



STATE OF NEVADA
Department of Administration
Division of Human Resource Management

CLASS SPECIFICATION

<u>TITLE</u>	<u>GRADE</u>	<u>EEO-4</u>	<u>CODE</u>
CARTOGRAPHIC/GRAPHICS TECHNICIAN IV	34	C	6.361
CARTOGRAPHIC/GRAPHICS TECHNICIAN III	31	C	6.364
CARTOGRAPHIC/GRAPHICS TECHNICIAN II	28	C	6.366
CARTOGRAPHIC/GRAPHICS TECHNICIAN I	26	C	6.368

SERIES CONCEPT

Cartographic/Graphics Technicians produce maps which are geographic representations facilitating a spatial understanding of objects, concepts, conditions, processes or events in the world; provide illustrations for publications, presentations and grant applications/reports; and create manual covers, forms, charts, graphs and other graphic materials.

The Cartographic/Graphics Technician series is distinguished from the Photogrammetrist/Cartographer series by the types of maps and other products produced. Cartographers in the Photogrammetrist/Cartographer series perform map compilations based on horizontal and vertical positions which use completed field survey files to develop base maps.

Meet with the project requestor to determine the layout, scale, projection, and end use of the requested materials; research data from government agencies and other sources to obtain hardcopy and/or digital base maps and feature data to compile information such as road networks, legal subdivision lines, State and county lines, boundaries, township and range data, drainage, and related data; research historical records and related data to ensure historical data is properly placed on the map/publication; plot data on the map in accordance with agency and United States Geological Survey (USGS) mapping standards and recognized methods for display of cartographic information.

Compile/create and edit publications, forms, digital images and other information using desktop publishing, illustration software and graphics techniques, and Web-based images; prepare data for final output including writing specifications for document and photographic duplication, and coordinating distribution of project materials.

Design and create multimedia displays using related software and equipment for presentations, videos, public information meetings, and court and legislative hearings.

Design and produce displays and create illustrations needed to clarify and amplify technical information for publications, displays and grant applications/reports by computer-aided drawing, desktop publishing, hand drafting, pen and ink drawing, painting in various media, and photography; scan photographs and slides and perform extensive digital enhancement and repair of images for use in printed and digital products.

Design and produce slides for presentations using a computer, various illustrating and slide-making software, computer-operated slide-making camera, and related equipment.

Research and develop new routines and processes to translate computer files across different platforms; maintain files of projects, publications, and other related digital information; maintain computer and peripheral hardware and software as required.

Perform related duties as assigned.

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CLASS CONCEPTS

Cartographic/Graphics Technician IV: Under general direction, incumbents perform the full range of duties in the series concept and serve as a first-line supervisor for lower level technicians including providing work direction and evaluating performance, coordinating projects with other divisions and the requesting party, and tracking project workload and completion dates.

Prepare, justify, implement and monitor the division/section budget and submit recommendations concerning personnel, equipment and supplies needed to ensure services are provided efficiently and effectively; prepare project/product cost estimates and billing statements.

Cartographic/Graphics Technician III: Under direction, incumbents perform the full range of the duties in the series concept at the journey level.

Cartographic/Graphics Technician II: Under general supervision, incumbents continue to receive training and gain experience in performing the duties in the series concept. Incumbents may progress to the journey level upon meeting the minimum qualifications and with the approval of the appointing authority.

Cartographic/Graphics Technician I: Under close supervision, incumbents receive training in the performance of all or part of the duties in the series concept. This is the entry level in the series. Incumbents may progress to the next level upon meeting the minimum qualifications and with the approval of the appointing authority.

MINIMUM QUALIFICATIONS

INFORMATIONAL NOTE:

- * An Associate of Applied Science degree in computer graphics, multimedia, geography, geology or closely related field may be substituted for one year of the required experience.

CARTOGRAPHIC/GRAPHICS TECHNICIAN IV

EDUCATION AND EXPERIENCE: Graduation from high school and five years of progressively responsible cartography and graphic arts experience which included writing specifications for document and photographic duplication; **OR** one year of experience as a Cartographic/Graphics Technician III in Nevada State service; **OR** an equivalent combination of education and experience. (*See Informational Note*)

ENTRY LEVEL KNOWLEDGE, SKILLS AND ABILITIES (required at time of application):

Detailed knowledge of: principles of graphic art and cartographic drafting, including the use of drafting equipment and symbols, nomenclature, and sources of information; desktop publishing systems and computer programs related to the field of graphics, illustration and drafting. **Ability to:** write specifications for offset printing, imaging and reproduction projects; coordinate projects and major assignments; negotiate and exchange ideas, information, and opinions with others to formulate policies and/or arrive jointly at decisions, conclusions, or solutions as part of a team; *and all knowledge, skills and abilities required at the lower levels.*

FULL PERFORMANCE KNOWLEDGE, SKILLS AND ABILITIES (typically acquired on the job):

Working knowledge of: offset printing, imaging and reproduction methods; State law and agency policies and procedures applicable to personnel management, budget and the division/section. **Ability to:**

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MINIMUM QUALIFICATIONS (cont'd)

CARTOGRAPHIC/GRAPHICS TECHNICIAN IV (cont'd)

FULL PERFORMANCE KNOWLEDGE, SKILLS AND ABILITIES (cont'd)

organize material, information and resources in a systematic way to optimize efficiency and minimize duplication of effort; train, supervise and evaluate the performance of assigned staff; manage space, equipment and material resources and prepare justifications for acquisitions; refer information to different levels of management as appropriate; analyze production costs to meet budget guidelines; develop and justify division/section budget; establish and maintain cooperative working relationships with agency and division management, vendors, suppliers and others. **Skill in:** making oral group presentations to provide information and training.

