

POSITION DESCRIPTION



POSITION	POSITION NUMBER
Senior Design Engineer	1097
CLASSIFICATION	LOCATION
Band 7	Phoenix
DEPARTMENT	DIVISION
Design, Survey and Drainage	Infrastructure and Environment

Position Objectives

This position supervises three staff positions. The position reports directly to the Coordinator Design, Survey and Drainage. The Design, Survey and Drainage unit is responsible for the design of the City of Ballarat Capital Works Program civil infrastructure projects. These projects include road construction, roundabouts, intersections, and traffic management treatments. The designs include associated infrastructure: drainage, pedestrian crossings, Kerb and channel, footpaths, line marking and signage.

The Design, Survey and Drainage unit undertakes engineering surveys, investigations, planning, preparation of concepts, public consultation, final design, and preparation of documents for projects including schedules and specifications.

The position will also provide:

- An efficient and accurate engineering design, plan production and Quality Assurance specification service for civil infrastructure projects.
- Engineering design services for large and complex infrastructure projects.
- Technical support and direction to Design, Survey and Drainage staff in all engineering design related matters.

Key Responsibility Areas

Civil Design

- Assist the Coordinator Design, Survey and Drainage in the preparation and planning of the design program.
- Allocate civil works designs to Design Engineers as appropriate and in line with the works program.
- Undertake design of roads, drainage, and other infrastructure projects
- Enhance survey data to obtain accurate base plan information using electronic format/software and prepare accurate existing condition drawings (plans, longitudinal and cross sections).
- Prepare detailed concept drawings.

Design and Assessment of Major Civil Infrastructure Projects

- Prepare detailed design of Council's major and complex roads, drainage projects, traffic management items and other works including full computations ensuring that all works conform with adopted principles.
- Design of road pavements using specialised equipment to enable assessment of site conditions and incorporation into design documentation.
- Prepare detailed design drawings in CAD format to Councils standard requirements.
- Prepare Specifications based upon standard VicRoads shell format for each major project, for public tender.

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- Undertake preliminary assessments including onsite investigations for State and Federal Government funded road / traffic management projects
- Verify as-constructed details and transcribe onto existing drawings using manual and computer aided methods.

Estimate Costs of Construction of Major Design Projects

- Calculate accurate quantities of all project items and prepare detailed cost estimates for construction, utilising existing standard rates.
- Vary the standard rates dependent upon project scope and complexity.
- Maintain and update unit rate schedules for civil construction and verify using first principals.

Technical Assistance and Guidance to Team

- Provide technical assistance and guidance to subordinate Design, Survey and Drainage team members.
- Lead a team of three staff

Major Events and Land Development Projects.

- Assist the Events Ballarat office in the preparation of road traffic management plans for the various events held throughout the municipality.
- Assess road and road traffic management control items for new subdivisions when requested by the Land Development Unit.

Customer Service

- Accurately and promptly advise internal and external clients concerning maps, plans, survey information and general drafting matters as required.
- Provide timely, accurate and courteous responses to customer and client requests.
- Actively participate in the implementation of a culture of customer service.
- Remain updated on new and relevant technology and to attend courses and seminars as directed that are relevant to the application of such technology and technique.

REPORTS TO:	DIRECT REPORTS:
<ul style="list-style-type: none"> • Coordinator Design, Survey and Drainage 	<ul style="list-style-type: none"> • 2 X Design Engineers • Design and Support Officer
ORGANISATIONAL RELATIONSHIPS	
Internal: <ul style="list-style-type: none"> • All divisions and business units of Council 	External: <ul style="list-style-type: none"> • Government/Statutory Authorities • External and Internal Consultants • Land Developers • Community Groups and Organisations • Residents and General Public • Private Clients

ORGANISATIONAL RELATIONSHIPS

POSITION DESCRIPTION



Accountability and extent of authority

- Accountable to the Coordinator for producing existing conditions drawings, accurate innovative design drawings and Quality Assurance specifications in accordance with sound engineering design principles within appropriate timeframes particularly for major projects.
- Responsible for providing technical advice and guidance to design and survey staff.
- Responsible for producing specialised projects, drawings and technical submissions as required.
- Responsible for planning and organising activities to achieve appropriate timelines.
- Responsible for providing support to the Coordinator
- Authorised to provide technical comments within his/her area of expertise and in accordance with Council's policies and guidelines.

Judgement and decision making

- Provide sound solutions, advice and recommendations on matters relating to civil infrastructure design.
- Judgement and decisions will be required on complex civil infrastructure design
- Resolution of complex design problems using relevant design principles and Council policy, with limited guidance required from Coordinator Design, Survey and Drainage.
- Complex problem resolution on an as required basis which are not related to previously encountered situations where some originality and creativity is required.

Specialist skills and knowledge

- Sound knowledge and operation of relevant design software such as MAGNET, AutoCAD, and relevant civil engineering packages
- Sound knowledge of VicRoads shell documentation and other minor shell documents used for lower levels of value.
- Maintain a professional development log to be eligible for, or to retain RPEng status.

Management skills

- Ability to plan effectively and efficiently, co-ordinate, organise and prioritise one's own work and work of subordinate staff (with assistance) to achieve organisational objectives within scheduled timeframes despite conflicting pressures in an environment of change.
- Ability to provide technical guidance and assistance to Engineering Designers and other staff on use of appropriate methods, materials, and equipment.
- Knowledge of Equal Employment Opportunity and Occupational Health and Safety principles and procedures.

Interpersonal skills

- Provide excellent customer service to all stakeholders, residents and staff, and support others to do the same
- Ability to negotiate, advise, liaise, and persuade to gain cooperation from other staff, public authorities, consultants and other customers is essential.
- Ability to communicate effectively and clearly convey policy and development philosophy in relation to civil infrastructure design.
- Sound written and verbal communication skills for external and internal liaison/correspondence.
- Ability to work as part of a team.

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Qualifications and experience

- 4 Year Tertiary Degree in Civil Engineering providing eligibility for Registered Professional Engineers status.
- Demonstrated ability in leading and supervising staff.
- Excellent written and verbal communication skills, including the proven ability to write objective reports with practical recommendations
- Demonstrated design and drafting ability.
- Demonstrated skills with computer-aided design and drafting

SELECTION CRITERIA

- 4-year degree qualification in Civil Engineering eligible for Registered Professional Engineers (RPEng) status in accordance with the Professional Engineers Registration Act 2019.
- Experience and expertise in civil infrastructure design particularly road, traffic management items and drainage.
- Expertise in the operation of computer-aided design software - MAGNET, Autocad and other engineering software packages, including traffic management software and Council's IT Software.
- Excellent written and verbal communication skills.
- Ability to supervise and lead a small team and work as a team member.
- A strong positive culture and customer focus.
- Excellent analytical and problem-solving skills.