ADMINISTRATIVE ASSISTANT I
Code 4836 Salary Grade 0008
ADMINISTRATIVE ASSISTANT II
Code 4837 Salary Grade 0010

I. CLASSIFICATION DEFINITION:

This is secretarial/administrative support work involving responsibility for facilitating general departmental management details for an administrative official. Employees perform a variety of complex secretarial/administrative duties requiring a comprehensive knowledge of the agency's programs and the exercise of independent judgment and action, including the making of frequent decisions in accordance with delegated powers from the supervisor. Primary emphasis is placed upon relieving the supervisor of operational details by summarizing data into concise form, and preparing correspondence and technical or confidential reports. Employees screen visitors who are obtaining or reporting information, and sometimes represent the supervisor in meetings. Employees may be authorized to establish and maintain methods and procedures which will produce results in accordance with agency standards. Employees may exercise supervision of lower level support staff.

Employees receive general supervision from an administrative official and are expected to exercise considerable tact, discretion, and judgment in all areas of work. Distinctions among the administrative assistant levels are based upon application of the Position Appraisal Method factors, copies of which can be found in the Human Resources' section classification unit.

II. MINIMUM QUALIFICATIONS:

Education: Graduation from a standard high school or possession of a high school equivalency certificate.

Experience: One year (I) three years (II) of experience in secretarial or clerical work involving typing or stenographic duties.

Notes:

1. Applicants may substitute additional secretarial or clerical experience on a year-for-year basis for the required education.

2. Applicants may substitute an Associate of Arts degree with a major in Secretarial Science from an accredited college for up to two years of the required experience.

3. U.S. Armed Forces military service experience as defined under the Minimum Qualifications may be substituted for the required education and experience on a year-for-year basis.

Licenses, Registrations, and Certificates:

Not Applicable

Special Requirements

Demonstrated ability to accurately type on a keyboard of a personal computer at a minimum of forty words per minute may be required, depending on the specific requirements of the position.

III. EXAMPLES OF WORK: (Examples are illustrative only)

Provides secretarial support to one or more administrative staff or officials;
Types or prepares manuscripts, correspondence, statements, tables and forms from corrected copy, rough draft or oral detailed instructions;
Types or prepares and may format materials using word processing or other software on the personal computer;
Maintains important or confidential records, employees' work schedule records, expense accounts and office supplies;
Composes correspondence dealing with routine and occasionally complex subject matter;
Gathers materials from a variety of sources for articles, reports, or speeches;
Interviews callers and prospective employees, answers questions, makes and cancels appointments for superiors, and processes confidential matters;
Opens, sorts, and reads incoming correspondence, proofreads and signs outgoing letters of a routine nature;
Reads reports and summarizes information to facilitate review by the supervisor;
Prepares expense accounts or statistical records and reports;
Reviews correspondence for supervisor's signature noting format, grammar, and completeness;
Maintains confidential personal correspondence files and other records, and report files;
Examines, checks, and verifies complex reports and correspondence for the supervisor's signature for completeness, propriety, adequacy, and accuracy;
Completes special forms and summaries at the request of the supervisor, frequently checking against a variety of records to secure complete and accurate information;
Transcribes dictation from a transcribing machine, speed writing or stenotype notes, and types from copy material of a technical and confidential nature;
May take and transcribe dictation and type from copy material of a confidential and technical nature;
May supervise employees performing typing, stenographic, and related clerical duties;
Performs other related duties.

IV. REQUIRED KNOWLEDGE, SKILLS, AND ABILITIES:

Knowledge of office practices, procedures, and equipment;
Knowledge of business English, spelling, punctuation, grammar, and arithmetic;
Knowledge of personal computers, word processing, and various software programs;
Skill in typing on a keyboard of a personal computer at a minimum speed of 40 words per minute may be required, depending on the specific requirements of the position;
Knowledge of the principles and procedures of office management;

Ability to understand and follow complex instructions;
Ability to compose business correspondence;
Ability to deal with the public in an effective and courteous manner;
Ability to establish and maintain effective working relationships with supervisors, subordinates, associates, representatives of other organizations, and the general public;
Ability to keep complex clerical records and prepare accurate reports from various and complex statistical, accounting, or related records;
Ability to plan, organize and execute complicated and continuing assignments without instructions or reviews;
Ability to maintain complex clerical data and prepare accurate reports;
Ability to make decisions in accordance with established laws, rules, regulations and apply departmental policies to daily work problems;
Ability to deal with public relations problems courteously and tactfully;
Ability to design, install and maintain clerical methods, forms, and procedures under general supervision;
Ability to operate office and business machines;
Ability to work independently on complex and confidential secretarial/administrative tasks.

Date Revised: July 27, 2017

APPROVED: _____
Director, Office of Human Resources

ADMINISTRATIVE ASSISTANT III
Code 8403 Grade Band 0012
ADMINISTRATIVE ASSISTANT EXECUTIVE
Code 8404 Grade Band 0014

I. CLASSIFICATION DEFINITION:

This is administrative support work providing complex secretarial/administrative services in a major office or administration within MDOT. Employees typically function as the personal assistant to an administrative or executive level official. Work of this classification is characterized by the variety of complex assignments requiring a thorough knowledge of the organization and programs under the supervisor's jurisdiction, and an extensive knowledge of the supervisor's policies, views and special interests. Primary emphasis is placed upon relieving the supervisor, by exercising independent judgment and action, of all administrative problems not requiring major deviations from established policy or procedures otherwise requiring the supervisor's direct attention. Employees screen visitors who are obtaining or reporting information, compose a variety of correspondence for the supervisor's signature, summarize data into concise form, and establish office procedures. Employees may supervise lower level support staff.

Employees receive general supervision from an administrative official and are expected to exercise considerable tact, discretion, and judgment in all areas of work. Only assigned projects which entail technical or confidential matters are given close attention by the supervisor. Distinctions among the administrative assistant levels are based upon application of the Position Appraisal Method factors, copies of which can be found in the Human Resources' section classification unit.

II. MINIMUM QUALIFICATIONS:

Education: Graduation from a standard high school or possession of a high school equivalency certificate.

Experience: Five years of experience in secretarial work.

Notes:

1. Applicants may substitute additional secretarial or clerical experience on a year for year basis, for the required education.

2. Applicants may substitute an Associate of Arts degree with a major in Secretarial Science from an accredited college for up to two years of the required experience.

3. U.S. Armed Forces military service experience as defined under the Minimum Qualifications may be substituted for the education and experience on a year-for-year basis.

Licenses, Registrations and Certificates:

Not Applicable

Special Requirements

Demonstrated ability to accurately type on a keyboard on a personal computer at a minimum of forty words per minute may be required, depending on the specific requirements of the position.

III. EXAMPLES OF WORK: (Examples are illustrative only)

Acts as the administrative assistant to an administrative official or executive overseeing the administrative operations of the office;
Interprets administrative decisions and policies and transmits orders and instructions with the authority of the supervisor;
Screens calls and visitors, handles queries, arranges for appointments and interviews;
Acts as intermediary for the supervisor by maintaining contact with public and private executives, professional staff, and other officials;
Composes correspondence for the supervisor's signature, entailing a wide knowledge of the department's programs, procedures, functions, and policies;
Reviews correspondence prepared for the supervisor's signature noting format, grammar, and completeness;
Reads reports and summarizes information to facilitate review by the supervisor;
Exercises independent decision making authority within designated limits;
Maintains confidential correspondence files and other files as needed;
Obtains pertinent material from the files and other sources and puts it into usable form for the review and use of the supervisor;
Prepares expense accounts and routes flow of material for this individual while he/she is out of the office;
Types or prepares manuscripts, correspondence, statements, tables and forms from corrected copy, rough draft, or oral instructions;
Types or prepares and formats materials using word processing or other software on the personal computer;
Assists in the preparation of budgets;
Analyzes unit operating practices, such as record keeping systems, forms control and design, office layout, personnel requirements, and performance standards with a view toward establishing or revising existing procedures;
Coordinates the collection and preparation of operating records and reports;
May supervise employees performing typing, stenographic and related clerical duties;
Performs other related duties.

IV. REQUIRED KNOWLEDGE, SKILLS AND ABILITIES:

Knowledge of business office practices, procedures, and equipment;
Knowledge of business English, spelling, punctuation, grammar, and arithmetic;

Skill in typing on a keyboard of a personal computer at a minimum speed of 40 words per minute may be required, depending on the specific requirements of the psotion;
Knowledge of the principles and procedures of office management and supervision;
Knowledge of personal computers, word processing, and various software programs;
Knowledge of standard record maintenance procedures;
Ability to make decisions in accordance with laws, rules, and regulations;
Ability to apply departmental policy to daily work problems;
Ability to compose effective correspondence on routine and non-routine matters following general instructions without review;
Ability to exercise good judgment, courtesy and tact in receiving callers, in giving and obtaining information, and in the disposition of problems;
Ability to prepare accurate reports from various statistical or accounting information;
Ability to work independently on complex and confidential secretarial tasks or routine administrative tasks;
Ability to establish and maintain effective working relationships with supervisors, subordinates, associates, and the general public;
Ability to design, install and maintain clerical methods, forms, and procedures;
Ability to orient and train other clerical employees and interpret and explain complex agency policies, rules, regulations, and procedures;
Ability to establish and maintain effective working relationships with supervisors, subordinates, associates, and the general public;
Ability to operate office and business machines.

Date Revised: July 27, 2017

APPROVED: _____
Director, Office of Human Resources

ADMINISTRATIVE SPECIALIST III
Code 2043 Salary Grade 0012

I. CLASSIFICATION DEFINITION:

This is non-manual or office work customarily and regularly involving the exercise of discretion and independent judgment directly related to the management policies or general operation of the employing department or agency, or of the employing department's or agency's clientele. Workers are assigned administrative responsibilities involving the analysis and interpretation of data and situations, the development of solutions and alternatives to administrative problems, and the resolution of administrative issues. Actual duties and responsibilities may vary from assignment to assignment, dependent upon the work center to which the employee is assigned. Workers in this class may ultimately specialize in one of several areas, or may function as administrative generalists. In some agencies, positions in this class may be involved in the direction of organizational units and the supervision of other workers.

A general characterization of the difference between this job and the lower level in the Administrative Specialist series is in terms of the amount of responsibility given to workers, the technical complexity of the work, and the degree of independence allowed by the supervisor.

II. MINIMUM QUALIFICATIONS:

Education: Completion of 60 credit hours at an accredited college or university.