CARTOGRAPHIC/GRAPHICS TECHNICIAN III

EDUCATION AND EXPERIENCE: Graduation from high school and four years of related experience, three of which included performing cartography work and experience in one or more of the following: computer-based desktop publishing, graphic arts, mapping or drafting; **OR** an Associate of Applied Science degree in computer graphics, multimedia, geography, geology or closely related field and three years of experience as described above; **OR** one year of experience as a Cartographic/Graphics Technician II in Nevada State service; **OR** an equivalent combination of education and experience. (*See Informational Note*)

ENTRY LEVEL KNOWLEDGE, SKILLS AND ABILITIES (required at time of application):

Working knowledge of: USGS mapping standards; geodesic principles and how the curvature of the earth affects a flat map; typography and copy fitting units of measure in order to design projects; methods, materials and techniques used in artistic design and graphics; desktop publishing software and techniques. **Ability to:** work independently to create colorful, pleasing and informative displays using computer equipment and related software; type sufficiently to prepare forms and reports with accuracy; transcribe information into a form which meets the needs of the agency; create manual covers, charts, graphs and other graphic materials; conduct research and obtain information needed for projects; *and all knowledge, skills and abilities required at the lower levels.*

FULL PERFORMANCE KNOWLEDGE, SKILLS AND ABILITIES (typically acquired on the job):

Working knowledge of: various printing processes and the best format and medium for reproduction; complete mapping process including various materials to produce full colored maps. **General knowledge of:** sources of information within the organization for needed information. **Ability to:** meet with project requestors regarding the type, scope and timelines for projects and products; determine what information and approach is pertinent to specific requests for graphic and/or cartographic materials; determine areas to be photographed for projects and the appropriate scale; interpret maps and aerial photographs with sufficient accuracy to correctly identify features; troubleshoot problems within the computer system.

CARTOGRAPHIC/GRAPHICS TECHNICIAN II

EDUCATION AND EXPERIENCE: Graduation from high school and three years of related experience, two of which included performing cartography work and experience in one or more of the following: computer-based desktop publishing, graphic arts, mapping or drafting; **OR** an Associate of Applied Science degree in computer graphics, multimedia, geography, geology or closely related field and two years of experience as described above; **OR** one year of experience as a Cartographic/Graphics Technician I in Nevada State service; **OR** an equivalent combination of education and experience. (*See Informational Note*)

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MINIMUM QUALIFICATIONS (cont'd)

CARTOGRAPHIC/GRAPHICS TECHNICIAN II (cont'd)

ENTRY LEVEL KNOWLEDGE, SKILLS AND ABILITIES (required at time of application):

Working knowledge of: principles of graphic arts and cartographic drafting, including the use of drafting equipment and symbols, nomenclature, and sources of information; desktop publishing systems and computer programs related to the field of graphics, illustration and drafting; metric system and United States customary units of measurement. **General knowledge of:** ability to convert map measurements and plot grids in metric and USGS mapping standards; geodesic principles and how the curvature of the earth affects a flat map. **Ability to:** produce accurate materials suitable for publication; perform tasks and follow through on assignments; perform effectively under conditions of fluctuating workloads to meet established time frames; *and all knowledge, skills and abilities required at the lower level. (See Informational Note)*

FULL PERFORMANCE KNOWLEDGE, SKILLS AND ABILITIES (typically acquired on the job):
(These are identical to the Entry Level Knowledge, Skills and Abilities required for Cartographic/Graphics Technician III.)

CARTOGRAPHIC/GRAPHICS TECHNICIAN I

EDUCATION AND EXPERIENCE: Graduation from high school, one year of experience performing computer-based desktop publishing and one year of experience performing graphic arts, mapping or drafting tasks; **OR** an Associate of Applied Science degree in computer graphics, multimedia, geography, geology or closely related field; **OR** an equivalent combination of education and experience. *See Informational Note)*

ENTRY LEVEL KNOWLEDGE, SKILLS AND ABILITIES (required at time of application):

Working knowledge of: basic math skills; metric system and United States customary units of measurement. **General knowledge of:** computer-aided drafting, graphic arts, photography, mapping and desktop publishing. **Ability to:** perform repetitive work according to established procedures; add, subtract, multiply and divide whole numbers, fractions and decimals; compute ratios and percentages. **Skill in:** communicating effectively both orally and in writing; establishing and maintaining cooperative working relationships with co-workers and the public.

FULL PERFORMANCE KNOWLEDGE, SKILLS AND ABILITIES (typically acquired on the job):
(These are identical to the Entry Level Knowledge, Skills, and Abilities required for Cartographic/Graphics Technician II.)

This class specification is used for classification, recruitment and examination purposes. It is not to be considered a substitute for work performance standards for positions assigned to this class.

	<u>6.361</u>	<u>6.364</u>	<u>6.366</u>	<u>6.368</u>
ESTABLISHED:	7/1/93P	7/1/93P	7/1/93P	7/1/93P
	8/31/92PC	8/31/92PC	8/31/92PC	8/31/92PC
REVISED:	10/15/97R	10/15/97R	10/15/97R	10/15/97R
	9/10/99PC	9/10/99PC	9/10/99PC	9/10/99PC
REVISED:	12/19/03PC	12/19/03PC	12/19/03PC	12/19/03PC