

“This document is available in alternate format upon request.”

ENGINEER SERIES

PREAMBLE

INCLUSIONS

The Engineer (EG1 – EG5) series encompasses five levels where the primary work is dedicated to the practice of professional engineering meaning any act of planning, designing, composing, measuring, evaluating, inspecting, advising, reporting, directing or supervising, or managing any of the foregoing, requiring the application of engineering principles and that concern the safeguarding of life, health, property, economic interests, the public interest or the environment.

Included in the series are positions which require the incumbent to be registered as a member of the Association of Professional Engineers and Geoscientists of the Province of Manitoba or other provincial legislation which regulates the practice of engineering.

EXCLUSIONS

This series does not include:

- positions where the primary duties and responsibilities are included in the definition of any other classification specification.

APPLICATION OF THE SERIES

Further to the inclusions statement in the preamble, the series is applied based on the general intent statement at each level and is further supported by the factors described at each level.

ENGINEER 1

GENERAL INTENT

This is the introductory level of engineering and project management work at the graduate level performed under the immediate and direct supervision of a Professional Engineer. An incumbent receives on-the-job training in the practical and professional aspects of work with direct supervision, generally in accordance with established codes, standards and practices. Incumbents assist in, and perform technical and engineering work relative to the academic training obtained up to graduation.

The Engineer 1 classification is a training and development level. Incumbents are not normally promoted to the full working level until they have obtained registration as a Professional Engineer in the Province of Manitoba.

FACTORS

COMPLEXITY

Skills/Expertise Required

- Bachelors-level degree in Engineering (specified discipline, as preferred)
- Registered (or be eligible for registration) with the Association of Professional Engineers and Geoscientists of the Province of Manitoba, with appropriate scope of practice in specified discipline.
- Scope of practice is directly related to the engineer's individual level of expertise.

Guidelines

- Work is governed by internal policies and procedures and guided by related Acts, Regulations and codes.
- Works within accepted ethics, standards and guidelines associated with the practice of Engineering.
- Works within accepted standards for Engineer-in-training.

SUPERVISORY AND ADMINISTRATIVE RESPONSIBILITY

Nature of the Functions Supervised

- Assigns and checks work of small group of technical staff.
- May review the work of technical staff and/or other staff to ensure protection and safety of the public and staff.

OTHER LEVEL DETERMINANTS

Independence of Action or Decision Making

- Exercises control over routine work where methods are clearly defined and technical guidance is readily available.
- Incumbents are expected to work independently in terms of managing workload.
- Selects and applies appropriate methodologies and techniques to verify that solutions meet specifications, codes and standards.
- Incumbent cannot accept professional responsibility and/or legal liability for engineering work produced.

Supervision Received

- Receives general and direct supervision from a Professional Engineer.
- Receives oral or written instructions as to methods and procedures to be followed in work assignments.
- Work is subject to review for accuracy and validity of findings
- Results are normally reviewed in detail and technical guidance is normally present to deal with problems and difficulties.

Consequence of Error

- May cause moderate delays and additional allocation of funds and resources within the unit/program, usually discovered before results become serious.
- May affect public safety.
- May cause environmental damage.
- Deficiencies will not affect the attainment of the operational objectives.

ENGINEER 2

GENERAL INTENT

This is the first level of professional engineering accountability. This is professional engineering and project management work on standard projects/assignments. Under the supervision of a more senior Professional Engineer, an incumbent performs assigned engineering tasks within their scope of practice using standard engineering methods and techniques for their solution. Engineers at this level undertake studies, analyses and interpretations where technical subject matter, usually of limited scope, is involved.

FACTORS

In addition to the factors described at the EG1 level, the following factors apply to positions at the EG2 level:

COMPLEXITY

Skills/Expertise

- Bachelor-level degree in Engineering (specified discipline, as preferred).
- Registered (or be eligible for registration) **as a Professional Engineer** with the Association of Professional Engineers and Geoscientists of the Province of Manitoba, with appropriate scope of practice in specified discipline.
- Scope of practice is directly related to the engineer's individual level of expertise.

Originality

- Applies standardized methods and procedures vs. creativity, independent research, development of new techniques, analysis or drawing conclusions.

Variety

- Work requires similar knowledge or skills.

SUPERVISORY AND ADMINISTRATIVE RESPONSIBILITY

Nature of the Functions Supervised

- Provides technical guidance and advice to junior Engineers and/or technical staff assigned to work on a common project.
- Provides work direction, training and coaching to engineering and/or technical staff on work assignments.
- Makes recommendations concerning selection and training of staff.
- May make recommendations concerning performance management of staff.
- May give technical direction to contractors on projects and approve finished work.