Experience: Two years of experience in administrative or professional work.

Notes:

1. Applicants may substitute a Bachelor's degree from an accredited college or university for the required education and experience.

2. Applicants may substitute experience as defined above for the required education at the rate of one year experience for 30 credit hours of education, for up to 60 credit hours of the required education.

Licenses, Registrations And Certificates:

Candidates appointed to positions in this classification may be assigned duties which require the operation of a motor vehicle. Employees assigned such duties will be required to possess a motor vehicle operators license valid in the State of Maryland.

III. EXAMPLES OF WORK: (Examples are illustrative only)

Conducts studies and analyses of some complexity of agency programs, organization, procedures, or systems;
Assists in the administration of an assigned program and/or supervision of an operational unit within an agency; in the preparation of final reports and suggested recommendations for the improvement of the agency or its programs;
Consults with program heads and administrative officials regarding policies, trends, and interpretation of data and program needs;
Prepares statistical tables and charts, work-flow charts, staffing patterns, and organizational charts;
Conducts efficiency, time or cost studies and analyses of work programs, procedures, practices, and organization;
Provides assistance in the formulation and preparation of an agency's budget, or portions thereof;
Supervises assigned professional, technical and clerical personnel;
Assists in the planning and implementation of new or revised programs, procedures, practices, and organization;
Performs other related duties.

IV. REQUIRED KNOWLEDGE, SKILLS AND ABILITIES:

Knowledge of English usage;
Knowledge of reference and research methods;
Knowledge of techniques used in collecting, compiling, and organizing data and information;
Knowledge of basic methods and techniques used in organizing and conducting studies and analyses of programs, procedures and organizations;
Knowledge of basic analytical principles and techniques;
Knowledge of the principles of public and business administration;
Knowledge of the nature and function of government and governmental organizations;
Knowledge of organization charts, staffing patterns, and work-flow diagrams;
Knowledge of time and cost studies;
Knowledge of basic statistical procedures and techniques;
Knowledge of the practices of personnel administration;
Knowledge of public finance, including budgeting, purchasing, and fiscal controls;
Knowledge of current business and economic trends;
Ability to conduct studies and analyses of agency programs, procedures, and organizations;
Ability to prepare and present reports and to make sound recommendations for improvements;
Ability to establish and maintain effective working relationships with employees, supervisors, and program chiefs in an agency;
Ability to use tact and discretion in dealing with people of all levels;
Ability to learn and understand an agency's purpose, programs, organization, and procedures;
Ability to collect, compile, code, edit, classify, and tabulate statistical and qualitative data;
Ability to apply elementary statistical techniques such as frequency distribution and calculation of medians and means;
Ability to ascertain information by personal contact and observation;

Ability to exercise initiative, imagination, resourcefulness and sound judgment in executing work assignments;
Ability to prepare and present ideas and information;
Ability to prepare organization charts, staffing patterns, and work-flow charts;
Ability to assess and evaluate the personnel needs of an agency and determine the extent to which program objectives are being met.

Date Revised: **March 1, 2005**

ADMINISTRATIVE SPECIALIST I
Code 1755 Salary Grade 0010

ADMINISTRATIVE SPECIALIST II
Code 1756 Salary Grade 0011

I. CLASSIFICATION DEFINITION:

This is non-manual or office work customarily and regularly involving the exercise of discretion and independent judgment directly related to the management policies or general operation of the employing department or agency, or of the employing department's or agency's clientele. Following an initial period of training and orientation, workers are assigned administrative responsibilities involving the analysis and interpretation of data and situations, the development of solutions and alternatives to administrative problems, and the resolution of administrative issues. Actual duties and responsibilities may vary from assignment to assignment, dependent upon the work center to which the employee is assigned. Workers in these classes may ultimately specialize in one of several areas of public administration, or may function as administrative generalists. In some agencies, positions in these classes may be involved in the direction of organizational units and the supervision of other workers.

A general characterization of the difference between this job and the higher level in the Administrative Specialist series is in terms of the amount of responsibility given to workers, the technical complexity of the work, and the degree of independence allowed by the supervisor.

Administrative Specialist I and II is a proficiency progression class grouping wherein as a matter of compensation policy and practices, workers doing the same job receive grade level increases in addition to step increases on the same basis contingent upon (1) meeting all the stated minimum qualifications and criteria listed in the Classification Definition section of the class specification and (2) satisfactory work performance.

II. MINIMUM QUALIFICATIONS:

Education: Completion of 60 credit hours at an accredited college or university.

Experience: None (I) One (II) year of experience in administrative or professional work.

Notes:

1. Applicants may substitute experience as defined above for the required education at the rate of one year of experience for 30 credit hours, for up to 60 credit hours of required education.

2. Applicants may substitute 90 credit hours at an accredited college or university for the required education and experience.

Licenses, Registrations And Certificates:

Candidates appointed to positions in this classification may be assigned duties which require the operation of a motor vehicle. Employee's assigned such duties will be required to possess a motor vehicle operator's license valid in the State of Maryland.

III. EXAMPLES OF WORK: (Examples are illustrative only)

Conducts studies and analyses of agency programs, organizations, procedures, or systems;
Assists in the administration of an assigned program or supervision of an operational unit within an agency; and in the preparation of final reports and suggested recommendations for the improvement of the agency or its programs;
Consults with program heads and administrative officials regarding policies, trends, and interpretation of data and program needs;
Prepares statistical tables and charts, work-flow charts, staffing patterns, and organizational charts;
Conducts efficiency, time or cost studies and analyses of programs, procedures, practices and organization;
Provides assistance in the formulation and preparation of an agency's budget, or portions thereof;
Supervises assigned professional, technical, and clerical personnel;
Assists in planning and implementing new or revised programs, procedures, practices, and organizations;
Performs other related duties.

IV. REQUIRED KNOWLEDGE, SKILLS AND ABILITIES:

Knowledge of English usage;
Knowledge of reference and research methods, and techniques used in collecting, compiling, and organizing data and information;
Knowledge of basic methods and techniques used in organizing and conducting studies and analyses of programs, procedures, and organizations;
Knowledge of basic analytical principles and techniques;
Knowledge of the principles of public and business administration;
Knowledge of the nature and function of government and governmental organizations;
Knowledge of organization charts, staffing patterns, and work-flow diagrams;
Knowledge of time and cost studies;
Knowledge of basic statistical procedures and techniques;
Knowledge of the practices of personnel administration;
Knowledge of public finance, including budgeting, purchasing, and fiscal controls;
Knowledge of current business and economic trends;
Ability to conduct studies and analyses of agency programs, procedures, and organizations;
Ability to prepare and present reports and sound recommendations for improvements;

Ability to establish and maintain effective working relationships with employees, supervisors, and program chiefs in an agency;
Ability to use tact and discretion in dealing with people of all levels;
Ability to learn and understand an agency's purpose, programs, organization, and procedures;
Ability to collect, compile, code, edit, classify, and tabulate statistical and qualitative data;
Ability to apply elementary statistical techniques such as frequency distribution and calculation of medians and means;
Ability to ascertain information by personal contact and observation;
Ability to exercise initiative, imagination, resourcefulness, and sound judgment in executing work assignments;
Ability to prepare and present ideas and information clearly and concisely;
Ability to prepare organization charts, staffing patterns, and work-flow charts;
Ability to assess and evaluate the personnel needs of an agency and determine the extent to which program objectives are met.

Date Adopted (code 1755): March 1, 2005
Date Revised (code 1756): March 1, 2005

JOB SPECIFICATIONS

REGISTERED PROFESSIONAL ENGINEER

MINIMUM QUALIFICATIONS:

EDUCATION:

Possession of a Bachelor's degree in civil engineering or structural engineering from an accredited college or university approved by the Engineer's Council for Professional Development and/or approved by the Maryland State Board of Registration for Professional Engineers.

Persons currently registered as Professional Engineers in the State of Maryland or in a state with comparable requirements, are considered to have also met the educational requirements.

EXPERIENCE:

Five (5) years as a Project Engineer, Resident Engineer or equivalent, involved in highway engineering on bridge and roadway construction projects.

CONDITIONS OF EMPLOYMENT:

Employee must be in good health and physically able to perform the duties required of the positions.

TRANSPORTATION ENGINEER II
Code 0116 Salary Grade 0016

I. CLASSIFICATION DEFINITION:

This is experienced level professional civil engineering work applying engineering theories, principles and standards to a variety of engineering projects and processes in highway, traffic, construction, structural, rail, port, airport, maintenance, materials, or other transportation areas. Positions in this class do not supervise, but may provide direction and guidance to technicians in all engineering functions necessary to prepare engineering plans, designs, specifications and cost estimates.

Employees receive moderate supervision from a higher level engineer or engineering supervisor. Work is performed in an office setting and in the field; work may involve physical inspection of job sites.

Positions assigned to the Transportation Engineer II classification are experienced positions distinguished from the Transportation Engineer I by greater independent decision making and by the requirement to apply a greater range of engineering knowledge and skills.

II. MINIMUM QUALIFICATIONS:

Education: Possession of a bachelor's degree in engineering from an accredited college or university.

Experience: One year of experience in professional engineering.

Notes:

1. Additional work experience in professional engineering, or in technical engineering at the journey level or above, may be substituted on a year for year basis for the required education.

2. Possession of a Master's Degree in engineering may be substituted for the required experience.

3. Persons currently registered as Professional Engineers in the State of Maryland, or in a state with comparable requirements, are considered to have met the education requirements.

Licenses, Registrations and Certificates:

Employees in this classification may be assigned duties which require the operation of a motor vehicle. Employees assigned such duties will be required to possess a motor vehicle operator's license valid in the State of Maryland.

