

HIGHWAY SURVEY ASSISTANT

DESCRIPTION: Under general supervision performs geodetic and cadastral survey duties; 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.)

Operates high-accuracy Global Positioning System (GPS) receivers.

Calculates angles and distances from notes taken in the field.

Locates and copies records within the Department of Roads for survey information, as required.

Drafts final plats on the drafting board with information provided.

Drafts/hand draws corner or control-point tie descriptions from field notes by making a drawing of control-point corner location and by placing pertinent information on the form.

Performs calculations with calculators using trigonometry and geometry for the determination of distances and angles.

Draws preliminary location maps using angles and distance measurements taken from field work.

Inputs Nebraska Geometric Traverse Computations ("Nebraska Traverse") on computer.

Researches survey records, following specific directions of the land surveyor.

Checks and records preliminary geodetic and other surveys such as hydraulic and ROW for completeness and/or accuracy, including alignment, stationing, levels, cross-sections, by using a calculator.

Determines best method and proper tools for excavation; excavates material for location of corners and control points.

Sets tripods, receiver, range poles, and other survey instruments, reflectors, etc. over traverse points, control points or section corners for sights to measure angles and distances necessary, as directed by instrument operator or survey-leader.

Sets ground control for photogrammetric surveys by physically placing monuments.

Assists in locating government land corners, triangulation and benchmarks.

Sets sights for traverse network by setting range poles and tripods.

Sets prism for high accuracy distance measurement.

Runs level rod for precise levels.

HIGHWAY SURVEY ASSISTANT (continued)

Assures all the supplies and equipment are available and ready for use.

Using previously coded data, runs IBM programs to compute traverse runs, threewire levels, electronic distance measurements (EDM), and to identify errors.

Updates Project Scheduling System (PSS) activities at the direction of the activity manager; updates monthly survey status reports; maintains preliminary project files and computer files.

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

Knowledge of: basic land surveying techniques; "Nebraska Traverse"; State Plane Coordinate System; location of survey records within the Nebraska Department of Roads.

Ability to: interpret legal descriptions, determine accuracy of survey by using a calculator; draft survey plats; locate section corners with limited direction; interpret highway plans; download and operate GPS receivers; demonstrate how to run computer programs to train others.

Skill in: accurately measuring and computing angles, distances and elevations; drafting techniques used for survey plats; the use of hand held calculators for computations of survey data; coding and inputting survey data for the computations used by the Registered land Surveyor.

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

Knowledge of: coordinate, trigonometry and geometry principals, basic surveying principles.

Ability to: set up surveying equipment; to operate 75 pound jackhammer; use shovels, picks, and corn knives in a safe and effective manner; read highway plans.

Skill in: using hand held calculators, basic computer operations.

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 civil surveying.

SPECIAL NOTE

A valid driver's license is required.

Some overnight travel may be required.