural) – Under the general supervision of a higher-level drafting technician or structural engineer, performs drafting duties in the preparation of construction plans for such structures as bridges, separation structures, culverts, tunnels, retaining walls, pedestrian facilities and other structures on highways; following rough draft sketches, verbal and written instructions, and technical manuals of standard practice, makes scaled drawings of sections of the component parts of a structure,

showing dimensions, elevations and size, and showing spacing and exact location of reinforcing steel in reinforced concrete structures, and showing welded or riveted connection details in structural steel drawings; computes quantities of concrete, reinforcing steel, structural steel, timber, structural excavation and other bid items according to specification requirements; performs other incidental duties, such as preparing graphs, charts, diagrams or tables from rough sketches, selecting appropriate scale and drawing standard details of bridges and other structures and filing of plans, records, and other data.

Drafting Technician (Cartographic) – Exercises drafting skill and cartographic knowledge in the preparation of new and revised maps and charts, such as tax maps, land-use maps, topographic maps, etc.; in a tax maps function, drafts changes on tax maps in accordance with instructions noted on land transfer documents which have been reviewed and abstracted by supervisors; may personally analyze moderately difficult land transfer documents to determine changes that should be made to tax maps records, such as changes in boundaries, land area, dimensions, location and ownership; following pre-determined scale, plots new subdivisions from sources such as file plans, land court maps, descriptions, deeds, etc., and performs related computations; retraces worn tax maps; accompanies supervisor on field trips to investigate and clarify problems of ownership, boundary, descriptions and similar data; may conduct title searches in files, legal documents and records, maps, etc., of other agencies or departments; or under the general supervision of a cartographic drafting technician of higher level, drafts a variety of topographic and other maps ranging in difficulty from those involving relatively limited data to those containing congested features; plots triangulation traverse stations, main property boundaries, contours, physical land features and man-made objects to maps, from information in field notes, land transaction documents, existing maps and other land or tax records; reduces and enlarges maps to required scale; makes final tracings of maps; indexes, registers and files maps and other records.

Knowledge and Abilities Required:

In addition to the knowledge and abilities required at the next lower level, this level requires:

A good knowledge of the drafting techniques, practices, instruments and equipment used in the area of assignment; and a knowledge of related standard terminology, sources of information and regulatory issuances.

The ability to interpret and apply general instructions and guides in the performance of drafting assignments; use conventional and special tools, instruments and equipment and perform mathematical computations relating to the area of assignment or specialization; deal effectively and tactfully with others.

DRAFTING TECHNICIAN VI

8G.610

Duties Summary:

Individually performs complex drafting work involving a high level of drafting skill in an area of specialization; may serve as team leader for a small group of drafting technicians of lower level; and performs other duties as required.

Distinguishing Characteristics:

Drafting technician positions at this level are distinguished from those at the previous level by a marked increase in the extent of authority and independent responsibility for planning the method of approach of graphic portrayals so as to complement most effectively the information contained in specifications or descriptions. Drafting technicians at this level are expected to plan and develop their work with a minimum of supervisory assistance; they frequently work in situations where supervisory assistance is not readily available and where the review of completed work is by design originators who verify the drawings for consistency with their prior engineering or architectural determinations. Thus, while specific duties are in many respects similar to those found at the next lower level, there is a significant increase in the degree of initiative, judgment and originality required by drafting technicians at this level in the independent performance of drafting duties; they may be responsible for developing minor designs or details through application of established design methods and practices, and adaptation of precedent designs for similar situations, and they may recommend minor design changes.

Guides and precedents are similar to those at previous levels, but may require considerable interpretation based on knowledge of the general approach and intent of the design originator and of the various uses which will be made of the completed drawings.

Person-to-person contacts are significant at this level, involving contacts with professional engineers, architects or others to clarify and obtain information, determine design intent, suggest new methods of presentation of data, etc.

