

INITIAL KSAPC LISTING

CLASSIFICATION: Senior Structural Engineer

NOTE: Each position within this classification may perform some or all of these KSAPCs.

KSAPC Statements	
Knowledge of:	
K1.	Advanced knowledge of statics and stress analysis as it applies to structural related projects.
K2.	Advanced knowledge of strength, properties and uses of structural materials as it applies to a wide variety of structural related projects.
K3.	Advanced knowledge of specifications and building codes as they apply to buildings and other structures.
K4.	Comprehensive knowledge of project management in order to direct the work of others.
K5.	Advanced knowledge of structural design of buildings and other structures to accurately complete assigned projects.
K6.	Comprehensive knowledge of the use of 3-Dimensional structural analysis software for the design of structural projects.
K7.	Basic knowledge of architectural, electrical and mechanical engineering to properly coordinate all the elements required for a complete building design.
K8.	Comprehensive knowledge of computers and software (e.g., Microsoft Office, AutoCAD, Revit, etc.) to effectively prepare various construction documents, reports, correspondence, spreadsheets, etc.
K9.	Comprehensive knowledge of Federal, State, and Local regulations and standards in order to perform functions essential to the practice of structural engineering at the professional level.
K10.	Advanced knowledge of methods and techniques used to identify existing structural conditions of the project site in order to develop a record of site information at the professional level.
K11.	Comprehensive knowledge of construction costs in order to design a project within the budget.
K12.	Comprehensive knowledge of the methods of organization for proper production and compilation of construction documents.

KSAPCs highlighted in bold text are not currently on the SPB classification specification

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KSAPC Statements	
Ability to:	
A1.	Coordinate the work of others to complete an assignment.
A2.	Observe and determine the quality of structural work in the field to ensure quality control.
A3.	Analyze situations accurately and adopt an effective course of action.
A4.	Prepare and maintain various engineering records, reports, specifications, notes, data, etc. to provide direction, information and recommendations on a wide variety of structural related projects.
A5.	Apply interpersonal and communication techniques to maintain professional relationships with others.
A6.	Interpret building codes and specifications as it applies to a wide variety of structural related projects.
A7.	Use computer assisted tools (e.g. Auto-Cad, Microsoft Office, etc.) in order to produce construction documents.
A8.	Act as a mentor to provide instruction and/or guidance in order to facilitate projects and/or assignments related to structural engineering.
A9.	Communicate effectively in order to exchange and/or provide information and/or direction to others.