OTHER LEVEL DETERMINANTS

Independence of Action or Decision Making

- Work is performed independently with responsibility for the selection of methods employed and the validity of the results obtained.
- Provides engineering support, input and recommendations on projects, studies and investigations where technical subject matter, normally of limited scope, is involved.
- The position may act as a consultant on matters involving engineering considerations to senior management and professional personnel.
- Incumbent accepts full professional engineering accountability and associated legal risks.

Supervision Received

- Receives direction on position expectations and deliverables on projects and work assigned, although the amount of supervision may vary with the assignment.
- Technical guidance is normally available to advise on unusual features of the assignment.

Contacts

- Relates directly with local government authorities, other government agencies and private organizations.

Consequence of Error

- The incumbent may lose their certificate or license to practice Engineering.

ENGINEER 3

GENERAL INTENT

This level is advanced professional engineering work performed under minimum supervision which may include project management. Incumbents exercise independent engineering judgment in solving problems by integrating and synthesizing standard procedures, modifications of established techniques or methods developed in previous assignments within their scope of practice.

FACTORS

In addition to the factors described at the previous EG levels, the following factors apply to positions at the EG3 level:

COMPLEXITY

Skills/Expertise Required

- Bachelor-level degree in Engineering (specified discipline, as preferred).
- Registered (or be eligible for registration) as a Professional Engineer with the Association of Professional Engineers and Geoscientists of the Province of Manitoba, with appropriate scope of practice in specified discipline.
- Scope of practice is directly related to the engineer's individual level of expertise.

SUPERVISORY AND ADMINISTRATIVE RESPONSIBILITY

Nature of the Functions Supervised

- May assume responsibility for the technical direction of one or more groups of junior Engineers and/or technical staff and makes recommendations for the organization of groups under their technical control.
- Reviews project progress/plans and/or work assignments of subordinates.

OTHER LEVEL DETERMINANTS

Independence of Action or Decision Making

- Maintains, develops and modifies work procedures or applications as required to suit projects, program objectives and industry standards.
- Solves problems within an area of learned things and past practice.

- Reviews submissions from independent Engineers for conformity with Departmental policies, procedures, guidelines, legislation and engineering best practices.
- Makes recommendations arising from work assignments/projects that are reviewed for soundness of judgment but are generally accepted as technically accurate and feasible.
- May make decisions consistent with guidelines and Departmental policies and procedures.
- May provide engineering advice within professional capacity without supervisory review.
- Decisions are generally made through standard procedures; however modifications of techniques may also be recommended when performing special investigations or improvements to procedures.
- Makes decisions and takes action on the application of operating policies and standards widely accepted within the profession.

Supervision Received

- Receives assignments in the form of concepts which are based on scope of initial assignment.
- Work is verified largely through technical/engineering dialogue with supervisor.
- Work is reviewed for completeness and accuracy before proceeding to next phase.

Consequence of Error

- May cause considerable delays, financial implications and/or political liabilities involving public and/or staff safety.
- May affect scheduling and project completion in other units/regions/branches/areas and unless adjustments are made, could affect attainment of the operational area or Branch objectives.
- Delays may have significant impact(s) on clients programs.

ENGINEER 4

GENERAL INTENT

This level is professional engineering work involving continuing supervisory responsibility of professional Engineers and/or technical staff, and/or specialization as a Departmental technical authority/expert/specialist in a specific sub-discipline of engineering.

Under general direction and with considerable latitude for independent action and decisions, positions act as a principle engineering resource/assistant to the head of a major unit. This encompasses full supervision with considerable administrative responsibility.

OR

As the Departmental technical authority/expert/specialist, has achieved appropriate recognition in an engineering sub-discipline of major importance to the organization. Engages in research and advanced engineering studies calling for approaches that are creative and innovative, and advises on policy matters.

Normally only one Departmental technical authority/expert/specialist will be found in a particular sub-discipline of engineering in a Department.

FACTORS

In addition to the factors described at the previous EG levels, the following factors apply to positions at the EG4 level:

COMPLEXITY

Skills/Expertise Required

- Bachelor-level degree in Engineering (specified discipline, as preferred).
- Registered (or be eligible for registration) as a Professional Engineer with the Association of Professional Engineers and Geoscientists of the Province of Manitoba, with appropriate scope of practice in specified discipline.
- Scope of practice is directly related to the engineer's individual level of expertise.
- Performs specialized professional engineering work and advises the Department on technical and policy matters.

