

# Master Specification

## Part PC-PL5

### Cost Estimation

September 2024



**Government of South Australia**  
Department for Infrastructure  
and Transport

**Build.**  
**Move.**  
**Connect.**

## Document Information

Document Information	
K Net Number:	14010695
Document Version:	0
Document Date:	30/09/2024

## Document Amendment Record

Version	Change Description	Date
0	Initial issue	30/09/2024

## Document Management

This document is the property of the Department and contains information that is confidential to the Department. It must not be copied or reproduced in any way without the written consent of the Department. This is a controlled document and it will be updated and reissued as approved changes are made.

# Contents

Contents	3
PC-PL5 Cost Estimation	4
1 General	4
2 Prequalification requirements	4
3 Requirements for cost estimation	4
4 Estimating methodology	5
5 Estimating deliverables	6

---

## PC-PL5 Cost Estimation

### 1 General

- a) This Master Specification Part sets out the requirements for cost estimation and associated documentation and deliverables including:
  - i) the prequalification requirements, as set out in section 2;
  - ii) the requirements for cost estimation, as set out in section 3;
  - iii) the estimating methodology requirements, as set out in section 4; and
  - iv) the estimating deliverables requirements, as set out in section 5.
- b) Cost estimation must comply with the Reference Documents, including:
  - i) Department EST600 Estimating Manual, Transport Infrastructure Projects (found at: [https://dit.sa.gov.au/\\_data/assets/pdf\\_file/0003/173532/Estimating\\_Manual.pdf](https://dit.sa.gov.au/_data/assets/pdf_file/0003/173532/Estimating_Manual.pdf)); and
  - ii) Department EST600-2 - Standard Estimating Spreadsheet, Levels 2, 3, 4, 5 and 5B (where prepared by estimating consultants) template (as referenced in the Department EST600 Estimating Manual, Transport Infrastructure Projects).
- c) This Master Specification Part must only be used for the cost estimate levels that are detailed in Table PC-PL5 3-1.
- d) The requirements of this Master Specification Part apply to the planning phase, pre-delivery phase and delivery phase of a Project.

### 2 Prequalification requirements

- a) The Contractor must ensure that cost estimates are prepared by an entity (and its nominated personnel) (herein known as the Estimating Contractor) listed as a supplier for the provision of Estimating Services within the relevant service categories of the Preferred Supply Arrangement Estimating, Scheduling, and Constructability register ([https://dit.sa.gov.au/contractor\\_documents/prequalification](https://dit.sa.gov.au/contractor_documents/prequalification)).
- b) The Contractor must ensure that individual staff engaged to perform the relevant cost estimation tasks have appropriate experience in the development of cost estimates incorporating project programs, cash flows, staging diagrams and risk assessments for civil infrastructure projects of a similar type, magnitude, and complexity as applicable to the engagement.

### 3 Requirements for cost estimation

- a) The Contractor must ensure that the Estimating Contractor undertakes all necessary estimating and associated activities required to deliver on the stated objectives and outcomes in the Contract Documents.
- b) The level of the cost estimate, nominal design stage deliverable and its intended application is detailed in Table PC-PL5 3-1.

Table PC-PL5 3-1 Level of cost estimation

Cost Estimate level	Nominal design stage	Intended application
Level 2	Longlist Concept Design	Long list of options in the proving phase of a planning study
Level 3	Shortlisted Concept Design	Approved shortlist of Concept Designs in the proving phase of a planning study
Level 4	Reference Design to Preliminary Design	Refined version of preferred Concept Design in the proving phase of a planning study
Level 5	Detailed Design to IFA with cost estimate revisions as the design progresses	Project delivery

