



ENGINEERING DESIGN GUIDELINES

QUALITY ASSURANCE REQUIREMENTS FOR DESIGN

Planning Scheme Policy No. 15.10

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1 Quality System Requirements for Design

1.1 Scope

This Guideline sets out the process for quality assurance of designs required for Operational Works approval and undertaken as part of Council's road and drainage Capital Works Program. The requirements are applicable to all design work whether undertaken by Council's design staff, Consultant or a Sub-consultant.

The Guidelines refers to the detail engineering design processes. Requirements which refer to the development of the Concept Design are generally covered in other sections of Council's Engineering Design Guidelines.

1.2 Objectives

This Guideline aims to set standards and document requirements for the execution and recording of design processes in order that the infrastructure associated with any development is designed to be fit for service and of a standard reasonably maintainable when it is accepted by Council as a community asset

It is also an objective that these qualities be readily demonstrable by clear records of key design processes and that data relevant to the upkeep of the assets is available to Council officers.

1.3 Reference and Source Documents

(a) Council Specifications

All Design Guidelines and Construction Specifications
All Council's Policies

(b) Australian Standards

AS/NZS 3905.2	Guide to Quality System Standards AS/NZS 9001, AS/NZS 9002 and AS/NZS 9003 for construction
AS/NZS 3913	Quality Manuals – Guide to Preparation
AS/NZS ISO 8402	Quality Management and Quality Assurance – Vocabulary
AS/NZS ISO 9001	Quality Systems – Model for Quality Assurance in Design
AS/NZS ISO 9004.1	Quality Management and QUALITY System Elements - Guidelines

(c) Other

Integrated Planning Act, 1997 and Amendments
Local Government Act (1993)
Environmental Protection Act, 1994 and Amendments

1.4 Certification

The Designer shall present all engineering drawings to Council for acceptance. Each set of drawings shall be accompanied by a Certification Report which will be signed by an RPEQ. The Design Certification Report will comprise the certificate set out in the Annexure A.

The Design Certification Report is required when the final drawings and resubmission drawings are submitted. Certification is not required with sketch plans or concept plans

In addition to the Design Certification Report, the engineer shall submit a design “Non-Compliances Report” which shall clearly identify any aspects of the design which does not meet requirements or tolerances set out in Council's Design Guidelines, Construction Specifications, Local Laws or Planning Approval conditions.

Council officers are not responsible for checking drawings in detail and it is the engineer's responsibility, through their own internal quality assurance procedures, to ensure that the drawings and calculation sheets are in accordance with Council's standards, are of acceptable engineering practice and will result in a safe and acceptable design.

Council's checking will be on an audit basis only and the RPEQ who certifies the individual respective drawings and calculation sheets will be responsible for any consequences as a result of the inadequacy or inappropriateness of the design.

1.5 Minimum Drafting Requirements

Design drawings shall be definitive and clearly set out so as to present the design concepts in such a way that the project can be understood, specified for construction and satisfactorily built.

All design drawings shall comply with the Engineering Design Guideline – D20 Drawings and Documentation.

1.6 Designer's Qualifications

A Registered Professional Civil Engineer (RPEQ) shall be required to certify plans for roadworks, drainage works, water supply, sewerage works. (excluding pumping stations), a bridge, retaining walls, miscellaneous structures, buildings, pumping stations and flood control structures.

1.7 Records

The Designer shall retain appropriate design records in a format such that they can be understood readily by design staff with no prior knowledge of the particular design.

A design file shall be maintained by the Designer containing records of calculations, approvals and decisions, geotechnical data and other design data which could be relevant in reviewing aspects of the design or planning future maintenance responsibilities.

Particular requirements apply to hydrological and hydraulic design data. (Refer to Council's Engineering Design Guideline – D5 Stormwater.

Copies of records are to be made available to Council upon request.

1.8 Audit

Council shall have the right to audit of all processes and documents related to the project design. The Designer shall provide reasonable assistance to a nominated Council's Officer in inspecting records of designs submitted to Council for acceptance.