Examples of Duties:

The following are illustrative only and not all-inclusive:

Drafting Technician (Engineering) – From basic layouts, preliminary plans or general instructions, prepares maps, plans, systems networks and drawings for use in the planning, design, construction and/or maintenance of highways, airports, harbors, parks, water, sewage and drainage facilities, and other public works structures and facilities; prepares to scale, detail drawings of important engineering construction projects, developing details of design, such as foundations, drainage features and structures, retaining walls, lighting and pavement markings; plots center lines, topography, cross sections, profiles, property and rights-of-way boundaries; checks and reduces field notes and makes mathematical computations of distances, quantities, angles, curves, areas and traverses; prepares detailed quantity estimates from working drawings, of concrete, steel, earthwork, pipes, etc.; makes changes to and revises existing maps and records; reduces and enlarges scaled drawings, maps and plans; may prepare special pictorial presentations, layouts, charts and statistical tables, using various art media, for planning and public informational purposes; makes field investigations to check measurements and obtain supplemental information; may assign work to, instruct and review the work of a small group of drafting technicians of lower level.

Drafting Technician (Architectural) – Working directly with a design architect, prepares complex architectural layouts, plans, specifications and cost estimates for construction, alteration and repair of large buildings and structures; makes field investigations of project site to obtain supplementary information such as checking ground condition for contour, condition of surface, amount of grading required, locating existing water, gas, telephone, electric and sewer service and verifying dimensions and pertinent details; computes grade elevations and contour lines from surveyors' plans; prepares post-contract drawings and cost estimates as required; prepares complete preliminary drawings, working drawings, including plumbing diagrams and layout, and structural drawings when required; prepares complete specification and budget estimates; logs, reviews and checks substitution requests for acceptability, subject to review of staff architect; checks shop drawings submitted by contractors for details and method of construction.

Drafting Technician (Structural) – Following structural computations and design sketches furnished by a structural engineer, drafts construction plans for bridges, separation structures, culverts, tunnels, retaining walls, pedestrian facilities and other structures; arranges and selects structural details following design standards, and makes necessary computations such as grades, loads, structural strength, sizes, weights and clearances, and amounts of concrete, reinforcing steel, structural steel, timber and structural excavation needed; computations are checked for accuracy by higher-level drafting technician or engineer; prepares revised plans for structural changes in the field and plans for repair to existing structures; computes cost data for structures for future estimating purposes and may assist other drafting technicians with making graphs, tables, charts and standard details, and filing of plans and other data; may assist with the training and supervision of lower-level drafting technicians.

Drafting Technician (Cartographic) – Under very general supervision, with considerable latitude for independent action, prepares a variety of land maps requiring a high level of drafting skill and cartographic knowledge. The following are examples of work situations for Drafting Technician (Cartographic) at this level: (1) in a land survey function, has individual responsibility for the preparation, correction and verification of land court and file plan maps, requiring a high level of cartographic skill and a background knowledge of land court rules, regulations and procedures; drafts final original and subdivision maps of land court applications and consolidations of parcels of land in preparation of condemnation or exchange proceedings; checks, verifies, and makes corrections and amendments to existing land court and file plan maps; drafts preliminary and final right-of-way maps used for project agreements with the Bureau of Conveyance for appraisals, negotiations, acquisition and condemnation of rights-of-way; reduces and checks field survey notes, and makes related computations, and plots data on worksheet showing main property boundaries, traverse stations, offset stations, ties, contours, physical land features and man-made objects; enlarges or reduces maps by scale, using pantograph, plotting machine or calibrated dividers; may check descriptions and maps prepared by land surveyors for accuracy of computations and of land titles and descriptions; drafts, traces or colors maps for political, illustrative or other purposes, and may supervise several lower-level drafting technician in preparation of worksheets and final tracing of maps; and in the indexing, registering and filing of maps and other records; or (2) in a tax maps office, supervises and participates in the analysis and interpretation of land transfer documents, and the preparation and revision of tax maps in an assigned division of the tax system. Reviews data reflecting changes in land boundaries, areas, ownership and titles, and assigns drafting technicians to record and plot such changes on tax maps; plans and prepares basic worksheets for new and revised maps, determines map boundaries, scales and future additions, and plots or assigns to lower-level drafting technician for plotting; conducts extensive searches of

land transaction documents to verify land ownership, interest, title, and other data, and may conduct field trips to obtain additional information on land descriptions or ownership; makes computations such as computing coordinates and adjusts magnetic surveys to fit modern surveys; assigns new tax keys and makes reports to the district tax assessor of the changes; answers oral and written inquiries from interested parties on matters relating to land ownership, boundaries and areas for the assigned tax division; assigns work to one or two lower-level drafting technicians and reviews work performed for accuracy and completion of assignments.

