Effective Date: October 12,1997
Modified Effective: March 6, 2005

STATE OF WISCONSIN
CLASSIFICATION SPECIFICATION

ENGINEERING SPECIALIST CLASSIFICATION SERIES

I. INTRODUCTION

A. Purpose of This Classification Specification

This classification specification is the basic authority under s. ER 2.04, Wis. Adm. Code, for making classification decisions relative to positions responsible for providing assistance within the building construction program. Positions allocated to this classification are currently assigned to the Professional Engineering Bargaining Unit per s. 111.825(1)(f)(8), Wis. Stats., as determined by the Wisconsin Employment Relations Commission.

Classification decisions must be based on the "best fit" of the duties within the existing classification structure. The "best fit" is determined by the majority (i.e., more than 50%) of the work assigned to and performed by the position when compared to the class concepts and definitions of this specification or through other methods of position analysis. Position analysis defines the nature and character of the work through the use of any or all of the following: definition statements; listing of areas of specialization; representative examples of work performed; allocation patterns of representative positions; job evaluation guide charts, standards or factors; statements of inclusion and exclusion; licensure or certification requirements; and other such information necessary to facilitate the assignment of positions to the appropriate classification.

B. Inclusions

This series encompasses specialized positions at the Department of Administration (DOA), Department of Military Affairs (DMA), Department of Natural Resources (DNR), and University of Wisconsin (UW) colleges and campuses which devote the majority of their time and are responsible for assisting a project engineer. Positions included in this series must meet the Qualifications prescribed under Section I.C.

C. Qualifications

Specific qualifications for a position will be determined at the time of recruitment. Education required may include an associate degree in building design, a building construction trade area, or the completion of an apprenticeship. Training requirements may include work experience at building construction sites or serving an apprenticeship. Licensure requirements may include specific types of inspector licenses. Knowledge of reading and interpreting blueprints; estimating material and construction costs; interpolation of field data and information from land surveys and performance of drafting and CADDS; engineering theories and practices relative to pavement, utilities systems, and writing specifications may be required. Skill in researching, designing and preparing plans and specifications for structures; conducting on-site investigations to determine existing conditions and preparing plans for remodeling or repair projects; inspecting building projects; performing field surveys, soil borings and analysis; and estimating costs may be required. The amount of knowledge, education, work experience or specific licensure requirements will be based on an analysis of the goals and worker activities of each position.

D. Exclusions

Excluded from this classification series are the following types of positions:

1. Positions that require a Bachelor of Science degree in engineering or equivalent and require a professional engineer responsibility.

2. Positions that do not spend the majority of their time assisting in the construction program area as described herein.

3. All other positions which are more appropriately identified by other classification series.

E. Entrance Into and Progression Through This Series

Employees enter this classification series by competitive examination. Progression to the senior level will occur through reclassification. Progression to the advanced level will occur through some form of competitive examination.

II. DEFINITIONS

ENGINEERING SPECIALIST

Work is performed under close progressing to limited supervision. Positions at this level receive work assignments which have clearly defined objectives; have specific guidelines and instructions available; may involve complex projects from start to finish; and exercise limited discretion in decision making. The level of involvement in any work assignment is based on an assessment of the employees work by the immediate supervisor.

ENGINEERING SPECIALIST-SENIOR

Work is performed under general supervision. This is the objective level for positions which assist in managing complex construction projects. Complex building construction projects include building remodeling and/or additions which typically involve movement and/or the addition of two or three walls, and/or doors and/or windows. Electrical wiring will probably be involved. Roofs and exterior finishes may be involved. Complex Department of Natural Resources construction projects would include walkways, trails, public access facilities including roadways, parking lots, boat ramps, boarding docks, fishing piers and related items, waterfowl impoundment's, ponds channel improvements and water control structures.

ENGINEERING SPECIALIST-ADVANCED 1

Assistant Project Manager - Very Complex Projects: Work is performed under general supervision. This is the objective level for positions which assist in managing very complex building construction projects. Very complex building construction projects include new buildings or major structural changes for additions or remodeling. Electrical wiring, extensive lighting, plumbing, and HVAC will be involved along with foundation work, roofing work, and exterior finishes. A combination of the types of functions listed below must be performed.

A combination of the following types of functions, AS AN ASSISTANT TO THE PROJECT ARCHITECT/ENGINEER, (project planning, production of plans and specifications, material and/or project bids, assistant project manager, and other miscellaneous duties) are performed a majority of the time at the Senior and Advanced 1 levels:

Assist in Project Planning: Discuss project problems or needs with users. Gather factual information to determine and analyze the problems or needs, i.e. the size, dimensions, physical properties, structural requirements. Develop material, labor and time cost estimates. Determine and develop alternative concepts. Determine and recommend the most feasible project solutions and efficient layout for the area, i.e. budget and cost constraints, codes and regulations, building requirements, etc. Receive authorization for funding. Contact vendors or sales representatives for product information. Take measurements and dimensions as needed. **Senior** level: Projects involve complex additions or remodeling. DNR projects include obtaining necessary field data to investigate soil, topographic, climatic, geological, hydrologic, utility and other pertinent existing site specific conditions; developing simulated models to investigate the effects of flood plain; and investigating the effects of bridges, dams, culverts, piers, levees and other water control structures. **Advanced 1** level: Projects involve very complex additions, remodeling, or new buildings.