III. EXAMPLES OF WORK: (Examples are illustrative only)

Prepares engineering designs, plans, specifications and cost estimates for the construction/rehabilitation of roads, bridges, communications systems, traffic management systems, construction and maintenance equipment, storm drains, rail, buildings and other transportation facilities;
Participates in public hearings, finalizing plans, drafting specifications, etc.;
Reviews and comments on design submittals from consulting engineers to ensure compliance with standards and regulations;
Meets with consultants to resolve problems;
Reviews plans and specifications for transportation facilities submitted for new construction, rehabilitation or improvements to ensure compliance with contracts, regulations, engineering standards;
Prepares and maintains a variety of engineering documents including plans, specifications, contracts, maps and standards;
Reviews and comments on maintenance contract submittals to ensure compliance with standards and regulations;
Meets with contractors to resolve problems;
May serve as project manager on routine engineering projects; conducts field work, surveys, research, preliminary and final design; determines construction quantities; writes proposals; prepares contract documents, right of way and easement descriptions; provides engineering detail for environmental impact statements and develops cost estimates;
Coordinates projects among outside agencies, property owners and other divisions within the agency;
Prepares reports and memos describing the project and conducts inspections of work, as needed;
Answers inquiries from other agencies, interested parties and the public regarding engineering projects;
Maintains and prepares public works installation and project records and reports;
Provides information to and works with architects, engineers, contractors and developers to ensure adherence to proper standards and codes;
Conducts research, evaluates and makes recommendations regarding proposed and existing laws, standards and policies; writes contracts for engineering services;
Prepares requests for proposals; participates in selecting engineering consultants and contractors;
Serves as project liaison with the project construction engineer during the construction phase; makes changes and additions to the construction plans as needed;

Conducts studies and research to analyze and project present and future needs as they relate to engineering designs and solutions to current and anticipated problems; provides data and other information to interested groups;
Attends a variety of meetings; may provide testimony at formal hearings or in court;
Performs other related duties.

IV. REQUIRED KNOWLEDGE, SKILLS AND ABILITIES:

Knowledge of professional civil engineering principles, practices and methods;
Knowledge of design principles, strength of materials and stress analysis required in planning construction/rehabilitation projects;
Knowledge of computer applications relative to engineering projects;
Knowledge of construction standards and regulations;
Knowledge of maps, deeds, plats and plans;
Ability to prepare accurate plans, specifications, cost estimates and engineering reports;
Ability to maintain a variety of technical records and adapt records systems for computerization;
Ability to make accurate engineering computations and drawings;
Ability to communicate effectively and prepare technical reports;
Ability to establish and maintain effective working relationships with other employees, engineers, architects and the general public;
Ability to provide direction and guidance to technicians;
Ability to physically perform essential duties.

V. SPECIAL REQUIREMENT:

Applicants may be subject to a background check which may impact employment. A history of arrest or conviction is not an automatic disqualification to employment. Applicants, who are considered for work at the Maryland Aviation Administration, are subject to an extensive pre-employment security background check as required by the Federal Aviation Administration, Federal Aviation Regulation Part 107.

Date Adopted: July 1, 1997
Date Revised: July 1, 2008

APPROVED: _____
Director, Office of Human Resources

TRANSPORTATION ENGINEER III
Code 0117 Salary Grade 0017

I. CLASSIFICATION DEFINITION:

This is journey level professional civil engineering work applying engineering theories, principles and standards to a variety of complex engineering projects and processes in highway, traffic, construction, structural, rail, port, airport, maintenance, materials or other transportation areas. Employees in these positions may serve as project managers and provide guidance and direction to a project team and consultants, or supervise assigned engineering technicians or may have journey level expertise in either a broad range of engineering areas or a specialized area.

Employees receive general supervision from a higher level engineer or engineering supervisor. Work is performed in an office setting and in the field; work may require physical inspection of job sites.

Positions assigned to the Transportation Engineer III classification are journey level positions distinguished from the Transportation Engineer II by the responsibility for project management or supervisory duties or the independent handling of more complex engineering projects requiring greater independent decision making and a broad range of engineering knowledge and skills.

II. MINIMUM QUALIFICATIONS:

Education: Possession of a bachelor's degree in engineering from an accredited college or university.

Experience: Two years experience in professional engineering.

Notes:

1. Additional work experience in professional engineering, or in technical engineering at the journey level or above, may be substituted on a year for year basis for the required education.

2. Possession of a Master's Degree in engineering may be substituted for one year of the required experience.

3. Persons currently registered as Professional Engineers in the State of Maryland, or in a state with comparable requirements, are considered to have met the education requirements.

Licenses, Registrations and Certificates:

1. Employees of the Maryland Transportation Authority may be required to possess an Engineer-In-Training License from the Department of Labor, Licensing and Regulation.

2. Employees in this classification may be assigned duties which require the operation of a motor vehicle. Employees assigned such duties will be required to possess a motor vehicle operator's license valid in the State of Maryland.

III. EXAMPLES OF WORK: (Examples are illustrative only)

Prepares engineering designs, plans, specifications and cost estimates for the construction/ rehabilitation of roads, bridges, communications systems, traffic management systems, storm drains, rail, buildings and other transportation facilities;
Participates in public hearings, finalizes plans, drafts specifications, etc.;
Administers consultant contracts including approving monthly invoices and progress payments;
Reviews and comments on design submittals from consulting engineers to ensure compliance with standards and regulations; meets with consultants to resolve problems;
Assists and conducts the review and evaluations of Consultant Technical Proposals and Extra Work Requests;
Reviews plans and specifications for transportation facilities submitted for new construction, rehabilitation or improvements to ensure compliance with contracts, regulations, engineering standards;
Prepares and maintains a variety of engineering documents including plans, specifications, contracts, maps, standards, etc.;
Serves as project manager for the installation of communications systems;
Reviews and comments on maintenance contract submittals to ensure compliance with standards and regulations; communicates with contractors to resolve problems;
Serves as project manager on routine engineering projects; conducts field work, surveys, research, preliminary and final design; determines construction quantities; writes proposals; prepares contract documents, right of way and easement descriptions; provides engineering detail for environmental impact statements; develops cost estimates; coordinates project among outside agencies, property owners and other divisions within the agency;
Prepares reports and memos describing the project; conducts inspections of work as needed;
Answers inquiries from other agencies, interested parties and the public regarding engineering projects;
Maintains and prepares public works installation and project records and reports;
Provides information to and works with architects, engineers, contractors and developers to ensure adherence to proper standards and codes;
Conducts research; evaluates and makes recommendations regarding proposed and existing laws, standards and policies; writes contracts for engineering services; prepares requests for proposals; participates in selecting engineering consultants and contractors;
Serves as project liaison with the project construction engineer during the construction phase; makes changes and additions to the construction plans as needed;
Analyzes capacity, planning and highway system performance data and prepares traffic projections;

Conducts studies and research to analyze and project present and future needs as they relate to engineering designs and solutions to current and anticipated problems;
Provides data and other information to interested groups;
Attends a variety of meetings;
May provide testimony at formal hearings or in court;
May plan, organize, coordinate, schedule, assign and evaluate the work of engineering technicians;
Provides training and work performance counseling as needed;
Performs other related duties.

IV. REQUIRED KNOWLEDGE, SKILLS AND ABILITIES:

Knowledge of professional civil engineering principles, practices and methods;
Knowledge of design principles, strength of materials and stress analysis required in planning construction/rehabilitation projects;
Knowledge of computer applications relative to engineering projects;
Knowledge of construction standards and regulations;
Knowledge of effective supervisory methods and practices;
Skill in reading maps, deeds, plats and plans;
Skill in preparing accurate plans, specifications, cost estimates and engineering reports;
Skill in making accurate engineering computations and drawings;
Ability to maintain a variety of technical records and adapt records systems for computerization;
Ability to plan, organize, coordinate, assign and evaluate the work of engineering technicians and other support staff;
Ability to communicate effectively and prepare technical reports;
Ability to establish and maintain effective working relationships with other employees, engineers and architects and the general public;
Ability to physically perform essential duties.

V. SPECIAL REQUIREMENT:

Applicants may be subject to a background check which may impact employment. A history of arrest or conviction is not an automatic disqualification to employment. Applicants, who are considered for work at the Maryland Aviation Administration, are subject to an extensive pre-employment security background check as required by the Federal Aviation Administration, Federal Aviation Regulation Part 107.

Date Adopted: July 1, 1997
Date Revised: July 1, 2001
Date Revised: July 1, 2008

APPROVED: _____
Director, Office of Human Resources

TRANSPORTATION ENGINEER IV
Code 0516 Salary Grade 0018

I. CLASSIFICATION DEFINITION:

This is senior or advanced level professional civil engineering work applying engineering theories, principles and standards to a variety of complex engineering projects and processes in highway, traffic, construction, structural, rail, port, airport, maintenance, materials, or other transportation areas. Employees in these positions may serve as project manager and provide guidance and direction to a project team and consultants, or supervise assigned engineering technicians or may apply advanced knowledge in a specialized technical area such as hydraulics or environmental design, or in a broad range of engineering areas. Positions assigned to this classification may serve as team leaders over lower level professional engineers, technicians, and/or consultants that perform engineering functions necessary to prepare construction plans, specifications and cost estimates.

Employees receive general supervision from a higher level engineer or manager. Work is generally performed in an office setting and in the field; work may require physical inspection of job sites.

Specific position allocation to this level is determined by application of the Position Appraisal Method of Job Evaluation and the point to grade conversion contained in the Transportation Engineer July 1, 2008 ASR classification standards.

II. MINIMUM QUALIFICATIONS:

Education: Possession of a bachelor's degree in engineering from an accredited college or university.

Experience: Four years experience in professional engineering.

Notes:

1. Additional work experience in professional engineering, or in technical engineering at the journey level or above, may be substituted on a year for year basis for the required education.

2. Possession of a Master's Degree in engineering may be substituted for one year of the required experience.

3. Persons currently registered as Professional Engineers in the State of Maryland, or in a State with comparable requirements, are considered to have met the education requirements.

Licenses, Registrations and Certificates:

1. Employees of the Maryland Transportation Authority may be required to possess an Engineer-In-Training License from the Department of Labor, Licensing and Regulation.

2. Employees in this classification may be assigned duties which require the operation of a motor vehicle. Employees assigned such duties will be required to possess a motor vehicle operator's license valid in the State of Maryland.