## 4 Estimating methodology

- a) The Contractor must ensure that all cost estimates are prepared in accordance with the Department's EST600 Estimating Manual, Transport Infrastructure Projects.
- b) Cost estimates must be presented using the Department EST600-2 - Standard Estimating Spreadsheet, Levels 2, 3, 4, 5 and 5B (where prepared by estimating consultants) template.
- c) Where a cost estimate incorporates multiple Project options, all applicable Project option cost estimates are to be presented in a single cost estimate file.
- d) Where the estimated Project cost is anticipated to be in excess of \$25 million (P90, real \$), and if required by the Contract Documents (including the estimating work order), a duplicate estimate or concurrence review must be completed in accordance with the Department's EST600 Estimating Manual, Transport Infrastructure Projects. The reconciliation of duplicate estimate values must not occur without the involvement and approval of the Principal. Where concurrence reviews are utilised, specific reports detailing the processes used and resulting outcomes must be provided to the Principal as part of the deliverables in section 5.
- e) The Contractor must ensure that the Estimating Contractor completes all required tabs within the applicable cost estimate template, including transposing all relevant details from the estimating work order to the "scope, risk, methodology" tab of the cost estimate file and utilising additional summary and calculation tabs to accommodate all applicable Project options.
- f) The Contractor must ensure that the Estimating Contractor includes all relevant scope items within the cost estimate and not exclude any scope items where they are likely to form part of the Project scope (e.g. costs associated with land acquisition, service relocation, contaminated soils etc.).
- g) The Contractor must ensure that the Estimating Contractor includes all reasonable decarbonisation and circular economy opportunities within the estimate, including those identified in accordance with PC-PL2 "Planning Investigations" or in the planning phase sustainability plan.
- h) Where a Green Infrastructure Assessment has been undertaken in accordance with PC-PL2 "Planning Investigations", cost estimates must be inclusive of the planned extent and type of Green Infrastructure.
- i) Cost estimates must be prepared inclusive of constructability considerations as determined in accordance with PC-PL4 "Constructability Assessments".
- j) Cost estimates must incorporate assessment of risk items using probabilistic risk methods to determine P50 and P90 cost estimate values calculated in accordance with the Department's EST 600 Estimating Manual, Transport Infrastructure Projects.
- k) All cost estimates must include the development of Project programs, cash flows, staging diagrams, and risk assessment tables, which clearly link to the derived P50 and P90 values, with the exception of Level 2 cost estimates which are permitted to include a simplified or generic risk assessment table when deriving P50 and P90 values.

- l) The cost estimate must detail opportunities to provide improved value for money and best for Project outcomes.
- m) The cost estimate must be reviewed and checked by the Estimating Contractor's estimator and reality checker in accordance with the Department's EST600 Estimating Manual, Transport Infrastructure Projects with the relevant section of the estimate "cover sheet", to be marked accordingly upon completion of these reviews.
- n) A review of the cost estimate is to be undertaken by the Contractor to ensure that the applicable scope has been adequately accounted for and that the cost estimate is compliant with the Principal's estimating requirements, including those detailed within this Master Specification Part. The additional reviewer section of the estimate "cover sheet" is to be marked upon completion of this review.
- o) All reviews described in this section 4 must be completed prior to the submission of the cost estimate.

## 5 Estimating deliverables

### 5.1 Reports

- a) The Contractor must ensure that the Estimating Contractor provides a fully completed, single Microsoft Excel version of the cost estimate file in the applicable cost estimate template format inclusive of the following tabs:
  - i) cover sheet;
  - ii) scope, risk and methodology;
  - iii) summary option(s);
  - iv) calculation option(s); and
  - v) inherent and contingent risk option(s).
- b) If required by the Contract Documents, in addition to the requirement of section 5.1a) the Contractor must ensure the Estimating Contractor provides a summary report of information and supporting documentation including:
  - i) Project schedule/programs;
  - ii) Project cash flows;
  - iii) staging diagrams;
  - iv) risk registers and information to support the basis of risk calculations;
  - v) details of opportunities to improve value for money and best for Project outcomes;
  - vi) commentary on the constructability methodology (and additional information to support the cost estimate); and
  - vii) other items as specified in the Contract Documents.
- c) The Contractor must submit all estimating deliverables at the design stages defined in the Contract Documents and for any subsequent revisions.
- d) The Contractor must submit the cost estimate to the Principal. The Contractor must not, and must ensure that the Estimating Contractor does not, develop the cost estimate further until it receives the Principal's approval under PC-PL1 "Framework for Planning Studies".

### 5.2 Records

The Contractor must retain, and must ensure that the Estimating Contractor retains, all information used during the cost estimation process to allow for future estimate revisions, analysis and audits including:

- a) first principles estimating calculations within proprietary estimating software; and
  - b) input data associated with risk calculations (to allow for risk assessment calculations to be re-run, and for the future validation of outputs).
-