

HIGHWAY BRIDGE INSPECTOR

DESCRIPTION: Under limited supervision performs inspections and provides condition ratings for steel, concrete, and timber bridges or box culverts in accordance the National Bridge Inspection Standards; inspects bridges and box culverts for the Nebraska Bridge Management System (BMS); perform related work as required.

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

Evaluates each structure for deficiencies and deterioration; determines the applicable non-destructive or destructive tests that should be used.

Conducts ultrasonic testing for flaws in steel welds, plates and bridge pins using pulse echo equipment and the appropriate probes, interprets test indications to determine the severity of flaws.

Locates cracks in welds and plates on bridge girders using dye penetrant and magnetic particle tests; determines limits of the cracks.

Establishes delaminated areas of bridge decks by chain dragging; computes the percentage of delamination.

Locates hollow areas in timber structural members using an Increment Borer or by sounding.

Checks structures for settlement or lateral movement using surveying instruments.

Visually examines the structure to detect deterioration of any material employed in bridge construction.

Records damage and supplements inspection reports by taking pictures and video taping.

Reports and describes the inspection findings orally to engineers and makes detailed written reports, supplemented by sketches.

Operates the Underbridge Inspection Units (Snooper) on girder bridges, truss and other restrictive bridges.

Judges channel integrity, stream meander, scour (both local and general), and channel alignment; makes recommendations to engineers on the need for further analysis.

Rates and documents bridge element deterioration to uniform standards specified in the NBIS and Nebraska Bridge Management System.

Assists in performing and/or provides guidance in some bridge rehabilitation projects, like resetting rockers, deck joint repair and pin replacement.

Inspects collision damage and recommends temporary traffic restrictions required pending a more thorough evaluation.

HIGHWAY BRIDGE INSPECTOR (continued)

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

Knowledge of: hydraulics and electronics of the "Snooper"; "Bridge Inspector's Training Manual"; Nebraska Bridge Management System; all structure types and different details found on the state highway system bridges; where and what to look for on each structure type; materials used in bridge construction and their deterioration characteristics and processes.

Ability to: perform minor repairs to "Snooper"; utilize a lap-top computer; inspect bridges and collect data as specified by Nebraska Bridge Management System.

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

Knowledge of: the behavior of different bridge types and different materials; regulations pertaining to bridge inspection by AASHTO; safety regulations of OSHA; applicable specifications of the American Welding Society and the American Society for Testing Materials.

Ability to: notice signs of distress and know the critical areas in different bridge types.

Skill in: exercising good judgment when dealing with the public, railroad employees, county officials or other NDOR employees.

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 education or experience in bridge inspection, design or construction. A Bridge Inspector certification by NDOR/FHWA is required.

SPECIAL NOTE

Valid Commercial Drivers license is required.

Overnight travel is required.