III. EXAMPLES OF WORK: (Examples are illustrative only)

Performs the most complex and varied engineering project coordination functions;
Plans, organizes, coordinates, schedules, assigns and evaluates the work of subordinate engineers and technicians; provides training and work performance counseling as needed;
Prepares engineering studies, designs, plans, specifications and cost estimates for the construction, rehabilitation or maintenance of roads, bridges, storm drains, rail, buildings and other transportation facilities; participates in public hearings, finalizes plans, drafts specifications, etc.;
Administers consultant contracts including approval of monthly invoices and progress payments;
Reviews and comments on design submittals from consulting engineers to ensure compliance with standards and regulations; meets with consultants to resolve problems;
Assists in and conducts the review and evaluation of Consultant Technical Proposals and Extra Work Requests;
Reviews plans and specifications for transportation facilities submitted for new construction, rehabilitation or improvements to ensure compliance with contracts, regulations and engineering standards;
Prepares and maintains a variety of engineering documents including plans, specifications, contracts, maps and standards;
Prepares designs, plans, specifications and cost estimates for communications and traffic management systems, or construction and maintenance equipment;
Serves as project manager on large and/or complex engineering projects; conducts field work, surveys, research, preliminary and final design; determines construction quantities; writes proposals; prepares contract documents, right of way and easement descriptions; provides engineering detail for environmental impact statements and develops cost estimates;
Coordinates projects among outside agencies, property owners and other divisions within the agency; prepares reports and memos describing the project; conducts inspections of work as needed;
Answers inquiries from other agencies, interested parties and the public regarding engineering projects;
Maintains and prepares public works installation and project records and reports;
Provides information to and works with architects, engineers, contractors and developers to ensure adherence to proper standards and codes;
Conducts research, evaluates and makes recommendations regarding proposed and existing laws, standards and policies; writes contracts for engineering services; prepares requests for proposals;
Participates in selecting engineering consultants and contractors;

Serves as project liaison with the project construction engineer during the construction phase; makes changes and additions to the construction plans as needed;
Conducts studies and research to analyze and project present and future needs as they relate to engineering designs and solutions to current and anticipated problems;
Provides data and other information to interested groups;
Attends a variety of meetings;
May provide testimony at formal hearings or in court;
Performs other related duties.

IV. REQUIRED KNOWLEDGE, SKILLS AND ABILITIES:

Knowledge of professional civil engineering principles, practices and methods;
Knowledge of design principles, strength of materials and stress analysis required in planning construction /rehabilitation projects;
Knowledge of computer applications relative to engineering projects;
Knowledge of construction standards and regulations;
Knowledge of effective supervisory methods and practices;
Skill in reading maps, deeds, plats and plans;
Skill in preparing accurate plans, specifications, cost estimates and engineering reports;
Skill in making accurate engineering computations and drawings;
Ability to maintain a variety of technical records and adapt records systems for computerization;
Ability to plan, organize, coordinate, assign and evaluate the work of lower level engineers, engineering technicians and other support staff;
Ability to communicate effectively and to prepare technical reports;
Ability to establish and maintain effective working relationships with other employees, engineers and architects and the general public;
Ability to physically perform essential duties.

V. SPECIAL REQUIREMENT:

Applicants may be subject to a background check which may impact employment. A history of arrest or conviction is not an automatic disqualification to employment. Applicants, who are considered for work at the Maryland Aviation Administration, are subject to an extensive pre-employment security background check as required by the Federal Aviation Administration, Federal Aviation Regulation Part 107.

Date Adopted: July 1, 1997
Date Revised: July 1, 2001
Date Revised: July 1, 2008

APPROVED: _____
Director, Office of Human Resources

TRANSPORTATION ENGINEER V
Code 2706 Salary Grade 0019

I. CLASSIFICATION DEFINITION:

This is team leader and expert level civil engineering work performing complex engineering projects and processes in highway, traffic, construction, structural, rail, port, airport, maintenance, materials or other transportation areas. Some employees serve as team leader on large and complex engineering projects leading and directing multi-disciplinary project teams with professionals and consultants, others may be assigned administrative and managerial responsibility for an organizational unit overseeing technical work functions. Other positions independently perform expert level duties within one or more highly specialized areas within the field of Transportation Engineering such as highway, bridge, airport, rail, port, facility design, traffic or hydraulics.

Employees receive general supervision from a higher level engineering manager. Work is performed in an office setting and in the field; work may require physical inspection of job sites.

Specific position allocation to this level is determined by application of the Position Appraisal Method of Job Evaluation and the point to grade conversion contained in the Transportation Engineer July 1, 2008 ASR classification standards.

II. MINIMUM QUALIFICATIONS:

Education: Possession of a bachelor's degree in engineering from an accredited college or university.

Experience: Five years experience in professional engineering.

Notes:

1. Additional work experience in professional engineering, or in technical engineering at the journey level or above, may be substituted on a year for year basis for the required education.

2. Possession of a Master's Degree in engineering may be substituted for one year of the required experience.

3. Persons currently registered as Professional Engineers in the State of Maryland, or in a State with comparable requirements, are considered to have met the education requirements.

Licenses, Registrations and Certificates:

1. Employees in this class may be required to possess a Professional Engineer, Land Surveyor or Property Line Surveyor License.

2. Employees of the Maryland Transportation Authority may be required to possess an Engineer-In-Training License from the Department of Labor, Licensing and Regulation.

3. Employees in this classification may be assigned duties which require the operation of a motor vehicle. Employees assigned such duties will be required to possess a motor vehicle operator's license valid in the State of Maryland.

III. EXAMPLES OF WORK: (Examples are illustrative only)

Plans, organizes, coordinates, schedules, assigns and evaluates the work of subordinate engineers and technicians; provides training and work performance counseling as needed;
Serves as project manager on large and complex engineering projects; conducts field work, survey, research, preliminary and final design; determines construction quantities; writes proposals; prepares contract documents, right of way and easement descriptions; provides engineering detail for environmental impact statements and develops cost estimates;
Prepares engineering designs, plans, specifications and cost estimates for the construction/ rehabilitation of roads, bridges, storm drains, rail, buildings and other transportation facilities; participates in public hearings, finalizes plans, drafts specifications, etc.;
Administers consultant contracts including approval of monthly invoices and progress payments;
Reviews and comments on design submittals from consulting engineers to ensure compliance with standards and regulations; meets with consultants to resolve problems;
Supervises and conducts the review and evaluation of Consultant Technical Proposals and Extra Work Requests;
Reviews plans and specifications for roads, bridges, storm drainage, buildings and other facilities submitted for new construction, rehabilitation or improvements to ensure compliance with contracts, regulations and engineering standards;
Prepares and maintains a variety of engineering documents including plans, specifications, contracts, maps and standards;
Prepares designs, plans, specifications and cost estimates for communications maintenance and repair and traffic management systems;
Prepares specifications and cost estimates for construction and maintenance equipment;
Coordinates Emergency Operations Center Team activation and operation;
Coordinates projects among outside agencies, property owners and other divisions within the agency; prepares reports and memos describing projects; conducts inspections of work as needed;
Answers inquiries from other agencies, interested parties and the public regarding engineering projects;
Maintains and prepares public works installation and project records and reports;
Provides information to and works with architects, engineers, contractors and developers to ensure adherence to proper standards and codes;
Conducts research, evaluates and makes recommendations regarding proposed and existing laws, standards and policies; writes contracts for engineering services; prepares requests for proposals; participates in selecting engineering consultants and contractors;
Serves as project liaison with the project construction engineer during the construction phase; makes changes and additions to the construction plans as needed;
Conducts studies and research to analyze and project present and future needs as they relate to engineering designs and solutions to current and anticipated problems;
Provides data and other information to interested groups;
Attends a variety of meetings;
May provide testimony at formal hearings or in court.

IV. REQUIRED KNOWLEDGE, SKILLS AND ABILITIES:

Knowledge of professional civil engineering principles, practices and methods;
Knowledge of design principles, strength of materials and stress analysis required in planning construction/rehabilitation projects;
Knowledge of computer applications relative to engineering projects;
Knowledge of construction standards and regulations
Knowledge of effective supervisory methods and practices;
Skill in reading maps, deeds, plats and plans;
Skill in preparing accurate plans, specifications, cost estimates and engineering reports;
Skill in making accurate engineering computations and drawings;
Ability to maintain a variety of technical records and adapt records systems for computerization;
Ability to plan, organize, coordinate, assign and evaluate the work of engineering technicians and other support staff;
Ability to communicate effectively and to prepare technical reports;
Ability to establish and maintain effective working relationships with other employees, engineers, architects and the general public;
Ability to physically perform essential duties.

V. SPECIAL REQUIREMENT:

Applicants may be subject to a background check which may impact employment. A history of arrest or conviction is not an automatic disqualification to employment. Applicants, who are considered for work at the Maryland Aviation Administration, are subject to an extensive pre-employment security background check as required by the Federal Aviation Administration, Federal Aviation Regulation Part 107.

Adopted: July 1, 1997
Revised: July 1, 2001
Revised: July 1, 2008

APPROVED: _____
Director, Office of Human Resources

TRANSPORTATION ENGINEERING MANAGER I
Code 0515 Salary Grade 20
TRANSPORTATION ENGINEERING MANAGER II
Code 2707 Salary Grade 21

I. CLASSIFICATION DEFINITION:

This is supervisory, administrative and managerial transportation engineering work over engineers applying engineering theories, principles and standards to a variety of complex engineering projects and processes in highway, traffic, construction, structural, rail, port, airport, maintenance, materials, or other transportation areas. These managers are typically section managers, assistant division managers, or are assigned area-wide responsibility. Work includes managing and coordinating work assignments of the unit, setting standards and providing quality assurance reviews and coordinating work with other divisions. Staff level, non-supervisory nationally recognized expert positions may also be assigned to these levels. Positions assigned to this class may require expert level knowledge within one or more highly specialized areas within the field of Transportation Engineering such as highway, bridge, airport, rail, port, facility design, traffic, or hydraulics.

Employees receive managerial supervision from a higher level engineering manager or administrative official.

Specific position allocation to these levels is determined by application of the Position Appraisal Method of Job Evaluation and the point to grade conversion contained in the Transportation Engineer July 1, 2008 ASR classification standards.

II. MINIMUM QUALIFICATIONS:

Education: Possession of a bachelor's degree in engineering from an accredited college or university.

Experience: Seven (I), Eight (II) years experience in professional engineering, including (for the II level only) one year of supervisory or consultant management experience.

Notes:

1. Additional work experience in professional engineering, or in technical engineering at the journey level or above, may be substituted on a year for year basis for the required education.

2. Possession of a Master's Degree in engineering may be substituted for one year of the non-supervisory experience.

3. Persons currently registered as Professional Engineers in the State of Maryland, or in a state with comparable requirements, are considered to have met the education requirements.

Licenses, Registrations and Certificates:

1. Employees in this class may be required to possess a Professional Engineer, Land Surveyor, or Property Line Surveyor License.

2. Employees in this classification may be assigned duties which require the operation of a motor vehicle. Employees assigned such duties will be required to possess a motor vehicle operator's license valid in the State of Maryland.

