JOB FAMILY CONCEPT

The Engineering Professional job family consists of seven levels from engineering technical support to division management. Levels are distinguished by complexity and scope of responsibilities, the degree of specialization, the degree of independent functioning and decision making responsibility, and the level of education or certification required. The engineering job family addresses responsibility for the following:

- Facilities Engineering
- Utilities Engineering
- Project Management
- Contract Management
- Overall Planning and Management of Engineering Activities

Incumbents may perform in one or more of the above areas to support a wide range of engineering activities.

Positions in this family provide engineering expertise, guidance, and technical assistance. This job family covers several areas of engineering expertise including:

- Supporting electrical, mechanical, facilities, or other engineering projects
- Operating and maintaining power plant functions
- Managing the design and construction of code correction projects, capital projects, grant projects, and repair and renewals
- Developing long-range strategic plans for the university's facility and capital improvement needs
- Engineering support to the maintenance and operations divisions
- Overall management and supervision of departmental employees

TYPICAL FUNCTIONS

[Note: A single position may involve one or more of the functions listed, and may include functions not listed.]

- Provide technical engineering support for utilities, maintenance, operations and construction projects
- Serve as a University representative for management of multiple design and construction projects

- Manage project activities to ensure University's interests are protected and to provide efficient, functional, and serviceable facilities
- Provide plant engineering, maintenance, and operations for a power plant
- Maintain owner project schedules, review and monitor schedules of all contracted parties for compliance
- Continuous monitoring and inspection of contractor quality, workmanship, and material selection to ensure compliance with contract documents
- Provide programming, planning, design and construction administration for the development or renovation of University facilities
- Develop project budgets and administer professional design and construction contracts for the timely completion of facilities and projects
- Provide a university environment that is conducive to effective program delivery and administrative support which meets University facility standards and current codes
- Manage the division's capital, deferred maintenance, and contracted maintenance programs

LEVELS AND COMPETENCIES

The primary distinction between levels is reflected in the level descriptors. As levels progress scope, complexity, and degree of independence increase. Higher levels may perform duties of lower levels.

Level 1 **Grade 78**
PCLS: 04001 **Non-Exempt**

Descriptors

Receives direct supervision from a project leader. Performs routine technical tasks requiring application of standard techniques, procedures, and criteria. Update as-built drawings of facilities, maintains and develops PMI systems, develop and maintain information management systems, and monitor systems using complex data acquisition equipment. Provide technical support for the facilities staff on construction and maintenance projects. The typical position for this level is Engineering Technician.

Knowledge, Skills, and Abilities

Knowledge of facilities construction and maintenance methods and techniques. Knowledge of database construction, contract document and record drawing interpretation, website organization/construction, and document tracking systems. Knowledge of facility life safety codes, computer-aided drafting, and application programming.

Experience
Requires experience in facilities maintenance and/or facilities construction, AutoCAD, or similar drafting program.

Education
Two Years of college level education in Engineering, Industrial/Construction Technology, or equivalent education/experience.

Level 2 **Grade 79**
PCLS: 04002 **Non-Exempt**

Descriptors
Receives general supervision from a project leader. Generally works within well defined guidelines. The required exercise of judgment is limited on details of work and in making preliminary selections or adaptations of engineering alternatives. Provide support to project managers, contract managers, and facilities engineers as needed including: inspection of contractor's work for contract compliance, coordinating request for information from contractors or consultants, and reviewing contract submittals. The typical position in this level is Engineering Assistant.

Knowledge, Skills, and Abilities
Knowledge of engineering principles and their application. Knowledge of current building and safety codes, technical specifications, and building standards. Knowledge of construction methods, construction scheduling, cost estimating, contract document and record drawing interpretation, and materials of construction. Proficiency required in computer hardware and software.

Experience
Requires work experience acquired in an entry-level engineering position or appropriate graduate level study.

Education
Bachelor of Science degree in any of the engineering disciplines may be required from an accredited engineering program. Successful completion of Engineering in Training exam within six months of employment may also be required.

Level 3 **Grade 80**
PCLS: 04003 **Exempt**

Descriptors
Work is performed under intermittent supervision. Independently performs most assignments with instruction as to the desired outcome. Receives instructions on specific assignment objectives, complex features, and possible solutions. Provides professional management of engineering and

construction projects. May lead the work of level 1 and 2 engineers. Typical positions in this level are Contract Manager and Construction Inspector.

Knowledge, Skills, and Abilities
Knowledge of policies, principles, practices, laws, legal liabilities, responsibilities, and regulations relating to construction project management for projects valued from several thousand to millions of dollars. Knowledge of current building and safety codes, construction scheduling, cost estimating, and all disciplines of architectural and engineering drawings and specifications.

Experience
Requires developmental experience in an engineering position or equivalent graduate-level education. Demonstrated construction management or facilities/utilities experience preferred.