Assist in production of plans and specifications: Design and draw [may utilize computerized system] detailed project plans and specifications for products, services and installation procedures. Select or assist in the selection of colors, textures, patterns, styles of carpeting, tile, fabric, paint, wood finishes, etc. Develop construction material and equipment specifications. Consult and interpret building, safety, zoning, environmental and university codes and standards. Prepare and consult regarding project architectural working drawings including plans, elevations and details necessary to construction; prepare engineering drawings for plumbing, heating, ventilating, air conditioning, and electrical work. Digitize floor and wiring plans using computerized system. Prepare building files. Update building master plans and input all remodeling projects on plans and files. **Senior** level: Projects involve complex remodeling or additions. DNR projects include preparing plans and specifications for a professional engineer. **Advanced 1** level: Projects are very complex, with only minimal instructions provided by the professional engineer.

Assist in material and/or project bids: Develop construction material and equipment specifications for required contract bidding of purchases. Work with the purchasing work unit to locate sources, coordinate time schedules, review bids to select labor, equipment and/or material to meet and complete required specifications. Recommend and justify contract awards, particularly deviations from project specifications. Develop and consult with project engineer or supervisor regarding bid package including project drawings and specifications. Review contract documents at the time the projects go to bidders. Conduct on-site visits for potential bidders prior to submission of bids; answer questions and supply supplementary information to bidders. After bids have been received and contracts have been approved, arrange pre-construction meeting with contractors and other staff as required; define project limits, problems, etc.; secure parking permits, keys and other items necessary for contractors to proceed; and keep minutes of the meetings. **Senior** level: Develop specifications and contracts, work on bidding process for specific materials required or complex addition or remodeling work. DNR projects include answering questions pertaining to interpretation of plans and specifications, preparing necessary bidding addenda, assisting in the evaluation of bids received, preparing the construction budget, and making recommendations for award of contract. **Advanced 1** level: Work with bidding process for very complex remodeling, additions, or new building projects.

Assistant Project manager: Supervise, schedule, and coordinate work done by outside contractors. Inspect and ascertain that work is being done in strict accordance to drawings, specifications and applicable building codes. Consult with or advise project engineer as to contract interpretations, change orders, work progress, etc. Approve change orders and arbitrate contract disputes on projects designed by this position. Advise contractors through oral and written communication (punch lists, etc.) as to what work is considered either incomplete or not to requirements. Advise project engineer weekly as to job progress, adherence to schedules and unusual occurrences pertaining to project accomplishment. Approve payments to contractors. Receive all maintenance and equipment manuals for all equipment supplied on projects. Submit final reports. Conduct weekly job meetings to set priorities, solve delays and establish new project schedules. Makes

general and specific observations as to quality of work being performed and work that should be done but was not included. Write weekly progress reports. Arrange final project inspection with key personnel, keeping notes on items to be completed, corrected or replaced. Issue written punch lists to contractors indicating remaining work to be completed before contracts can be closed. Keep department records of projects throughout the project life. Ascertain that the contractor has completed the project prior to final payment. Coordinate construction work with State Building Inspectors. **Senior** level: Act as construction project manager for complex additions and/or remodeling projects. DNR projects include attending preconstruction meetings; inspecting construction projects; reviewing and approving cost breakdowns, construction schedules and subcontractor lists; reviewing, correcting and approving in the correction and approval of drawings and material specifications; investigating any problems arising during construction; attending progress meetings; requesting project contract change orders; reviewing contractor requests and certifications for payment; and making final project inspections. **Advanced 1** level: Act as construction project manager for very complex projects.

Miscellaneous: Revise all existing drawings to maintain updated accurate revisions. Produce new master drawings for future planning and other activity use. Reduce new master drawings. Maintain drawing files. Perform Lead Worker functions over student workers, lower level specialists, or technicians. Draft as-built tracings for architectural floor plans, plumbing plans, heating and ventilating plans, electrical plans, and electrical elevator plans. Coordinate the asbestos disposal program by maintaining certification as an asbestos worker; collecting asbestos samples and sending out for testing, contracting asbestos workers to remove asbestos, preparing and implementing respiratory programs, and maintaining asbestos inspection and location records. Assist in the research, investigation, and selection of purchases of various mechanical, electrical and plumbing equipment. Prepare purchase orders. Serve as a resource on such things as roofing, masonry, insulation and related problems and perform roof inspections; determine emergency roof repairs; inspect masonry problems and recommend corrections. Design specifications for maintenance projects bid items such as exterior glass replacement, painting, caulking, and roof repairs. DNR projects would include preparing engineering and economic feasibility studies and preliminary cost estimates for proposed projects; and reviewing plans.

III. ADMINISTRATIVE INFORMATION

This classification series was created effective October 12, 1997, and announced in Bulletin CC/SC-74 to describe positions which perform engineering specialist work. The creation of this classification series resulted from the Governor's Human Resource Reform Commission recommendation to simplify the classification system. This action resulted in the abolishment of the Engineering Specialist classification series (class codes 25001 through 25005). This classification was modified, effective March 6, 2005, and announced in OSER-0059-MRS/SC, to abolish the Advanced 2 allocation that has never been used.

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