

**BENCHMARK POSITION DESCRIPTION – BM #37  
MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE**

<b>1. POSITION TITLE</b> Sr. Materials and Pavement Engineer	<b>2. CLASSIFICATION LEVEL</b> LSO 4
<b>3. DIVISION</b> Highways	<b>4. BRANCH</b> Engineering
<b>5. IMMEDIATE SUPERVISOR</b> Chief Geotechnical, Materials and Pavement Engineer	<b>LOCATION</b> Victoria

<b>Program Function</b>	Describe the purpose of the program and organization in which the position operates.
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The primary function of the Geotechnical, Materials and Pavement section is to provide research, technical and management expertise for roadway planning, embankment and slope stability assessment, foundation design, geological hazards, natural and engineered materials evaluation. The section is also responsible for the development and maintenance of all geotechnical, materials and pavement policies, standards, specifications and for the provision of expert professional advice and recommendations to the Ministry.

<b>Purpose of Position and Summary of its Functions</b>	This may be used for POSTING purposes.
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The primary function of this position is to plan and develop provincial highway pavement construction and rehabilitation policy, standards and strategies. As the Ministry's expert on materials and pavement, the position also initiates and undertakes research in pavement management and pavement materials application technologies, and provides specialized expert advice and recommendations to Ministry staff on pavement and materials engineering issues.

<b>Organizational Structure and Working Environment</b>
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The section is part of the Engineering Branch which reports to the Chief Engineer. The Sr. Materials and Pavement Engineer reports directly to the Chief Geotechnical, Materials and Pavement Engineer. The position functions with considerable independence in the provision of professional expertise and technical support to various Headquarters, Regional and District staff.

<b>Position's Specific Functions and How They Are Performed</b>
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**1. 30% Plans and develops provincial highway pavement construction and rehabilitation policy, standards and strategies by:**

- Soliciting and analyzing the input of regional staff and pavement design staff draft
- Reviewing and revising existing policies, procedures and standards
- Preparing policy papers and technical circulars on pavement management issues
- Developing and recommending new pavement development and design standards, policies and strategies for review by the Chief Geotechnical, Materials and Pavement Engineer
- Evaluating and interpreting scientific literature regarding advances in research and methodology, assessing implications to project level pavement management and materials application and developing adaptations for ministry application
- Evaluating the latest pavement materials, techniques and testing technology in cooperation with other jurisdictions, universities, professional organizations, and agencies
- Developing pavement rehabilitation systems and procedures
- Developing standard testing and design methods for a variety of pavement structures and materials

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**2. 35% Initiates and undertakes research and development projects in pavement management and pavement materials application by:**

- Analyzing research and development requests, coordinating development work scheduling and ensuring quality control on the project
- Coordinating province wide information collection, pavement management and development activities and maintaining scientific records
- Overseeing research and development activities
- Acting as the primary contact engineer for the Canadian Strategic Highway Research Program.
- Investigating and assessing new highway pavement construction materials in the field
- Investigating the stability of flexible, semi-rigid and rigid pavements, analyzing in-depth properties of asphalt materials and developing roadway structural layering profiles
- Conducting experiments to increase performance levels and reduce costs using a variety of products
- Preparing analytical reports of pavement testing, including summaries, detailed test results and outlines

