

STATE OF SOUTH DAKOTA CLASS SPECIFICATION

Class Title: Buildings Engineer II

Class Code: 40892

Pay Grade: GK

A. Purpose:

Designs, reviews, and recommends approval of plans and specifications; and supervises construction of building projects to ensure that plans and specifications comply with generally accepted engineering practices and state laws and that construction projects are built according to plans and specifications.

B. Distinguishing Feature:

Buildings Engineers II are responsible for a major engineering section of an organization, for example, field inspection, construction, or design.

Buildings Engineers I implement a capital improvements plan for an agency or institution.

C. Functions:

(These are examples only; any one position may not include all of the listed examples nor do the listed examples include all functions that may be found in positions of this class.)

1. Performs administrative activities to assist managers with coordination and facilitation of construction, maintenance and repair, and renovation of state facilities.
 - a. Negotiates with consultants, contractors, and equipment suppliers on state building projects.
 - b. Advises physical plant managers at state institutions regarding maintenance, operating procedures, and equipment.
 - c. Assists state institution managers with negotiations for preventive maintenance services provided by privately owner enterprises.
 - d. Advises state agency personnel on building construction and maintenance requirements, preparation of cost estimates for construction, and budgetary requests for special equipment needed for operation and maintenance.
 - d. Conducts bid openings.
 - e. Negotiates contracts with engineers and architects.
 - f. Provides training and instruction to other staff.
2. Performs engineering work and provides engineering direction to others to accomplish assigned projects according to accepted engineering principles and practices and state requirements.
 - a. Designs plans and specifications during preconstruction and construction, including specific purchases of equipment and materials.
 - b. Reviews engineering plans and specifications submitted by consultants, coworkers, or other state agencies for accuracy, completeness, and compliance with applicable codes.
 - c. Performs special engineering assignments.
 - d. Directs inspections and inspects and approves state building projects during construction and after completion for compliance with approved plans and specifications.
 - e. Interprets plans and specifications, building codes, laws, and regulations to contractors, consultants, and other state agencies to ensure that projects are in compliance.
 - f. Negotiates construction change orders, approves testing procedures, and approves pay estimates and final payments to ensure project was constructed according to plans and specifications.

g. Resolves disputes which arise during construction.

3. Performs other work as assigned.

D. Reporting Relationships:

Reports to an Engineering Supervisor or the State Engineer. Does not supervise.

E. Challenges and Problems:

Challenged to ensure that the assigned area of responsibility is properly implemented. This is challenging because it requires the incumbent to be involved in every aspect of the area of responsibility, and decisions made have major impacts on construction projects and budgets. Further challenged to develop effective temporary repairs until funds are available for permanent repairs.

Problems include making adjustments to established construction schedules, forecasting estimates of costs for various types of construction with little prior information, materials, and construction methods that do not meet plans and specifications, structural failures, and changes to projects after the contract is let.

F. Decision-making Authority:

Decisions made include those involving technical design; materials to use for projects; test standards for material tests; whether contractors' work is acceptable; and approval of pay estimates, construction change orders, and final payment to contractors; assessments of liquidated damages; interpretation of building codes and specifications; and whether to waive certain insurance requirements and project forms.

Decisions referred include interpretation of statutes; resolution of disputes among owner, consultant, and/or contractor; which projects should be scheduled; which materials and specifications meet requirements set by state and federal laws; selection of contractors, architects, and consultant engineers; whether to shut down a total project for non-compliance; and scheduling emergency projects.

G. Contact with Others:

Daily contact with architects, consultant engineers, contractors and other state agency personnel to coordinate projects and contracts, check on progress of projects, and provide advice on construction problems; and weekly contact with manufacturers of construction material to acquire materials information, specification performance capabilities, and descriptive data of products.

H. Working Conditions:

When making field inspections, buildings engineers are required to inspect all phases of construction projects including crawl spaces, tunnels and roofs. Prior to completion of construction projects, the areas inspected may be structurally unsafe. Many inspections must be made during adverse weather.

I. Knowledge, Skills and Abilities:

Knowledge of:

- modern principles and practices of mechanical, electrical, or structural engineering;
- soils and geological structure as they relate to structural design;
- building construction;
- building inspection techniques and uniform building codes;
- principles of effective human relations and dealing with the public;
- Federal and state rules and regulations, and department policies and procedures as they relate to facilities management and building construction, maintenance and repair.

Ability to:

- provide work direction to coworkers, other agencies' staff, consultants, contractors, and owners of private enterprises;
- coordinate the work of project teams to accomplish agency objectives in a timely manner;
- assign appropriate priorities to work activities based on organizational goals and situational pressures;
- organize the operations of facilities management within the agency and provide scheduling for all in-house projects to be accomplished within the engineering action;
- prepare complete and concise reports and recommendations on structural engineering problems;
- establish working relationships with coworkers, consultants, contractors, and other agencies' personnel.