
Overview

This unit is concerned with designers working with contractors and consultants and securing contracts with clients to carry out the design for construction and installation work. The words estimate, bid and tender are all used in the industry, and are taken here to be synonymous.

It is about scrutinising the tender enquiries received, and deciding whether or not to bid.

The following elements cover what to do if you are going to bid. You must be able to get to the bottom of an enquiry quickly, and you must have a good knowledge of your organisation's capabilities, its business plan, workload and the state of the market.

It is about deciding how the job will be done. You must be able to get all the information that you need, decide the best way of working, produce a method statement, and agree this with the project team. It is about deciding how much the work will cost. You must be able to turn your method statement into a working programme, decide what resources you need, calculate the costs, and discuss them with the project team.

It is about turning your cost estimate into a final bid which will be competitive in the marketplace. You must be able to assess the risks and opportunities that the work presents, and assemble the bid to give you the best chance of success. This will include ways of making your bid more attractive than those of your competitors.

Performance criteria

Review enquiry documentation

- You must be able to:*
- P1 confirm and summarise the enquiry requirements for design services
 - P2 investigate the enquiry documents within budgets and enquiry time limits
 - P3 identify any points of concern in the enquiry documents and seek clarification and resolution
 - P4 evaluate the enquiry documents against agreed organisational criteria and assess and confirm whether the organisation should decide to proceed
 - P5 keep information about enquiries in confidence and only pass it on to people who have the authority to receive it

Evaluate and select work methods

- You must be able to:*
- P6 assess the available project information and summarise it to enable decisions on production, installation and work methods to be made
 - P7 obtain more information from relevant sources in cases where the available project information is insufficient
 - P8 identify work methods which will make the best use of resources and which meet project, statutory and contractual requirements
 - P9 evaluate the methods against production and installation factors and select the one which best meets the design parameters
 - P10 recommend the selected method to decision makers and encourage them to adopt it
 - P11 prepare an outline method statement which is accurate, clear, concise and acceptable to all the people involved

Estimate the resource requirements and costs within a tender

- You must be able to:*
- P12 develop a proposed plan of work and draft programme which meet the tender project requirements and phasing
 - P13 assess the available project information and summarise it to enable decisions on project requirements to be made
 - P14 obtain more information from relevant sources in cases where the available project information is insufficient

- P15 estimate what resources will be needed, their sources, availability and costs
- P16 modify the costs to take into account any external factors which may affect the cost projections
- P17 produce the overall estimate of costs and checking that it is complete, accurate and in a form which is suitable for a judgement to be made
- P18 explain and clarify the calculations to support the projected costs
- P19 recommend payment schedules which will meet proposed resource usage

Finalise and submit a tender offer

You must be able to:

- P20 identify and evaluate, the risks and opportunities involved in a successful tender offer
- P21 identify and specify alternatives and qualifications to the original tender requirements which may improve the organisations ability to carry out the work
- P22 apply a profit margin and payment schedule which meets the objectives and strategy of the organisation
- P23 adjust the tender offer to take account of market conditions
- P24 check that the tender offer is complete and accurate and conforms to house style, and make any necessary modifications
- P25 present and support the tender offer in a manner which maximises its acceptability
- P26 collate, arrange and submit tender offer information in accordance with tender instructions together with any identified alternatives and qualifications
- P27 collect together all the tender offer information, record it, store it securely and only pass it on to people who have the authority to receive it recommend the selected method to decision makers and encourage them to adopt it

Knowledge and understanding

You need to know and understand:

Review tender enquiry documentation

- K1 how to confirm and summarise the enquiry requirements for design services (application)
- K2 how and why to investigate the enquiry documents within budgets and enquiry time limits (analysis)
- K3 what to identify as any points of concern in the enquiry documents (understanding)
- K4 how and why to seek clarification and resolution (synthesis)
- K5 how and why to evaluate the enquiry documents against agreed organisational criteria (evaluation)
- K6 how and why to assess whether the organisation should decide to proceed (analysis)
- K7 how to confirm whether the organisation should decide to proceed (application)
- K8 how to keep information about enquiries in confidence and only pass it on to people who have the authority to receive it (application)

Evaluate and select work methods

You need to know and understand:

- K9 how and why to assess the available project information on production, installation and work methods (analysis)
- K10 how to summarise the project information to enable decisions on production, installation and work methods to be made (application)
- K11 how to obtain more information from relevant sources in cases where the available project information is insufficient (application)
- K12 what to identify as work methods which will make the best use of resources and which meet project, statutory and contractual requirements (understanding)
- K13 how and why to evaluate the methods against production and installation factors and select the one which best meets the design parameters (evaluation)
- K14 how and why to recommend the selected method to decision makers and encourage them to adopt it (synthesis)
- K15 how to prepare an outline method statement which is accurate, clear, concise and acceptable to all the people involved (application)

Estimate the resource requirements and costs within a tender

You need to know and understand:

- K16 how and why to develop a proposed plan of work and draft programme which meet the tender project requirements and phasing (synthesis)
- K17 how and why to assess the available project information and summarise it to enable decisions on project requirements to be made (analysis)
- K18 how to summarise the available project information to enable decisions on project requirements to be made (application)
- K19 how to obtain more information from relevant sources in cases where the available project information is insufficient (application)
- K20 how and why to estimate what resources will be needed, their sources, availability and costs (analysis)
- K21 how to modify the costs to take into account any external factors which may affect the cost projections (application)
- K22 how to produce the overall estimate of costs and check that it is complete, accurate and in a form which is suitable for a judgement to be made (application)
- K23 how to explain and clarify the calculations to support the projected costs (application)
- K24 how and why to recommend payment schedules which will meet proposed resource usage (synthesis)

Finalise and submit a tender offer

You need to know and understand:

- K25 what to identify as the risks and opportunities involved in a successful tender offer (understanding)
- K26 how and why to evaluate, the risks and opportunities involved in a successful tender offer (evaluation)
- K27 what to identify as alternatives and qualifications to the original tender requirements which may improve the organisations ability to carry out the work (understanding)
- K28 how and why to specify alternatives and qualifications to the original tender requirements which may improve the organisations ability to carry out the work (evaluation)
- K29 how to apply a profit margin and payment schedule which meets the objectives and strategy of the organisation (application)

- K30 how to adjust the tender offer to take account of market conditions (application)
- K31 how to check that the tender offer is complete and accurate and conforms to house style, and make any necessary modifications (application)
- K32 how to present and support the tender offer in a manner which maximises its acceptability (application)
- K33 how to collate, arrange and submit tender offer information in accordance with tender instructions together with any identified alternatives and qualifications (application)
- K34 how to collect together all the tender offer information, record it, store it securely and only pass it on to people who have the authority to receive it (application)
- K35 how and why to recommend the selected method to decision makers and encourage them to adopt it (synthesis)

Additional Information

Scope/range

Review tender enquiry documentation

1. Enquiry:

- 1.1. pre-qualification
- 1.2. invitation to tender

2. Enquiry documents:

- 2.1. pre-qualification questionnaire
- 2.2. invitation to tender
- 2.3. form of tender
- 2.4. returns procedure
- 2.5. availability of staff are they in the right place
- 2.6. cost of tendering
- 2.7. evaluation criteria
- 2.8. surveys
- 2.9. specifications
- 2.10. drawings
- 2.11. schedules
- 2.12. electronic models, graphical and non-graphical electronic data files
- 2.13. bills of quantities
- 2.14. health and safety plans
- 2.15. scope of services
- 2.16. terms and conditions
- 2.17. schedule of rates

3. Points of concern:

- 3.1. incomplete enquiry information
- 3.2. inconsistent with the policy of the organisation
- 3.3. discrepancies within enquiry information
- 3.4. unclear enquiry information
- 3.5. tender procedure requirements
- 3.6. quantitative requirements
- 3.7. qualitative requirements
- 3.8. contractual requirements

4. Agreed organisational criteria:

- 4.1. financial
- 4.2. availability of staff
- 4.3. cost of tendering
- 4.4. viability of tendering information
- 4.5. current workload
- 4.6. type of work
- 4.7. competence of people
- 4.8. timescale
- 4.9. social policies
- 4.10. environmental impact
- 4.11. location
- 4.12. potential completion
- 4.13. resources
- 4.14. risk
- 4.15. contractual
- 4.16. legal
- 4.17. inter-disciplinary working
- 4.18. information management

