

HIGHWAY PHOTOGRAMMETRIC TECHNICIAN III

DESCRIPTION: Under limited supervision coordinates photogrammetric work performed by consultants; performs independent technical photogrammetric tasks on roadway surveys; performs related work as required.

EXAMPLES OF WORK: (A position may not be assigned all the duties listed, nor do the listed examples include all the duties that may be assigned.)

Works with the agreements coordinator to prepare roadway survey contracts by writing the description for mapping limits, the survey scope-of-work and updating the planimetric mapping guidelines and exhibits.

Determines what is needed and directs the preparation and assembly of photogrammetric survey materials for use of Nebraska Department of Roads (NDOR) consultants.

Prepares estimate of time required to perform photogrammetric surveys.

Issue written report on findings of the review of consultant files; rates consultants on quality of contract work.

Responsible for preparing and maintaining project survey records, reports and delivery transmittals.

Uses the aerial analytical triangulation program to compute supplemental control points for stereomodels; analyzes results for best fit to ground control coordinates.

Using a Digital Terrain Modeling program evaluates the accuracy and completeness of compiled survey elevation data by creating a Triangulated Irregular Network and contour map.

Responsible for making "back-up" file(s), on tape or other media, of each map and data file recorded during compilation of the roadway survey.

Evaluates stereo photography for use in mapping.

Trains technicians in the use of stereoscopic instruments, computer systems and roadway survey procedures.

FULL PERFORMANCE KNOWLEDGE, ABILITIES AND SKILLS REQUIRED: (These may be acquired on the job and are needed to perform the work assigned.)

Knowledge of: photogrammetric methods and their limits; consultant methods and capabilities; project survey records needs; camera, ground control; camera reports; back-up system(s) and method(s);

Ability to: write in structures for new procedures; estimate labor for projects; negotiate; determine needs based on information from scoping meetings; ongoing reports, notebooks, listings and correspondence; visualize the potential of flights.

HIGHWAY PHOTOGRAMMETRIC TECHNICIAN III (continued)

ENTRY KNOWLEDGE, ABILITIES, AND SKILLS REQUIRED: (Applicants will be screened for possession of these through written, oral, performance, and/or other evaluations.)

Knowledge of: principles and techniques of cartography and Photogrammetry as applied to highway engineering; mathematics, including geometry, trigonometry and survey computations; principles of photogrammetry stereo plotter program(s); state plane coordinates; IGRDS and IG94; curve/spiral data; an analytical stereoplotter; ground control points; Data Adjustment Factor (DAF); CAD levels.

Ability to: utilize CAD (microstation) technology in 2 space 3D with stereoscopic instruments and other computer systems; recognize the limits of photogrammetric methods; send and receive files on the network; use Nebraska Traverse Program; understand contract requirements.

Skill in: evaluating results from computations; manipulating files to detect errors in lines, cells, and/or their placement.

JOB PREPARATION GUIDELINES: (Entry knowledge, abilities, and/or skills may be acquired through, BUT ARE NOT LIMITED TO, the following coursework/training and/or experience.)

Any combination of training and/or experience that will enable the incumbent to possess the required knowledge, abilities and skills. A general qualification guideline for positions in this class is high school education or equivalent AND education or experience in photogrammetry.