Knowledge and Abilities Required:

In addition to the knowledge and abilities required at the next lower levels, this level requires:

A thorough knowledge of the conventional and special drafting techniques, practices, instruments and equipment used in the area of specialization; a good working knowledge of related standard terminology, regulatory issuances and requirements, and sources of information.

The ability to relate and apply the above knowledge to the solution of problems and completion of drafting assignments; the ability to instruct, review the work of lower-level drafting technicians, and to deal tactfully and effectively with others.

DRAFTING TECHNICIAN VII

8G.611

Duties Summary:

Supervises a small group of drafting technicians (e.g. 5 to 8), performing highly skilled and complex drafting work characteristic of the VI level, or a larger group (e.g. 10 or more) of drafting technicians performing more standardized and routine drafting work characteristic of the II to V levels; personally performs the most difficult and complex drafting work of the unit; and performs other duties as required.

Distinguishing Characteristics:

A drafting technician at this level is typically a supervisor with responsibility for planning, scheduling, assigning and reviewing the work of an organizational segment of drafting personnel. Work performed individually by the incumbent characteristically requires study, analysis and consideration of several possible courses of action,

techniques, general layouts or designs, and selection of the most appropriate and generally requires some adaptation of precedent designs, plans or techniques. A drafting technician at this level works under the general direction of an engineer, architect or administrative employee; assignments which involve concepts and methods familiar to the incumbent are received in terms of the objectives to be achieved and without explicit instructions as to methods or procedures; on unusual or unprecedented problems, the supervisor furnishes specific instructions and assistance; completed work is checked for technical adequacy. Originality and judgment are required in independently planning the details to accomplish assignments governed by established procedures, utilizing reference sources, selecting and making minor modifications in designs, procedures, methods, equipment or instruments, analyzing and interpreting technical data, regulatory issuances, and/or legal documents and descriptive background information necessary for completion of assignments. Guides are essentially the same as at the previous level, but the drafting technician at this level exercises progressively more independence in the selection, interpretation and application of guides to assigned projects. The drafting technician at this level must also refer frequently to State and departmental regulatory material, technical directives, and to previous reports, plans and specifications, and the drafting technician must acquire and demonstrate a good knowledge and understanding of them.

Personal work contacts are significant at this level and include contacts within the organization and with other departments and agencies to exchange information and to coordinate the work of the organizational segment with professional design and engineering functions or with other governmental functions; in positions involving field surveys and investigations, contacts with contractor personnel, consultants and with the public may be involved.

Examples of Duties:

Positions at this level include the following typical supervisory duties irrespective of the area of specialization or assignment:

Supervises and works with a group of drafting technicians of lower level in an area of specialization; schedules, lays out and assigns work to subordinates, giving instructions as to work methods and procedures, reviewing work in progress and on completion for accuracy and adequacy, and coordinating work of the organizational segment with other units or functions. Problems of an administrative nature, such as those involving budgetary or policy matters, as well as technical problems where no precedents exist, are referred to the superior. Some supervisory positions at this level have personnel management responsibility, such as recommending personnel changes,

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initiating requests for personnel actions, and handling disciplinary problems; in other cases, the supervisory responsibility is as a working supervisor over the functional and technical aspects of the work with personnel management responsibilities retained at a higher supervisory level. Personally performs the more complex drafting work, including minor design, research relating to drafting assignments and making field investigations to obtain or verify information; prepares technical reports and correspondence.

Knowledge and Abilities Required:

In addition to the knowledge and abilities required at previous levels, this level requires:

A good knowledge of regulatory issuances, including procedures, policies and legal requirements, and sources of information relating to the area of assignment; some practical knowledge of the principles and practices of the related engineering or architectural field.