III. EXAMPLES OF WORK: (Examples are illustrative only)

Plans, manages, organizes, coordinates, supervises and evaluates the work of a major division or subdivision of professional engineers; oversees training and work performance counseling as needed;
Manages the preparation of engineering designs, plans, specifications and cost estimates for the construction/rehabilitation of roads, bridges, communication systems, traffic management systems, construction and maintenance equipment, storm drains, rail, buildings and other transportation facilities; participates in public hearings; approves the finalizing of plans and specifications;
Manages the administering of consultant contracts;
Manages the review of design submittals from consulting engineers to ensure compliance with standards and regulations; meets with consultants to resolve problems;
Manages the review of plans and specifications for transportation facilities submitted for new construction, rehabilitation or improvements to ensure compliance with contracts, regulations and engineering standards;
Manages the preparation and maintenance of a variety of engineering documents including plans, specifications, contracts, maps and standards;
Assures effective project management of a variety of engineering projects;
Assures the effective conduct of administrative and fiscal activities, including proper documentation, contract and budget monitoring;
Answers inquiries from other agencies, interested parties and the public regarding engineering projects;
Assures the proper maintenance of a variety of records pertaining to public works installations and projects; prepares reports related to the work;
Manages and coordinates research and evaluation of proposed and existing laws, standards and policies;
Manages and oversees the preparation of contracts for engineering services, requests for proposals and related documents; oversees the selection of engineering consultants and contractors;
Initiates and manages special studies and research to analyze and project present and future needs as they relate to engineering designs and solutions to current and anticipated problems;
Directs or supervises special projects as needed;
Prepares a variety of correspondence and technical reports and attends a variety of meetings related to the work;

Provides technical guidance and advice to other employees and other agencies;
Attends and makes presentations at public hearings, seminars and conferences;
Performs other related duties.

IV. REQUIRED KNOWLEDGE, SKILLS AND ABILITIES:

Knowledge of professional transportation engineering principles, practices and methods;
Knowledge of design principles, strength of materials and stress analysis required in planning construction/rehabilitation projects;
Knowledge of computer applications suitable to engineering projects;
Knowledge of construction standards and regulations;
Knowledge of effective managerial methods and practices;
Ability to organize and coordinate human and material resources in the carrying out of large and complex program activities;
Ability to assure program effectiveness, including the organization and maintenance of records and proper documentation;
Ability to assure the effective application of proper engineering standards and principles to the work;
Ability to plan, organize, coordinate, assign and evaluate the work of subordinate professional supervisors;
Ability to communicate effectively and prepare technical, complex reports;
Ability to establish and maintain effective working relationships with other employees, engineers and architects, representatives of other agencies and the general public;
Ability to physically perform essential duties.

V. SPECIAL REQUIREMENT:

Applicants may be subject to a background check which may impact employment. A history of arrest or conviction is not an automatic disqualification to employment. Applicants, who are considered for work at the Maryland Aviation Administration, are subject to an extensive pre-employment security background check as required by the Federal Aviation Administration, Federal Aviation Regulation Part 107.

Date Adopted: July 1, 1997
Date Revised: July 1, 2008
Date Revised: June 9, 2014

APPROVED: _____
Office, Director of Human Resources

TRANSPORTATION ENGINEERING TECHNICIAN III
Code 8448 Grade Band 11-12

I. CLASSIFICATION DEFINITION:

This is the journey level of work performing a variety of engineering support tasks. Employees perform transportation engineering survey, inspection, design, materials testing, data collection, traffic analysis and administrative duties. Specific duties depend on job assignments and may include inspecting construction and maintenance projects; conducting roadway and bridge inspections; evaluating methods for maintenance operations; performing tests on soils and materials; serving on a survey crew; drafting design details, maintenance contract specifications, and construction notes; calculating quantities for construction projects and maintenance activities; preparing Computer Aided Design and Drafting (CADD) plans, maps, or right of way plats; collecting and recording traffic data and conducting traffic studies; and compiling planning data for reports. Employees in this class may serve as a Project Manager on small sized construction projects, or may serve as an experienced rodman on a survey crew. Employees in this class may supervise, and may serve as a lead worker over a crew and may be expected to give guidance and assistance to less experienced employees.

Work is performed under the general supervision of an engineer, surveyor, or higher level technical employees. Work conditions vary depending on assignments and are performed in the office or in the field during survey and inspection assignments with exposure to varying weather conditions and rough terrain and requirements for walking, standing, bending, and lifting loads weighing up to 80 pounds; may require working in close proximity with traffic on Maryland highways; requires hand/eye coordination in the efficient operation of computers and other office machines, survey equipment and the like. Employees in this position may be required to work various shifts and on weekends depending on assignment. Employees in some positions in this classification may be required to travel and be available for work in any part of the State, subject to change of assignment, as work requires.

Positions assigned to the Transportation Engineering Technician III classification function as journey level positions distinguished from the Transportation Engineering Technician II by the ability to perform more complex tasks requiring greater technical knowledge.

II. MINIMUM QUALIFICATIONS:

Education: Graduation from a standard high school or possession of a high school equivalency certificate.

Experience: Three years of experience in technical engineering related work in the areas of design, traffic, construction, materials testing, engineering surveys, maintenance, or planning.

Notes:

1. Applicants may substitute education in a civil engineering curriculum at an accredited college or university at the rate of 30 semester credit hours for each year of the required experience.

2. Applicants who possess an Associates Degree in Engineering, Construction Management or Surveying or Surveying Technology from an accredited community college, college or university are considered to have met two years of the required experience.

Licenses, Registrations and Certificates:

1. Employees in this classification may be assigned duties that require the operation of a motor vehicle. Employees in some positions in this classification may be required to possess a motor vehicle operator's license valid in the State of Maryland. A CDL license may be required for some positions.

2. National Institute for Certification in Engineering Technologies (NICET) certification, in-house certifications or state-sponsored, material-testing certification may be required for some positions.

3. Employees in this classification may be required to possess Federal Highway Administration (FHWA) certification for inspection of In-Service Bridges, or have the ability to acquire this certificate within a given time period.

4. Employees in this classification may be required to possess an American Society for Non-Destructive Testing Level I Certification.

5. Employees in this classification may be required to achieve certification in field testing procedures in concrete, soil aggregate and Hot Mix Asphalt within a given time period.

III. EXAMPLES OF WORK: (Examples are illustrative only)

Performs CADD and hand drafting of highway plans, right of way plats and mosaics, highway design and topographic features requiring reduction of field notes and the application of survey information, using computerized and manual processes;
Develops and updates various road plans, right of way plats and maps;
Checks deed, estate and tax records to establish property lines;
Performs field inspections to monitor road conditions, bridges, road construction and traffic projects, and material used in road construction and repair;
Performs in-service bridge inspections in accordance with FHWA criteria;
Prepares project specifications on transportation projects;
Reviews construction, maintenance or traffic projects for compliance with project specifications;
Participates in traffic control utility relocation activities;

Collects samples, conducts tests and evaluates test results on soils, asphalt, cements/concrete, aggregates, bituminous products, metal products and industrial coatings;
Performs inspection and testing at materials supplier facilities;
Performs calculations to establish design, contract quantities and cost estimates;
Assists in developing construction notes and placing notes on contract documents;
Compiles field notes, completes preliminary drawings, and plot plans, profiles, and elevations;
Uploads and edits field survey data files;
Performs preliminary processing to check and correct field survey data;
Performs surface model and contouring to create digital terrain models (DTM's);
Creates electronic topographic mapping using CADD software;
Assists in performing field reviews to assure accuracy of topographic mapping;
Researches, develops and maintains computerized and manual records, logs, and maps relating to assigned duties;
Operates electronic and mechanical equipment relating to drafting, surveying, materials testing and sampling and inspection;
Conducts ongoing studies of maintenance activities;
Drafts maintenance contract specifications;
Assists in an annual review of highways and roadsides at the shop, district, and statewide levels to determine the quality of highway maintenance;
Assists in the development of software programs for monitoring budget expenditures;
Participates in field reviews for various studies and analyses, and creates condition diagrams via CADD computer programs;
Prepares written correspondence for various data requestors (local police, government agencies, the media, the general public, other SHA departments, etc.);
Conducts moderately complex traffic studies;
Performs other related duties.

IV. REQUIRED KNOWLEDGE, SKILLS AND ABILITIES:

Knowledge of basic engineering principles, practices, and methods;
Knowledge of CADD drafting using Microstation or other engineering software;
Knowledge of design criteria, construction standards and inspection methods and techniques;
Knowledge of algebra, geometry and the principles of basic mathematics used in engineering design, drawing and drafting;
Knowledge of Temporary Traffic Control Standards, National Electrical and Safety Codes, and Manual on Uniform Traffic Control Devices;
Knowledge of Federal Highway Regulations and Criteria for Coding In-Service Bridge conditions;
Knowledge of AASHTO and ASTM test specifications and methods;
Knowledge of the American Welding Society specifications for structures and bridges;
Knowledge of human factors relating to traffic control design and driver performance;
Skill in the operation of electronic and mechanical equipment used in performing technical engineering support tasks;
Ability to learn new computer skills and data processing procedures;
Ability to interpret, analyze, or prepare maps, deeds, plats, and plans;

Ability to perform basic mathematical computations used in engineering design, drawing and drafting;
Ability to maintain records and adapt records systems for computerization;
Ability to read and create blueprints and engineering drawings and plans, using CADD or manual processes;
Ability to update computer design files, maps and other records;
Ability to establish and maintain effective working relationships with other employees and the general public;
Ability to communicate effectively;
Ability to physically perform essential duties.

V. SPECIAL REQUIREMENTS:

Employees in this classification may be considered "Essential Employees" and may be required to sign and agree to all policies and procedures relating to "Essential Employee" status.

Date Revised: December 16, 2003

APPROVED: _____
Director, Office of Human Resources

TRANSPORTATION ENGINEERING TECHNICIAN IV
Code 8449 Grade Band 13-14

I. CLASSIFICATION DEFINITION:

This is the senior technical or supervisory level of work performing a variety of engineering support tasks. Specific duties depend on job assignments and may include serving as Project Engineer for medium sized construction and maintenance projects; coordinating complex maintenance activities; performing advanced design work involving complex calculations and computations and geometric design elements; performing advanced tests on soils and materials; supervising a crew engaged in basic technical engineering activities; serving as instrument person on a survey crew; developing complex maintenance contract specifications; designing and coordinating major traffic control devices and management projects; and serving as a field crew chief for planning projects or maintaining advanced data systems in support of planning programs. Employees in some positions in this classification do not supervise, but may serve as lead workers. The employee is expected to give guidance and assistance to less experienced employees and may supervise a project, crew or unit.