Evaluate and select work methods

5. Project information:

- 5.1. contractual obligations and scope and scale of works
- 5.2. specifications
- 5.3. drawings
- 5.4. schedules
- 5.5. electronic models, graphic and non-graphic electronic data files
- 5.6. bills of quantities
- 5.7. health and safety plans

6. Production, installation and work methods:

- 6.1. sequencing and integration of work operations
- 6.2. construction and installation techniques
- 6.3. prefabrication and standardisation
- 6.4. working conditions (health, safety and welfare)
- 6.5. new materials and technologies

7. Relevant sources:

- 7.1. project team and supply chain
- 7.2. regulatory authorities
- 7.3. technical/trade literature
- 7.4. standard lists and procedures
- 7.5. investigative research

8. Production and installation factors:

- 8.1. construction requirements and compatibility with site constraints
- 8.2. adaptation of existing structural elements
- 8.3. practicality, buildability and disassembly
- 8.4. standardisation and component co-ordination
- 8.5. production and installation processes, scheduling, lead-in times, construction programming/sequencing and quality control
- 8.6. expertise including experienced crafts people
- 8.7. fit and tolerances
- 8.8. production resources availability and performance (plant/equipment/people/skills)
- 8.9. materials, components and systems availability and capability
- 8.10. strategies to address interface issues on and off-site
- 8.11. access/transportation/traffic management
- 8.12. health and safety
- 8.13. system commissioning
- 8.14. operation and maintenance information

9. Design parameters:

- 9.1. client, user and community requirements, expectations, options and preferences
- 9.2. project type/purpose/use
- 9.3. site, location and surrounding environment
- 9.4. geology (seismology, ground movements and soil type)
- 9.5. transport and infrastructure
- 9.6. planning, urban & social integration
- 9.7. design form (architectural, structural, civil, services)
- 9.8. design quality (character/scale/aesthetics)
- 9.9. function/spatial planning (occupancy/room information/access and egress incl. DDA, security)

- 9.10. programme budget
- 9.11. cost (including whole life)
- 9.12. development timetable
- 9.13. risk assessment and mitigation
- 9.14. cost planning (including life cycle cost) and value management
- 9.15. procurement
- 9.16. in-use performance
- 9.17. environmental quality and sustainability
- 9.18. environmental assessment/certification schemes
- 9.19. protection of archaeological, architectural, cultural and historically valuable resources (significance/status)
- 9.20. statutory, regulatory and legal constraints
- 9.21. standards and codes of practice
- 9.22. health and safety
- 9.23. form, function, materials, components and systems
- 9.24. loose fit design - for flexibility/adaptability/deconstruction/disassembly
- 9.25. buildability
- 9.26. operation and maintenance

Estimate the resource requirements and costs within a tender

10. Project requirements:

- 10.1. construction
- 10.2. installation and maintenance work
- 10.3. supply of goods and materials
- 10.4. consultancy services
- 10.5. invitation to tender
- 10.6. form of tender
- 10.7. technology required
- 10.8. procedures for submitting tenders

11. Consultancy services:

- 11.1. invitation to tender
- 11.2. form of tender
- 11.3. technology required
- 11.4. procedures for submitting tenders

12. Phasing:

- 12.1. planning
- 12.2. design
- 12.3. procurement
- 12.4. construction

13. Estimate:

- 13.1. cost based on a quotation
- 13.2. unit cost built up from basic data
- 13.3. internal and historical cost data
- 13.4. published cost data

14. Resources - type:

- 14.1. people (in-house, external)
- 14.2. materials
- 14.3. finance
- 14.4. time
- 14.5. information management

15. External factors:

- 15.1. variations over time
- 15.2. location
- 15.3. statutory and contractual requirements
- 15.4. special working conditions and methods
- 15.5. resourcing conditions
- 15.6. competition
- 15.7. inter-disciplinary working

Finalise and submit a tender offer

16. Risks and opportunities:

- 16.1. environmental
- 16.2. financial and market
- 16.3. political
- 16.4. technical
- 16.5. health and safety
- 16.6. reputation
- 16.7. competence of people

17. Alternatives and qualifications:

- 17.1. specifications and materials
- 17.2. methods of construction
- 17.3. services
- 17.4. time-scales
- 17.5. supply options
- 17.6. price offer options
- 17.7. inter-disciplinary working

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