Education
Bachelor of Science in any of the engineering disciplines or architecture may be required or any combination of applicable advanced education and experience. Certification of education in building code courses, contract law, facilities management, utilities management, and construction courses may be substituted in lieu of a degree. Professional registration in the state of Alaska, or ability to obtain registration within 12 months of employment, may be required.

Level 4 **Grade 81**
PCLS: 04004 **Exempt**

Descriptors
Work is performed under intermittent supervision. Fully competent engineer in the subject matter or the functional areas of the assignments. Plans and conducts work requiring judgment in the evaluation, selection, and adaptation or modification of standard techniques, procedures, and criteria. Analyzes and appraises facts and precedents in making decisions. Typically handles greater scope and complexity projects than level 3. May lead the work of level 1 thru 3 engineers. Typical positions in this level include Sr. Contract Manager, Assistant Facilities Engineer, Assistant Utilities Engineer, and Assistant Project Manager

Knowledge, Skills, and Abilities
Knowledge of policies, principles, practices, laws, legal liabilities, responsibilities, and regulations relating to construction project management for projects valued from several thousand to millions of dollars. Knowledge of current building codes, construction trade codes, construction scheduling, cost estimating, and all disciplines of architectural and engineering drawings and specifications.

Experience
Requires extensive experience to ensure competence.

Education
Bachelor of Science in any of the engineering disciplines or architecture may be required or a combination of advanced education and experience. Certification of education in building code

courses, contract law, facilities management, utilities management, and construction courses may be substituted in lieu of a degree. Professional registration in the state of Alaska, or ability to obtain registration within 12 months of employment, may be required.

Level 5 **Grade 82**
PCLS: 04005 **Exempt**

Descriptors
Work is performed under administrative supervision. Sets standards and establishes procedures. Devises new approaches to problems encountered. Makes decisions independently on engineering problems and methods, and represents the organization to resolve important questions. Keeps supervisor informed of project progress and potentially controversial matters, that may have far-reaching implications. May lead the work of level 1 thru 4 engineers. May supervise a small unit. The typical positions for this level include Project Manager, Facilities Engineer, and Utilities Engineer.

Knowledge, Skills, and Abilities
Extensive knowledge of project programming, project scheduling, educational/research facilities design, engineering or architectural principles, building and life safety, codes, regulations and statutes, contract law, construction specifications and technology. Thorough understanding of project administration. Extensive knowledge of A/E contracting procedures for a public entity.

Experience
Requires experience managing capital improvement projects, including program development, project planning, design, bidding construction and warranty period administration. Experience must include management of projects ranging from several thousand to millions of dollars. Interpersonal and computer skills also required.

Education
Bachelor of Science in any of the engineering disciplines or architecture may be required or a combination of advanced education and experience. Professional registration in the state of Alaska, or ability to obtain registration within 12 months of employment, may be required.

Level 6 **Grade 83**
PCLS: 04006 **Exempt**

Descriptors
Work is performed under general direction. Technical responsibility for interpreting, organizing, executing, and coordinating assignments. Plans and develops engineering projects with unique or controversial problems which impact major company programs. Devises new approaches to problems encountered. Establishes and sets standards for the department. Establishes priorities within department to assure departments main goals and objectives are balanced and on track. Leads and gives assignments to engineers 1 thru 5. May supervise a work unit. The typical

positions for this level include Senior Project Manager, Senior Facilities Engineer, and Senior Utilities Engineer.

Knowledge, Skills, and Abilities
Extensive knowledge of project programming, project scheduling, educational/research facilities design, engineering or architectural principles, building and life safety, codes, regulations and statutes, contract law, construction specifications and technology. Thorough understanding of project administration. Extensive knowledge of A/E contracting procedures for a public entity. Ability to monitor and plan the activities of numerous engineers and projects.

Experience
Requires extensive progressive experience including experience at both the contract and project manager level.

Education
Bachelor of Science degree in any of the engineering disciplines or architecture required from an accredited engineering program. Requires professional registration in the state of Alaska, or advanced degree/experience, or equivalent.

Level 7 **Grade 84**
PCLS: 04007 **Exempt**

Descriptors
Work is performed under long-range administrative direction. Direct comprehensive management of division's capital, deferred maintenance, and contracted maintenance programs including maintaining fiscal control of construction projects funds and budgets. Responsible for overall management and supervision of departmental employees. The typical positions for this level are Director or Division Manager.

Knowledge, Skills, and Abilities
Capable of implementing procurement authority in compliance with State Statutes, UA policy and regulations. Proficient in engineering and architectural standards and practices and both general and specific construction methods. Demonstrated management ability in coordinating staff and analyzing financial data.

Experience
Requires extensive progressive work experience in contract, project, financial, and staff management.

Education
Bachelor of Science degree in any of the engineering disciplines or architecture required from an accredited engineering program. Requires professional registration in the state of Alaska, or advanced degree/experience, or equivalent.