Originality

- As it relates to technical application of engineering principles, creativity, independent research, development of new techniques, analysis or drawing conclusions are required.
- As the technical authority/expert/specialist, may participate in the development of legislation and technical standards.

Variety

- Project scope is generally provincial in nature.
- May have supervisory responsibilities.

SUPERVISORY AND ADMINISTRATIVE RESPONSIBILITY

Nature of the Functions Supervised

- Supervises the technical aspects of the work and organizes the assignments of one or more groups of professional Engineers and/or technical staff.
- May assist in the preparation of budgets.
- Plans or assists in planning section/unit programs and scheduling of work priorities.

OTHER LEVEL DETERMINANTS

Independence of Action or Decision Making

- Participates in, and makes recommendations to the Department on technical legislation, regulatory and policy matters.
- Using a systemic approach, participates in, and develops consistent approaches to engineering issues.
- Formulates work procedures and operating plans related to assigned projects.
- As the Departmental authority/expert/specialist, through the integration of research and best practices, may independently make engineering decisions on own initiative.
- Makes responsible decisions, not normally subject to technical review, on all technical matters assigned, subject to established operating policies and financial controls.

- Makes recommendations on how to apply and integrate best practices and research into engineering decisions and issues.
- Has latitude to recommend engineering exceptions to standard procedures and established techniques/methods on specific problems related to area of specialty.
- Independently interprets legislation, regulations, policies and guidelines on technical/specialist matters and may communicate same to other government Departments and private agencies.
- May make responsible technical and/or administrative recommendations pertaining to functions assigned, including the expenditure of funds and implementation of major programs.

Supervision Received

- Works independently on broad, general assignments, with responsibility for the planning, direction and conduct of all associated activities, limited only by policy and established financial controls.

Consequence of Error

- May cause systemic or Province wide financial and/or political liabilities.

ENGINEER 5

GENERAL INTENT

This level is professional engineering work involving major supervisory responsibilities and program area management. An incumbent provides leadership and direction while supervising the organizational and technical aspects of the work of a group of professional Engineers and technical employees, or a smaller group of highly qualified professional personnel engaged in technical applications involving major financial expenditures. Engineers at this level participate and contribute to the short and long range program planning and the development of policy and standards for the branch. They make responsible independent decisions on priorities of projects, work assignments and resource allocation within an overall program, normally not subject to technical review.

FACTORS

In addition to the factors described at the previous EG levels, the following factors apply to positions at the EG5 level:

COMPLEXITY

Skills/Expertise Required

- Bachelor-level degree in Engineering (specified discipline, as preferred).
- Registered (or be eligible for registration) as a Professional Engineer with the Association of Professional Engineers and Geoscientists of the Province of Manitoba, with appropriate scope of practice in specified discipline.
- Scope of practice is directly related to the engineer's individual level of expertise.

Originality

- Creativity, independent research, development of new techniques, analysis or drawing conclusions.

Variety

- Responsible for the most difficult/complex program planning responsibilities.
- Supervision of professional Engineers and/or highly qualified professional/technical positions.

- Management of program area including short and long range program planning and implementation.
- Participation on Departmental, national and/or international working committees.

SUPERVISORY AND ADMINISTRATIVE RESPONSIBILITY

Nature of the Supervisory Function

- Participates in short and long range planning for program area.
- Participates in the preparation of technical standards.
- May prepare budgets and/or monitor financial controls of program area.
- Makes recommendations on modifications to policy.
- Co-ordinates the work of the program area with that of other program areas.
- Manages, administers and delivers engineering programs.
- Manages the coordination of schedules and program resources.
- Manages risk associated with program area.
- Measures outcomes through performance and quality control management of program area.

OTHER LEVEL DETERMINANTS

Independence of Action or Decision Making

- Makes responsible technical and/or administrative decisions pertaining to overall program and technical assignments, including the expenditure of funds and implementation of major programs, subject only to overall policies, budgets and other financial controls.
- Makes final technical and/or administrative policy decisions for program.
- Coordinates, schedules and delivers branch responsibilities and initiatives to meet the objectives of the Division, Department and the broad objectives and policies of the Province.
- May approve engineering and technical assessments and/or recommendations as prepared by internal and/or external staff and/or service providers for use within program area.

- Prepares and/or reviews program/Branch correspondence with respect to technical matters falling under the position`s purview.
- Responsible for meeting program area objectives and deliverables.
- As the program technical expert, may represent Department on program legal matters.

Supervision Received

- Takes action without reference to superiors, except where policy changes are required.

Contacts

- May represent Province on national committees.