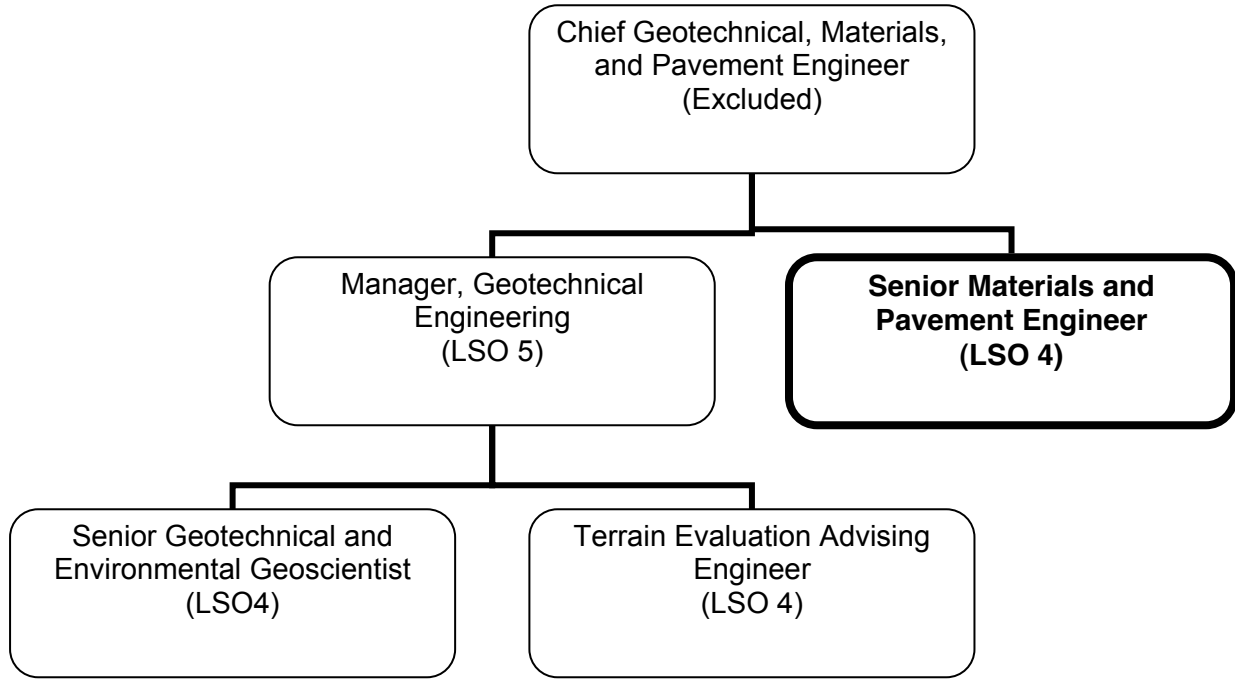
**3. 30% As the Ministry's expert on materials evaluation and assessment, provides specialist advice to Ministry staff, and paving contractors and represents the ministry on pavement and materials issues by:**

- Preparing and presenting seminars and workshops regarding project level pavement management policies, standards, systems and operations
- Advising specification committees regarding developments and specification changes
- Attending national and international conferences and preparing and presenting papers
- Disseminating information and technical interpretations to ministry staff
- Attending inter-jurisdictional meetings regarding pavement development and design
- Training regional pavement design engineers and technicians in pavement design and testing equipment and methods
- Designing and establishing cost effective project level pavement management systems
- Providing certified products and methodology for operation programs including the Provincial Pavement Management Program

**4. 5% Performs other related duties**

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**ORGANIZATION CHART – SR. MATERIALS AND PAVEMENT ENGINEER**



**BENCHMARK CLASSIFICATION RATIONALE – BM #37  
MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE**

**TITLE: Sr. Materials and Pavement Engineer**

**LEVEL: LSO 4**

**DIVISION/BRANCH: Highways/Engineering**

FACTOR	POINTS
<p><b><u>PURPOSE OF POSITION</u></b> As the Ministry's expert in materials and pavement, the position develops policies, standards, specifications and procedures for materials evaluation and assessment, and for pavement evaluation and assessment. The position provides advice and consultative services to Ministry staff.</p> <p><b><u>KNOLWEDGE</u></b> The work requires a deep knowledge of geotechnical and materials engineering with particular emphasis on materials assessment. The work is considered to be highly analytical and highly interpretive in nature in the review and evaluation of rehabilitation strategies, pavement performance, testing methodologies and in the development of new pavement development and design standards.</p> <p>Requires registration as a Professional Engineer.</p>	E(2) 130
<p><b><u>JUDGEMENT</u></b> <u>Originality and Complexity:</u> The position develops standards, specifications, procedures and proposed policies for materials and pavement evaluation and assessment. The work requires making major adaptations to previously developed geotechnical and materials solutions resulting from the position's identification and analysis of complex materials engineering issues encountered in ministry rehabilitation, construction and maintenance projects.</p> <p>The position is required to analyze and interpret a variety of complex data and interpret the results to develop solutions to complex geotechnical problems. The engineering properties of soil and rock vary considerably, unlike those of manufactured materials, and are therefore difficult to assess.</p> <p><u>Technical Supervision Received:</u> While proposals for policy change would be reviewed for adequacy and completeness, much of the position's work output, such as specialist advice and reporting on various research initiatives, goes directly to Ministry staff and licensed professional engineering consultants.</p>	C3 99
<p><b><u>ORGANIZATION AND PROGRAM ROLE</u></b> The primary role of the position is to provide consultative services, recommendations and expert advice to Ministry staff and licensed professional consultants.</p>	II(a) 43
<p><b><u>ADMINISTRATIVE SUPERVISORY RESPONSIBILITY</u></b> The position does not administratively supervise any staff.</p>	0

**TOTAL POINTS 272**

LEVEL	POINT RANGE
1	168 – 203
2	204 – 237
3	238 – 267
<b><u>4</u></b>	<b><u>268 – 295</u></b>
5	296 – 365