Work is performed under the general supervision of an engineer, surveyor, or higher level technical employee. Work conditions vary depending on assignments and are performed in the office or in the field during survey and inspection assignments with exposure to varying weather conditions and rough terrain and requirements for walking, standing, bending, and lifting loads weighing up to 80 pounds; may require working in close proximity with traffic on Maryland highways; requires hand/eye coordination in the efficient operation of computers and other office machines, survey equipment and the like. Employees in this classification may be required to work various shifts and on weekends depending on assignment. Employees in some positions in this classification may be required to travel and be available for work in any part of the State, subject to change of assignment, as work requires.

Positions in the Transportation Engineering Technician IV classification are distinguished from the Transportation Engineering Technician III classification by the performance of senior technical or supervisory work requiring greater technical knowledge and skills.

II. MINIMUM QUALIFICATIONS:

Education: Graduation from a standard high school or possession of a high school equivalency certificate.

Experience: Five years of experience in technical engineering related work in the areas of design, traffic, construction, materials testing, engineering surveys, maintenance, or planning.

Notes:

1. Applicants may substitute education in a civil engineering curriculum at an accredited college or university at the rate of 30 semester credit hours for each year of the required experience, up to a maximum of three years.

2. Applicants who possess an Associates Degree in either Engineering, Construction Management or Surveying or Surveying Technology from an accredited community college, college or university are considered to have met two years of the five year experience requirement.

Licenses, Registrations and Certificates:

1. Employees in this classification may be assigned duties that require the operation of a motor vehicle. Employees in some positions in this classification may be required to possess a motor vehicle operator's license valid in the State of Maryland. A CDL license may be required for some positions.

2. National Institute for Certification in Engineering Technologies (NICET) Certification or other in-house certifications may be required for some positions.

3. Employees in this classification may be required to possess Federal Highway Administration (FHWA) certification for inspection of In-Service Bridges, or have the ability to acquire this certificate within a given time period.

4. Employees in this classification may be required to possess an American Society for Non-Destructive Testing Level II Certification.

5. Employees in this classification may be required to achieve certification in field testing procedures in concrete, soil aggregate and Hot Mix Asphalt within a given time period.

III. EXAMPLES OF WORK: (Examples are illustrative only)

Operates electronic and mechanical equipment required in surveying, drafting and design, field inspection, and materials testing;
Reviews and comments on design submittals from consulting engineers to ensure compliance with standards; meets with consultants to resolve problems;
Provides information to and works with architects, engineers, contractors, developers, and the like to ensure adherence to proper standards and codes;
Oversees or performs plan preparation and review during construction and maintenance of roadways, structures and traffic control devices for conformance to plans and specifications;
Schedules and directs the work of construction inspectors assigned to construction and maintenance projects;
Compiles, documents, and reviews construction reports including cost and other data; reviews special provisions, design agreements, and continuity of plans as necessary; assists in determining if contract plans adhere to current standards and practices;

Drafts plans, plats and drawings for various engineering improvements and installations using CADD and manual processes;
Prepares construction drawings based on engineer's notes, survey notes, field and record research, and engineering calculations;
Updates maps, plats, and other engineering records based on "as builts," survey notes and other information;
Computes project quantities, curve data, elevations and profiles;
Performs traverse adjustments and coordinate geometry computations to produce final adjustment traverse coordinates;
Monitors contractors, producers, and fabricators and assures quality control of materials used in the construction of roadways, bridges and facilities; assures materials used meet state specifications;
Oversees material testing programs in permanent and portable labs and at material supplier facilities;
Performs as instrument person on survey assignments and acts as Party Chief in his/her absence;
Maintains records pertaining to public works installations and projects; prepares reports related to the work;
Oversees the advertisement of major maintenance contracts;
Oversees roadway evaluations/studies;
Compiles, documents, and reviews maintenance reports/studies including costs and other data, determining if maintenance contracts adhere to current maintenance practices and standards;
Assists in the clearance of utilities and other underground obstructions prior to subsurface explorations;
Assists in locating subsurface features through the use of preliminary engineering design documents and/or the use of electronic geographical positioning equipment;
Performs hydrographic surveys of shipping channels and berths;
Establishes horizontal and vertical controls for hydrographic surveys;
Determines tide adjustments and edits hydrographic surveys;
Compiles comprehensive analytical reports for various Project Planning/miscellaneous studies;
Attends project planning meetings and Public Hearings/Workshops;
Performs before and after accident studies;
Provides comprehensive reports pertaining to accident corridor studies;
Prepares charts and graphs for projects using various computer programs;
Performs other related duties.

IV. REQUIRED KNOWLEDGE, SKILLS AND ABILITIES:

Knowledge of basic engineering principles, practices, and methods;
Knowledge of CADD drafting using Microstation or other engineering software;
Knowledge of surveying, including use of instruments and equipment;
Knowledge of design and right of way plat criteria, construction standards and inspection methods and techniques;
Knowledge of InRoads, Geopak or other related engineering software in the use of design activities;
Knowledge of geodetic control processing software and CADD software;
Knowledge of Temporary Traffic Control Standards, National Electrical and Safety Codes, and Manual on Uniform Traffic Control Devices;

Knowledge of Federal Highway Regulations and Criteria for Coding In-Service Bridge conditions;
Knowledge of statistical principles;
Knowledge of algebra, geometry, and the principles of basic mathematics used in engineering design, drawing and drafting;
Knowledge of the inspection techniques for welding and fabrication of structural products including non-destructive testing methods and the American Welding Society Welding Code;
Knowledge of AASHTO and ASTM test specifications and methods;
Knowledge of human factors as they relate to transportation issues;
Knowledge of effective supervisory methods and practices;
Skill in reading and interpreting complex engineering drawings and computations;
Skill in the operation of electronic and mechanical equipment used in performing technical engineering support tasks;
Skill in reading and creating blueprints and engineering drawings, right of way plats and plans, using CADD or manual processes;
Skill in interpreting, analyzing or preparing maps, deeds, plats, and plans;
Ability to instruct and train lower-level technicians in coordinate geometry calculations and CADD processing;
Ability to maintain a variety of technical records and adapt records systems for computerization;
Ability to update computer design files, maps and other records;
Ability to establish and maintain effective working relationships with other employees and the general public;
Ability to communicate effectively;
Ability to physically perform essential duties.

V. SPECIAL REQUIREMENTS:

Employees in this classification may be considered "Essential Employees" and may be required to sign and agree to all policies and procedures relating to "Essential Employee" status.

Date Revised: December 16, 2003

APPROVED: _____

Director, Office of Human Resources

TRANSPORTATION ENGINEERING TECHNICIAN V
Code 8450 Grade 0015

I. CLASSIFICATION DEFINITION:

This is the advanced technical or senior project management level of work performing a variety of complex engineering support tasks. Some positions in this classification are responsible for supervising staff. Specific duties depend on job assignments and may include serving as Project Engineer for large sized construction and maintenance projects; overseeing complex maintenance activities; serving as Assistant Project Engineer on major bridge and highway design projects; overseeing the development and performance of advanced soils and materials testing programs; serving as party chief on a survey crew, or exploration crew; overseeing the development and advertisement of maintenance contracts, overseeing budget allocations statewide; or designing and coordinating major design and planning and traffic management projects. The employee is expected to give guidance and assistance to less experienced employees and may supervise a project team, crew or unit. Supervision is not a requirement when highly specialized expertise can be documented.

Work is performed under the general direction of an engineer, or other professional employee. Work conditions vary depending on assignments and are performed in the office or in the field during survey and inspection assignments with exposure to varying weather conditions and rough terrain and requirements for walking, standing, bending, and lifting loads weighing up to 80 pounds; may require working in close proximity with traffic on Maryland highways; requires hand/eye coordination in the efficient operation of computers and other office machines, survey equipment and the like. Employees in this classification may be required to work various shifts and on weekends depending on assignments. Employees in some positions in this classification may be required to travel and be available for work in any part of the State, subject to change of assignment, as work requires.

Specific position allocation to this level is determined by application of the Position Appraisal Method of Job Evaluation.

II. MINIMUM QUALIFICATIONS:

Education: Graduation from a standard high school or possession of a high school equivalency certificate.

Experience: Eight years of experience in technical engineering related work in the areas of design, traffic, construction, materials testing, engineering surveys, maintenance, or planning.

Notes:

1. Applicants may substitute education in a civil engineering curriculum at an accredited college or university at the rate of 30 semester credit hours for each year of the required experience, up to a maximum of three years.

2. Applicants who possess an Associates Degree in either Engineering, Construction Management or Surveying or Surveying Technology from an accredited community college, college or university are considered to have met two years of the eight year experience requirement.

Licenses, Registrations and Certificates:

1. Employees in this classification may be assigned duties that require the operation of a motor vehicle. Employees in some positions in this classification may be required to possess a motor vehicle operator's license valid in the State of Maryland. A CDL license may be required for some positions.

2. National Institute for Certification in Engineering Technologies (NICET) certification, in-house certifications or state-sponsored, material-testing certification may be required for some positions.

3. Employees in this classification may be required to possess Federal Highway Administration (FHWA) certification for inspection of In-Service Bridges, or have the ability to acquire this certificate within a given time period.

4. Employees in this classification may be required to achieve certification in field testing procedures in concrete, soil aggregate and Hot Mix Asphalt within a given time period.