Ability to select most appropriate of available guides and progressive ability to recognize limits of selected methods and techniques and to recommend deviations. Must also have the ability to carry out simple design projects under general supervision, make cost estimates, interpret plans and specifications, and develop specific work details within the framework of established methods and practices; supervise and work effectively with others.

DRAFTING TECHNICIAN VIII

8G.612

Duties Summary:

Supervises a large group of drafting technicians (e.g. 12 to 20), through subordinate supervisors, doing a variety of drafting work in a large drafting section or centralized drafting pool; and performs other duties as required.

Distinguishing Characteristics:

Incumbents of this class work under the general administrative and technical supervision of a professional engineer, architect or administrative personnel of higher level, who gives assignments in terms of board, general objectives, and provides advice and assistance as needed on unusual, critical or highly technical problems, such as those requiring significant deviations from standard drafting practices, or where

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distinctly new criteria or techniques are involved. Methods employed are seldom reviewed, but review is made for technical adequacy, for conformance to established policies and for adherence to completion and cost schedules. The same guides are available at this level as at preceding levels and consist of pertinent regulatory material, established policies and procedures, plans and specifications, technical manuals, drawings, manufacturer's catalogs, and precedent situations. Originality and judgment are required in the effective application, interpretation, adaptation and correlation of pertinent guide material, precedent situations, and own background of experience to organize, plan and guide the work efforts of subordinates, to coordinate and integrate personnel, management and technical functions of the organizational unit with those of other organizational units or functions, and to make recommendations on such matters as the workability of ideas and improvement in methods and equipment. Personal work contacts may be extensive at this level, to exchange information and coordinate the work of the unit with that of personnel in related activities, with design architects or engineers, or with consultants or contractor personnel.

Examples of Duties:

Positions at this level include the following typical supervisory duties irrespective of the area of specialization or assignment:

Plans and directs the work of a large section of subordinate personnel engaged in a wide variety of specific drafting projects to which established methods and techniques are directly applicable, including drawings, maps, sketches, charts, graphs, plans and other graphic applications or segments of a broad, complex project requiring special techniques or unusual graphic presentations or involving design subject matter where features of the design differ significantly from precedent designs; problems of a highly technical nature are referred to professional personnel; makes work assignments, outlines requirements, furnishes general instructions and determines priorities and work schedules; reviews work in progress and on completion for technical adequacy, accuracy of calculations and quality of workmanship; coordinates the activities of the organizational segment with the professional engineering or architectural, and/or the administrative functions of the department; may assist with such administrative functions as preparing budgets, planning procedures, policies and organizational structures; performs such personnel management functions as planning training programs for new employees, evaluating work performance, approving leave, recommending personnel actions and handling disciplinary problems; may personally perform the more difficult and technical duties of the unit; makes recommendations as to the new techniques, equipment or instruments, and the most effective and

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appropriate methods of graphic presentation; prepares technical and administrative reports and correspondence.

Knowledge and Abilities Required:

In addition to the knowledge and abilities required at the next lower level, this level requires:


A thorough knowledge of regulatory material, established procedures and policies, pertinent precedents and sources of information relating to the area of assignment; knowledge and understanding of new methods, equipment and techniques in the drafting specialization, and a general knowledge of related professional engineering or architectural principles and practices; knowledge of the principles and practices of supervision.

The ability to visualize objectives and analyze problems, to independently locate, select and apply established guides, choosing the best alternative where there are several possible methods or precedent designs; plan, coordinate, evaluate and review the work of subordinate personnel; establish and maintain effective working relationships with others; prepare technical reports and correspondence.

Due to the transfer of authority to the Department of Education to administer its own Civil Service System pursuant to Act 51 Session Laws of Hawaii 2004, this is an adoption of the class specifications for the Executive Branch Civil Service classes DRAFTING AID II and DRAFTING TECHNICIANS III, IV, V, VI, VII & VIII by the Department of Education Civil Service system.

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EFFECTIVE DATE: JUL - 1 2005


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