2017 REGIONAL CONTRACTORS' CONTINUOUS PROFESSIONAL DEVELOPMENT

SEMINAR

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TOPIC : ROLE OF CONTRACTOR IN COST ESTIMATION

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Definition of estimation

* "The technical process of predicting the cost of construction".
* "The technical process or function undertaken to assess and predict the **total cost** of executing an item(s) of work in a given time using all available project information and source".
* This definition depicts two important issues, namely;

a) the estimate is an approximate calculation; and

b) estimate contains uncertainties

* The reason for estimating is to provide the **most realistic prediction** possible of **time and cost** at any given stage in a project

Constitutes of an estimate

* the entire process of estimating a project is always time consuming and often tedious.
* estimates take the form of base estimates, plus allowances for uncertainties and specific contingencies as required, prices in the marketplace, it is the responsibility of management to add an amount for general overheads, assess the risks and turn the estimate into tender.

Constitutes of an estimate cont'd

* i.e. The traditional estimation process - where the cost of construction items prepared based on (labour, plant, material, subcontractor, and preliminary and VAT) on top of it overhead and profit added. – can be changed by adopting many scientific methods or software to estimate the unit rate price for tendering process – choose the best practice for your firm.

Main purpose of estimating costs

* For the Client, a proper estimate helps **determine the feasibility of project** and facilitates the **procurement procedure for the project**. It also helps him in **planning the finance** required for proper successful completion of the project
* From the Contractors perspective a proper estimate helps in **preparing a proper bid** for the works and **facilitates arrangement of resources for proper execution of works**

* The contractor is main character of the whole estimation process. He/she receives the contract drawings, specification and appropriate bill of quantities and starts work in given time frame.
* the Contractor's undertakes the cost estimate practice basically for the tendering purpose in order to **get the project** with good profit margin

Roles/responsibility in tendering/cost estimation

1. The estimators are responsible for predicting the most economic costs for construction in a way that is both **clear and consistent** – do not front load
2. **Cross check all quantities with contract drawings and specification.** It is very common practice that Contractor's Estimator always finds ambiguity in the BOQ. However this may not be possible when contract drawings are not issued at the time of tender. Therefore it can only be effected after award of the contract.

3. Cross check numbering of pages and carrying forward of page/element summaries to the grand summaries.
4. Understand the nature of project – spend enough time in preparation of the Tender and seek to understand the various risks involved in that project.

* Examples of the risks
  * by way of the employer including clauses in the conditions of tender in their own favour e.g. suspend or cancel the whole tendering process or change the date of submission at any time

Examples of the risks cont'd

FIDIC General Conditions of Contract 4th Edition, Clause 11.1 Inspection of Site: In accordance with this Clause, the Employer has to make available to the Contractor at the Tender stage, all the information regarding the site that the Employer may have in his possession at that time. This information may include data pertaining to hydrological and sub surface conditions, that has been obtained by investigations carried out by the Employer or on his behalf. However, **the Contractor is responsible for the interpretation of this data.** The Contractor has to carry out his own investigations regarding the site and its surroundings and he shall be deemed to have satisfied himself before submitting the tender; the form and nature of site including sub-surface conditions, the hydrological and climatic conditions at the site, the extent and nature of work and materials necessary for execution and completion of works and the means of access to site and the accommodation he may require. In other words, this Clause places the responsibility on the Contractor to ascertain all the risks involved in carrying out the works and make suitable provisions for contingencies and all other circumstances that may affect his tender.

Examples of the risks cont'd

* Clause 12.1 Sufficiency of Tender: In accordance with this clause, the Contractor shall be taken to have satisfied himself, regarding the correctness and sufficiency of the Tender.
* Clause 36.2 & 36.3 Cost of samples and Cost of Test: This clause pertains to the costs of the collection of material samples and their tests **in private laboratory**, if required by the Engineer. This expected cost should be considered at tendering stage.

Examples of the risks cont'd

* Clause 52.4 Day Work: Any time before the issuance of taking over certificate the Engineer has the authority to instruct any varied works to the Contractor that are to be executed on a Day-Works basis. So Contractor should always be keep good margin in these rates while preparing estimation for rendering
* through the conditions of contract e.g. fixed price contract for a period greater than 1 year in an effort to have cost certainty

* Thus, **the greater the risk** and number of risks that the Tendering Contractor has to consider while tendering for any works, **the greater is the probability that he will load the price to cover the risks** which may never happen. Subsequently, it is more likely that he **will engineer claims to recover the real losses that he has suffered.**

5. Review the whole description of BOQ – i.e. the specification

* Supply, install, connect, test and commission,
* take delivery and fix,
* installed by sub contractor,
* codes from a particular supplier thus contact that specialist/supplier

* For such a particular item of BOQ, even in prestigious project where the contractor is expected to make a decent profit, the contractor faces the risk of incurring loss due to indifference shown while preparing tender bid, if and only if, in the first instance he doesn't loose on award of the project on account of unreasonable rates!

6. **Cross check for errors** since they cannot be corrected and the law requires contractors to stand by their error
7. The adequacy of the tender price should remain reasonable even after changes to the final price are made to the tender by adding or subtracting certain percentage on the costs as per corporate strategy - This percentage is commonly known as the **management mark up.** Often this mark up is not based on any scientific calculation but rather is derived from rule of thumb or expert judgment of the management. Such a practice raises ambiguity in the final tender bid and increases the risk of the tender becoming overly priced or even under priced.

8. Utilize the information available in your data bank acquired from experiences of previously tendered projects, to use for the bidding for a new project by modifying and updating the collected information
9. Meet all mandatory requirements for tendering

Conclusion

* Construction is a **unique industry** which is **inherently risky** because most projects must be priced before they are constructed, whereas in other industries the selling price is based on known manufacturing costs.
* The whole exercise of Estimation allows the Management to take any action during execution of the project, by comparing the estimated and actual level of production. The **estimate (tender) provides budget** to the Management, **enabling them to control costs during construction** execution and also **provides for many assessments and judgments** that will be made during the construction stage

Thank you

God bless you all


UNDER
CONSTRUCTION
THE END