III. EXAMPLES OF WORK: (Examples are illustrative only)

Oversees or performs plan review, field inspections, and field investigations during design, construction and maintenance of roadways, structures and traffic control devices for conformance to plans and specifications;
Operates electronic and mechanical equipment required in surveying, drafting and design, field inspection, and materials testing;
Researches a variety of electronic and mechanical equipment in carrying out surveying, drafting and design and materials sampling and testing;
Provides information to and works with architects, engineers, contractors and developers to ensure adherence to standards and codes;
Conducts or participates in project milestone review meetings on transportation related projects;

Prepares correspondence to respond to or inform the public, elected officials, federal, state or local government agencies of project information;
Schedules and directs the work of construction inspectors assigned to construction and maintenance projects;
Monitors contract performance and project status for major construction and maintenance projects;
Develops and oversees material testing programs in permanent and portable labs and at material supplier facilities;
Monitors contractors, producers, and fabricators and assures quality control of materials used in the construction of roadways, bridges and facilities, and assures materials used meet state specifications;
Directs the preparation of plans, plats and drawings for various engineering improvements and installations, prepares construction drawings based on engineer's notes, survey notes, field and records research, and engineering calculations, updates maps, plats, and other engineering records based on "as builts," survey notes and other information, and conducts engineering surveys as needed;
Compiles quantities and reviews construction reports and other data;
Creates complex horizontal and vertical alignments using Computer Aided Design and Drafting (CADD) and coordinate geometry software;
Provides technical guidance and support to office and field personnel concerning design, survey, software, hardware and procedures;
Oversees the development of CADD plans, plats and other project documents;
Prepares and reviews special provisions, design agreements, and continuity of plans as necessary, and assists in determining if contract plans are complete;
Performs complex design and survey calculations to translate raw data into information for the design and construction of public works and other transportation-related projects;
Maintains records and prepares reports pertaining to public works installations and projects;
Compiles, documents, and reviews maintenance reports/studies including costs and other data, determining if maintenance contracts adhere to current maintenance practices and standards;
Oversees and is responsible for the clearance of utilities and other underground obstructions prior to subsurface exploration;
Oversees and is responsible for locating subsurface features through the use of preliminary engineering design documents and/or the use of electronic geographical positioning equipment;
Reviews, evaluates and approves Quality Control plans submitted by material producers and fabricators;
Performs hydrographic surveys of shipping channels and berths;
Establishes horizontal and vertical controls for hydrographic surveys;
Determines tide adjustments and edits hydrographic surveys;
Provides data, analysis, recommendations and corrective measures for Environmental Impact Studies;
Reviews work of other employees;
Performs multi-fatal accident analysis;
Performs other related duties.

IV. REQUIRED KNOWLEDGE, SKILLS AND ABILITIES:

Knowledge of basic engineering principles, practices, and methods;
Knowledge of CADD using Microstation, manual drafting and surveying;
Knowledge of design criteria, construction standards and inspection methods and techniques;
Knowledge of statistical principles;
Knowledge of algebra, geometry and the principles of basic mathematics used in engineering design, drawing and drafting;
Knowledge of AASHTO and other policies and procedures used in the design and construction of transportation projects;
Knowledge of Temporary Traffic Control Standards, National Electrical and Safety Codes, and Manual on Uniform Traffic Control Devices;
Knowledge of the principles and standards of highway, bridge and interchange design including geometrics, hydraulics, capacity, economics and traffic assignments;
Knowledge of materials and construction methods as they apply to the design of transportation projects;
Knowledge of Federal Highway Regulations and Criteria for Coding In-Service Bridge conditions;
Knowledge of Federal Aid regulations;
Knowledge of AASHTO and ASTM test specifications and methods;
Knowledge of effective supervisory methods and practices;
Skill in interpreting, analyzing, or preparing maps, deeds, plats, and plans;
Skill in operating computers using Microstation and other related engineering software;
Skill in the maintenance and operation of electronic and mechanical equipment used in performing complex technical engineering support tasks;
Skill in reading and creating blueprints and engineering drawings, right of way plats, and plans, using CADD or manual processes;
Skill in reading and interpreting complex engineering drawings and computations;
Ability to streamline and optimize complex design, surveying and mapping processes;
Ability to place complex traffic control devices and systems in operation;
Ability to maintain a variety of technical records and adapt records systems for computerization;
Ability to update computer design files, maps and other records;
Ability to establish and maintain effective working relationships with other employees and the general public;
Ability to prepare correspondence for transportation projects informing the public, elected officials and others about project specific data;
Ability to communicate effectively;
Ability to physically perform essential duties.

V. SPECIAL REQUIREMENTS:

Employees in this classification may be considered "Essential Employees" and may be required to sign and agree to all policies and procedures relating to "Essential Employee" status.

Date Revised: December 16, 2003

APPROVED: _____

Director, Office of Human Resources

TRANSPORTATION DESIGN ENGINEER V
Code 7665 Salary Grade 0021

I. CLASSIFICATION DEFINITION:

Transportation Design Engineer V is the senior level of licensed professional design engineering work responsible for managing large and complex engineering projects of major scope and importance involving a broad range of engineering disciplines, including some of the following: topographic and metes and bounds surveys, pavement design, structural design, hydraulic design, storm water management facilities, erosion and sediment control, environmental permitting, utility relocations, electrical design, mechanical design, and systems analysis and integration. Employees plan, develop, and coordinate engineering activities associated with the planning and design of transportation structures or facilities (e.g. bridges, highways, rails, buildings, airports, marine terminals, tunnels, or other major structures.) Employees apply engineering theories, principles and standards to a variety of complex engineering projects and processes including innovative contracting methods such as design build. Employees in this classification supervise lower level in-house engineers, and/or manage consultant engineering firms.

Employees receive managerial supervision from a higher-level engineering manager or other designated official. Work is performed in an office setting and in the field. When performing fieldwork, employees may be required to wear safety equipment. Employees are occasionally required to work on different shifts, evenings, or on weekends, and may be required to be on call to respond to after-hour emergencies.

Employees assigned to the Transportation Design Engineer V classification are distinguished from the Transportation Design Engineer IV classification by the responsibility for managing complex, major projects and supervising in-house engineers and/or consultant engineering firms. Transportation Design Engineer V positions also function with a greater degree of independence of action and authority than positions at the Transportation Design Engineer IV level. Transportation Design Engineer VI is distinguished from the Transportation Design Engineer V by the responsibility for providing supervision to in-house, licensed professional design engineer project managers.

II. MINIMUM QUALIFICATIONS:

Possession of a Maryland Professional Engineer license, in the appropriate option, is required. Evidence of license must be presented at the time of appointment.

Experience: One (1) year of experience managing engineering projects as a licensed, professional engineer.

Licenses, Registrations and Certificates:

1. An applicant's current license as a Professional Engineer in a state with comparable requirements acceptable to the Maryland State Board for Professional Engineers, in the appropriate option for which application is made, will be accepted but the applicant must obtain a Maryland license within twelve (12) months of appointment. Evidence of out of state registration must be presented at time of appointment.

2. Employees in this classification may be assigned duties which require the operation of a motor vehicle. Employees assigned such duties will be required to possess a motor vehicle operator's license valid in the State of Maryland.

Notes:

1. Registration requirements are established under Title 14, Business Occupations and Professions Article of the Annotated Code of Maryland.

2. Employees at the Maryland Aviation Administration may be required to obtain and maintain an Airfield Operator Permit in accordance with the Code of Maryland Regulations 11.03.01.04, Control of Vehicular Traffic on the Air Operations Area.

3. Employees at the Maryland Aviation Administration will be required to obtain and maintain an Airport security badge in accordance with 49 CFR Part 1542.209, Criminal History Records Check.

4. Employees of the Maryland Department of Transportation assigned to especially sensitive locations or facilities may be required to obtain and maintain a special security badge.

III. EXAMPLES OF WORK: (Examples are illustrative only)

Serves as project manager on complex engineering projects (geometric design, topographic metes and bounds surveys, pavement design, hydraulic design, storm water management facilities, erosion and sediment control, environmental permitting, and utility relocations);
Supervises lower level professional design engineers (in-house and/or consultants);
Conducts field work, survey, research, preliminary and final design; determines construction quantities; prepares right of way and easement descriptions;
Writes engineering specifications, develops geometric improvements;
Provides engineering detail for environmental impact statements;
Manages project components from concept through design project completion, including project scope, schedule, cost, quality, human resources, liability, and procurement;
Establishes and supports interdisciplinary project teams;
Oversees and monitors the performance of contractors and consultants to ensure that work is completed on schedule, within budget, and in accordance with the terms of the contracts;
Plans, coordinates and creates engineering plans, cost estimates and specifications for large and complex capital design project(s), such as the construction/ rehabilitation of roads, bridges, storm drains, rail, buildings, tunnels, runways and other transportation facilities;

Prepares and manages the preparation of permit applications, requests for proposals, consultant and interagency agreements, public information, and other applicable project documentation;
Plans and designs major and complex engineering project(s) associated with construction in a particular engineering specialty, such as foundations, roads, bridges, structures, buildings, access roads, utilities, tunnels, railroads, airport runways, harbor and port facilities structures, and a diversity of support facilities for building construction;
Administers consultant contracts including approval of monthly invoices and progress payments;
Develops, coordinates, and delivers major capital improvement projects;
Reviews and approves design concepts and design submissions from consulting engineers to ensure compliance with federal, State, and local standards and regulations, including National Environmental Policy Act (NEPA), American Association of State Highway Transportation Officials (AASHTO), and Maryland Department of Transportation (MDOT) standards;
Meets with consultants to resolve problems;
Develops engineering and structural solutions to problems arising from the use of land for construction purposes;
Writes contracts for engineering services; participates in selecting engineering consultants and contractors, prepares requests for proposals, support documentation and other procurement support materials;
Conducts studies and research to analyze and project present and future needs related to engineering designs and solutions for current and/or anticipated problems;
Ensures compliance with the NEPA, AASHTO, MDOT, and other applicable codes, policy, regulations, guidelines, and federal and State laws;
Conducts investigations of surface and subsurface conditions at proposed building sites, determines load-bearing capacity, and other conditions at the proposed sites;
Evaluates and selects available materials used in the construction of projects relative to foundations, landslides, and other potential conditions;
Prepares, reviews and approves preliminary budget estimates, work schedules and change orders for project(s); estimates costs and time requirements for current and projected construction project(s) and evaluates alternative project delivery methods;
Provides information to and works with architects, engineers, contractors and developers to ensure adherence to standards and codes;
Reviews submittals, shop drawings and requests for information; issues contract revisions during the construction phase of a project;
Conducts research, evaluates and makes recommendations regarding proposed and existing laws, standards and policies;
Represents MDOT to other agencies and the public regarding the development and delivery of project(s), including community involvement where applicable;
Answers inquiries from other agencies, interested parties and the public regarding engineering project(s);
Maintains and prepares project records and reports;
May plan, organize and lead the work of Engineers-In-Training, professionals, and other staff members in the conduct of assigned engineering project(s);
May provide testimony at formal hearings or in court;
Performs other related duties.

