

Contract Administration Services (CAS) CRA03 – Technical Brief – Constructability Reviewer Qualifications and Experience

To be considered for the Contract Administration Services (CAS) prequalification levels, applicants must satisfy the mandatory qualification, prerequisite level and mandatory experience requirements.

Academic / Professional Qualifications – Mandatory

- For engineers:
 - A degree in Civil Engineering or an equivalent Civil Engineering qualification, which is accepted by the Institution of Engineers Australia as a full Member (MIEAust), and
 - Registered Professional Engineer in Queensland (RPEQ) Civil.
- For designers:
 - A Bachelor of Engineering Technology (Civil) / Bachelor of Technology (Civil) or an equivalent qualification from a recognised tertiary institution, which is accepted by the Institution of Engineers Australia as a Technologist Member (TMIEAust), or
 - An Associate Degree in Engineering (Civil), which is accepted by the Institution of Engineers Australia as an Engineering Associate Member (AMIEAust).

Prerequisite level

- Nil.

Academic / Professional Qualifications – desirable

- Post graduate qualifications in construction management.

Roles and responsibilities

Role:

The Constructability Reviewer role will contribute to the development and optimisation of designs which are prepared as part of Transport and Main Roads' [OnQ Project Management Framework](#). The role will review the design and associated construction processes to identify obstacles before a project is actually built to reduce or prevent errors, delays, redesigns, variations, and cost overruns.

The term “constructability” refers to:

- The extent to which the design facilitates ease of construction, subject to the scope of the project, and
- An approach of achieving optimum integration of construction knowledge and experience in planning, engineering, site construction and balancing various project constraints to achieve the overall project objectives.



Responsibilities:

Depending on the phase of the project, the consultant may undertake a number of different activities for example:

- Reviewing constructability of the design.
- Reviewing construction bid documents and from a constructor's point of view, confirm that the drawings and tender documents are clear, constructible, maintainable, thereby resulting in reduced variations or impacts to the project.
- Checking the items / schedule against the plans and specifications to ensure relevant bid item breakdowns, appropriate choices of lump sum versus unit price items, and accurate item descriptions.
- Completing a complexity analysis. This is used to determine whether or not elements can be simplified.
- Preparing an overview of key construction risks.
- Reviewing construction and/or traffic staging.
- Developing a construction Gantt Chart.
- Facilitating a Value Engineering Workshop (including assessing design options, reviewing, functionality, constructability, costs).
- Reviewing mass haul diagrams.
- Identification of any errors, ambiguities or discrepancies within the tender documents.
- Identification of any possible design enhancements or innovations including benefits to Transport and Main Roads and provision of practical advice to Transport and Main Roads on the implementation of such given the time constraints for project delivery

Out of Scope

- Cost estimating activities.
- Peer review or Proof Engineering of the design, and
- Project life cycle or sustainability analysis.

Experience – Mandatory

- For engineers, a minimum of 13 years' post-RPEQ registration experience or a minimum of 15 years of substantial post graduate experience in the construction of road infrastructure projects.
- For designers, a minimum of 15 years of substantial post graduate experience in the planning and civil design of road infrastructure projects.
- Demonstrated knowledge and experience in constructing road infrastructure (as an engineer or designer) to Transport and Main Roads' policies, standards, and specifications.

Experience – Desirable

- Demonstrated experience and capability in:
 - Delivering constructability reviews on road infrastructure projects.
 - Planning for construction including preparation of bids, estimating, staging, engaging subcontractors.
 - Identification of design enhancements, innovations, improved staging / sequencing of works through peer review processes.
 - Delivering and managing transport infrastructure construction contracts, and
 - Apply project management principles.

Information Required

- Your CV should, as a minimum, provide details of skills, experience, and key achievements from your last three projects that pertain to **this** engagement.

