

STATE OF ARIZONA JOB CODE SPECIFICATION

FLSA:	NEXP	Job Code:	ACV95352
Job Class Code:	820	Salary Schedule:	ANONREG
EEO Category:	03	Grade:	S6
Workers Comp Code:	5506		

Job Code Established:	04/23/84	Effective Date:	
Job Code Revised:	11/30/94	Effective Date:	

JOB CODE SERIES: Transportation Series

JOB CODE TITLE: TRANSPORTATION BRIDGE TECHNICIAN II

HRIS TITLE: TR BRIDGE TECH II

WORK DESCRIPTION: Performs detailing and limited design work of average difficulty utilizing Computer Aided Design and Detailing (CADD) to generate preliminary bridge layouts. Generates bridge construction plans, documents, and the more complex and specialized structural projects. Researches, analyzes, and validates technical engineering data. Performs complex calculations for geometrical configurations, dimensions, and quantities. May act as a lead-worker for lower level staff.

WORK ACTIVITIES: calculates dimensions of land areas, earth forms, circular curves, material quantities and other quantitative measurements, using geometric and trigonometric computations. Operates cadd to construct complex structural engineering detailed drawings. Examines and verifies numeric data and specifications on source documents by recalculating computations, using geometry or trigonometry. Reviews construction plans and verifies that they are in accordance with designated specifications and other requirements. Performs complex mathematical calculations for preliminary bridge geometric design and layout. Reviews and verifies horizontal alignment of bridge in engineering drawings. Reviews and verifies vertical clearance computations of bridges. Develops quantity summaries for bid items for bridge construction (computes quantities of materials or service needed for a construction project). Reviews and approves applicable construction documents including shop drawings. Conducts various preliminary bridge engineering assignments requiring computer engineering application programs. Estimates costs of future construction projects in the planning phase, based on calculations from available data. Participates in post-design activities such as change orders design or construction modifications, and providing technical assistance to construction personnel. Reviews, recommends, and implements corrections to bridge as-built plans. Develops graphics for special project assignments. Attends staff meetings of work unit or section; gives and receives information helpful in work unit or work system operation. Performs a variety of CADD related development tasks. Researches as-builts, construction documents, and bridge maintenance records for specific information. Performs related work as required.

WORK CONDITIONS: No unusual work conditions.

SUPERVISION: Works under the general direction of a first-line supervisor, exercises considerable independent judgment within established parameters and guidelines.

WORK RESULTS/PRODUCTS: Completed preliminary bridge design layouts and final bridge construction plans. Completed bridge quantity calculations. Completed as-built plans.

RESPONSIBILITY: Timely and accurate completion of assigned projects; may act as lead-worker for lower level staff assigned to the work unit. Timely review of shop drawings.

AUTHORITY: Determines the accuracy of all geometric data and quantity calculations. Makes changes, under direction, in preliminary bridge design layouts to conform to standard designs and details.

KNOWLEDGE, SKILLS AND ABILITIES

Knowledge of: bridge standards, policies and procedures; the principles and practices of civil engineering; highway, bridge and drainage engineering concepts and technical applications related to the area of assignment; CADD and personal computer hardware and application software; methods, procedures and techniques used in researching, analyzing and evaluating a variety of engineering data; mathematics, including geometry and trigonometry as it applies to preliminary bridge design layout.

Skill in: operating all CADD and personal computer hardware and software used by the Bridge Group; complete bridge layout, complex detailing and preliminary design techniques.

Ability to: communicate verbally and in writing; research, analyze and evaluate a variety of engineering data.