IV. REQUIRED KNOWLEDGE, SKILLS AND ABILITIES:

Knowledge of principles, practices, and methods of civil and structural engineering relating to public works design and construction;
Knowledge of AASHTO, NEPA, and MDOT engineering and environmental standards;
Knowledge of field engineering, including surveying, inspection, and construction practices;
Knowledge of design principles, strength of materials and stress analysis required in planning construction/rehabilitation project(s);
Knowledge of engineering specifications, plans, contracts, materials, standards, and regulations;
Knowledge of principles and practices of government budgeting and project management;
Knowledge of the principles and practices of effective supervision;
Knowledge of computer aided design drafting, databases, spreadsheets, and related technical software;
Knowledge of mathematics and physics applicable to civil engineering;
Knowledge of federal and State procurement methods, rules, and regulations:
Knowledge of effective team leadership methods and practices;
Skill in reading and preparing plans, blueprints, specifications, cost estimates and engineering reports;
Skill in making accurate engineering computations and drawings;
Skill in the use of drafting tools and related engineering equipment;
Ability to manage large and complex engineering projects and their components from concept through design completion, including project scope, schedule, cost, quality, human resources, liability, and procurement;
Ability to oversee and monitor the performance of contractors and consultants to ensure that work is completed on schedule, within budget, and in accordance with the contract terms;
Ability to analyze complex engineering projects and determine the most cost effective approach;
Ability to identify the need for change orders and to evaluate the financial status of project(s);
Ability to conduct engineering research and compile technical data;
Ability to consult with architects and engineers on structural layouts and designs;
Ability to perform fieldwork and conduct inspections of job sites;
Ability to prepare and clearly present detailed reports and recommendations on engineering problems;
Ability to prepare structural layouts and designs;
Ability to prepare contractual specifications and to review job estimates for structural layouts and designs;
Ability to review specifications, design plans, and other supporting contract documents submitted by consulting engineers to determine compliance with sound engineering practices and established standards, codes, and regulations including AASHTO and NEPA;
Ability to plan and coordinate the work of project team members;
Ability to establish and maintain effective working relationships with other employees, engineers, architects and the public and to communicate effectively with same.

V. SPECIAL REQUIREMENTS:

1. Employees may be subject to emergency recall 24 hours a day and may be required to maintain a reliable communication link (telephone or pager) for the purpose of emergency call back requirements.

2. Eligible applicants may be subject to a background investigation under federal or State laws and regulations. A conviction is not an automatic disqualification to employment. Erroneous, misleading or fraudulent information on an application is sufficient grounds for rejection from the hiring process, removal from the list of eligibles, withdrawal of an offer for employment or immediate discharge.

Date Adopted: January 1, 2008

APPROVED: _____
Director, Office of Human Resources

TRANSPORTATION DESIGN ENGINEER VI
Code 7666 Salary Grade 0022

I. CLASSIFICATION DEFINITION:

Transportation Design Engineer VI is the supervisory level of licensed professional design engineering work associated with the planning and design of transportation structures or facilities (e.g. bridges, highways, rails, buildings, tunnels, airports, marine terminals, or other major structures.) Employees supervise subordinate licensed professional engineer project managers in the planning, development, and coordination of large and complex engineering projects of major scope and importance, including some of the following: geometric design, topographic and metes and bounds surveys, pavement design, structural design, hydraulic design, storm water management facilities, erosion and sediment control, maintenance of traffic, environmental permitting, utility relocations, electrical design, mechanical design, and systems analysis and integration. Employees apply engineering theories, principles and standards to a variety of complex engineering projects and processes, including the use of innovative contracting methods such as design build. Employees in this classification supervise in-house, licensed professional design engineer project managers, and may supervise other engineering professionals, technicians and administrative staff.

Employees receive managerial supervision from a higher-level engineering manager or other designated official. Work is performed in an office setting and in the field. When performing fieldwork, employees may be required to wear safety equipment. Employees are occasionally required to work on different shifts, evenings, or on weekends, and may be required to be on call to respond to after-hour emergencies.

Transportation Design Engineer VI is distinguished from the Transportation Design Engineer V by the responsibility for providing supervision to in-house, licensed professional design engineer project managers.

II. MINIMUM QUALIFICATIONS:

Possession of a Maryland Professional Engineer license, in the appropriate option, is required. Evidence of license must be presented at the time of appointment.

Experience: Two (2) years of experience managing engineering projects as a licensed, professional engineer.

Licenses, Registrations and Certificates:

1. An applicant's current license as a Professional Engineer in a state with comparable requirements acceptable to the Maryland State Board for Professional Engineers, in the appropriate option for which application is made, will be accepted but the applicant must obtain a Maryland Professional Engineer license within twelve (12) months of appointment. Evidence of out of state license must be presented at time of appointment.

2. Employees in this classification may be assigned duties which require the operation of a motor vehicle. Employees assigned such duties will be required to possess a motor vehicle operator's license valid in the State of Maryland.

Notes:

1. Employees at the Maryland Aviation Administration may be required to obtain and maintain an Airfield Operator Permit in accordance with the Code of Maryland Regulations 11.03.01.04, Control of Vehicular Traffic on the Air Operations Area.

2. Employees at the Maryland Aviation Administration may be required to obtain and maintain an Airport security badge in accordance with 49 CFR Part 1542.209, Criminal History Records Check.

3. Registration requirements are established under Title 14, Business Occupations and Professions Article of the Annotated Code of Maryland.

4. Employees of the Maryland Department of Transportation assigned to especially sensitive locations or facilities may be required to obtain and maintain a special security badge.

III. EXAMPLES OF WORK: (Examples are illustrative only)

Supervises lower level licensed, professional engineer project managers engaged in the design of large scale, complex transportation structures or facilities;
Plans, manages, organizes, coordinates, supervises and evaluates the work of licensed professional engineers;
Oversees training and work performance, counseling as needed;
Manages project components from concept through completion, including project scope, schedule, cost, quality, human resources, liability, and procurement;
Manages the preparation of engineering designs, plans, specifications and cost estimates for the construction/rehabilitation of roads, bridges, communication systems, traffic management systems, construction and maintenance equipment, storm drains, rail, buildings, airport runways, harbor and port structures, and other transportation facilities; participates in public hearings; approves the finalizing of plans and specifications;
Manages the administration of consultant contracts including approval of monthly invoices and progress payments;
Manages the review of design submittals and supporting documentation from consulting engineers to ensure compliance with federal, State, and local standards and regulations, including National

Environmental Policy Act (NEPA), American Association of State Highway Transportation Officials (AASHTO) and Maryland Department of Transportation (MDOT) standards;
Meets with consultants to resolve problems;
Manages the review of plans and specifications for transportation facilities submitted for new construction, rehabilitation or improvements to ensure compliance with contracts, regulations and engineering standards;
May serve as project manager on large and complex engineering projects; conducts field work, survey, research, preliminary and final design; determines construction quantities; prepares right of way and easement descriptions; provides engineering detail for environmental impact statements;
Develops, coordinates, and delivers major capital improvement projects;
Reviews and approves design concepts and design submissions from consulting engineers to ensure compliance with standards and regulations;
Meets with consultants to resolve problems;
Develops engineering and structural solutions to problems arising from the use of land for construction purposes;
Writes contracts for engineering services; participates in selecting engineering consultants and contractors, prepares requests for proposals, Board of Public Works support documentation and other procurement support materials;
Oversees and monitors the performance of contractors and consultants to ensure that work is completed on schedule, within budget, and in accordance with the terms of the contracts;
Prepares and manages the preparation of permit applications, consultant and interagency agreements, public information, and other applicable project documentation;
Conducts studies and research to analyze and project present and future needs related to engineering designs and solutions for current and/or anticipated problems;
Ensures compliance with applicable codes, policy guidelines, and federal and State laws;
Prepares, reviews and approves preliminary budget estimates, work schedules and change orders for projects; estimates costs and time requirements for current and projected construction projects; and evaluates alternative project delivery methods;
Conducts research, evaluates and makes recommendations regarding proposed and existing laws, standards and policies;
Represents MDOT to the public regarding the development and delivery of projects, including community involvement where applicable;
Answers inquiries from other agencies, interested parties and the public regarding engineering projects;
Maintains and prepares project records and reports;
May provide testimony at formal hearings or in court;
Performs other related duties.

IV. REQUIRED KNOWLEDGE, SKILLS AND ABILITIES:

Knowledge of principles, practices, and methods of civil and structural engineering relating to public works design and construction;
Knowledge of AASHTO, NEPA, and MDOT engineering and environmental standards;
Knowledge of field engineering, including surveying, inspection, and construction practices;
Knowledge of design principles, strength of materials and stress analysis required in planning construction/rehabilitation projects;
Knowledge of construction contracts, specifications, plans, materials, standards, and regulations;
Knowledge of principles and practices of government budgeting and project management;

Knowledge of computer aided design drafting, databases, spreadsheets, and related technical software;
Knowledge of mathematics and physics applicable to civil engineering;
Knowledge of federal and State procurement methods, rules, and regulations;
Knowledge of effective supervisory methods and practices;
Skill in reading and preparing plans, blueprints, specifications, cost estimates and engineering reports;
Skill in making accurate engineering computations and drawings;
Skill in the use of drafting tools and related engineering equipment;
Ability to design and manage large engineering projects;
Ability to analyze complex engineering projects and determine the most cost effective approach;
Ability to identify the need for change orders and evaluate the financial status of projects;
Ability to conduct engineering research and compile technical data;
Ability to consult with architects and engineers on structural layouts and designs;
Ability to perform field work and conduct inspections of job sites;
Ability to prepare and clearly present detailed reports and recommendations on engineering problems;
Ability to prepare structural layouts and designs;
Ability to prepare contractual specifications and to review job estimates for structural layouts and designs;
Ability to review specifications and design plans submitted by consulting engineers to determine compliance with sound engineering practices and established standards, codes, and regulations;
Ability to plan, organize, coordinate, assign and evaluate the work of professional engineers, engineers-in-training, engineering technicians and other support staff;
Ability to establish and maintain effective working relationships with employees, engineers, architects and the public and to communicate effectively with the same.

V. SPECIAL REQUIREMENTS:

1. Employees may be subject to emergency recall 24 hours a day and may be required to maintain a reliable communication link (telephone or pager) for the purpose of emergency call back requirements.

2. Eligible applicants may be subject to a background investigation under federal or State laws and regulations. A conviction is not an automatic disqualification to employment. Erroneous, misleading or fraudulent information on an application is sufficient grounds for rejection from the hiring process, removal from the list of eligibles, withdrawal of an offer for employment or immediate discharge.

Date Adopted: January 1, 2008

APPROVED: _____
Director, Office of Human Resources