DMI Takeoff and Estimating Systems

Accurate Bidding – Effective Project Management – Consistent Profitability

Consulting–Takeoff & Estimating–Project Management

Construction professionals achieve excellence using DMI Methods and Techniques.

DMI founder, Mike Litz developed methodology and techniques that can be learned and utilized via pencil and paper, electronic spreadsheets, or customized database software. Starting his freelance estimating business in 1985, Mike Litz began to refine his takeoff and estimating systems, initially using paper and pencil. In 1990 Mike used electronic spreadsheets to computerize his systems, and eventually started switching over to database systems prior to the millenium.

Through four decades, Mike's Takeoff & Estimating Service produced thousands of accurate takeoffs and estimates for his clients. Mike's bids successfully generated hundreds of millions of dollars in revenue for his clients, companies that self-performed one or more of the following trades:

- Light Gage Steel Framing
- Rough Carpentry
- Casework and Millwork
- Insulation
- EIFS and Stucco
- Doors and Hardware
- Metal Stud Framing
- Drywall Hanging and Taping
- Acoustic Ceilings
- Painting and Wallcovering

The limitless variety of commercial and residential projects included:

- Airport Facilities
- Apartment Buildings
- Casino Complexes
- College Dormitories
- Condominium Towers
- Custom Homes
- Department Stores
- Educational Facilities
- Fitness Centers
- Government Buildings
- Hospital Facilities
- Industrial Complexes
- Nursing Homes
- Office Towers
- Religious Institutions
- Shopping Malls
- Sports Arenas
- Townhouse Projects

The reliable accuracy of Mike's cost-effective services consistently augmented his clients' profitability.

Guide to Successful Construction Cost Estimating

The takeoff and estimating process is a means to an end. That end is not necessarily producing the low bid – or even receiving a contract award. A successful estimate is simply an accurate cost assessment.

Wise decisions rely on accurate estimating. Too often, rejecting a contract offer is the wise decision; nevertheless, such decisions prevent the company's involvement in unprofitable endeavors. When profitable opportunities arise, accurate estimates facilitate confidence during and after negotiations.

Once a contract has been awarded, the estimate can become a valuable project management resource; however, both organized material lists and thorough production schedules are basic prerequisites for successful management. Furthermore, to attain optimal profitability, this information must be separated into each manageable work zone of the project. Thus, the methods used to produce the estimate determine its potential value as a project management resource.

Unit-price-based estimating methods can produce successful estimates very expediently. Unit pricing also enables efficient performance of bid revisions and job change orders. Unfortunately, the functionality of solely unit-price-based estimates diminishes markedly subsequent to contract award; generating essential project management reports from these estimates is a very time-consuming process.

Component-based estimating methods can also produce successful estimates. Subsequent to contract award, this estimating method enables instant access to material lists and production schedules. However, for both bid revisions and job change orders, extracting prices from these estimates is a very tedious process.

Combining both estimating methods produces a most valuable estimate that facilitates bidding, contract negotiation, and project management. Thus, an accurate, fast, easy-to-use method of gathering and organizing information throughout the takeoff and estimating process is essential to cost-effectiveness.

Computerized relational database applications collect and organize this information most efficiently. Although effective results can also be achieved with electronic spreadsheets or even just paper and pencil, time is always a factor. Understanding the process, and utilizing logical methods is key to successful construction cost estimating – regardless of the estimating technology available.

Construction professionals typically think of takeoff and estimating as a two-step process. Yet, this rather complex process is better understood and thus more efficiently performed when separated into eight distinct steps. The first six steps comprise the takeoff process. *Step seven transforms the takeoff into an estimating format. Step eight completes the estimate.* The information gathered and analyzed throughout the eight-step process can then generate all reports essential for successful bidding, contract negotiation, and project management.

The Successful Takeoff and Estimating Process

(REMEMBER: DMI Database™ users do steps 7 & 8 simultaneously, with ease!)

1. Record general information obtained from bid/contract documents including written and/or oral correspondence. General information includes scope of work for the bid, project name and address, architect, engineers, etc., and drawing sheet numbers with date of latest revision for the entire set of plans. (Very important: Record pertinent, *specific clarifications* and *generalized exclusions*, as soon as they are recognized, throughout the entire process.)

2. Review the entire set of plans to gain a basic understanding of the architect's intentions for the whole project, as well as a quick overview of the scope of work for the bid. (Try not to spend more than half a minute per sheet, on average, for the entire set of plans; there will be many other opportunities to look more closely at specific details.)

3. Examine specifications and other bid/contract documents to understand their correlation to both the drawings and the relevant scope of work.

4. Identify the conditions shown on the bid/contract drawings that affect the relevant scope of work; produce a list of those conditions. (Very important: Remember that software programs read from left to right and sort alpha-numerically from left to right. Be consistent in listing conditions. List conditions starting with drawing number first, then Detail number; i.e. write: Sht.A2-Det.6b [then copy it, paste it several times, then tweak characters as needed for the next few conditions on the list] to keep the list of conditions in chronology with the set of drawings.)

5. Identify conditions missing from the bid/contract drawings that affect the relevant scope of work. Examples are conditions only found in other bid/contract documents, and conditions that are not shown on drawings, but inferred by adjacent context. Add all of these conditions, as soon as they are recognized, to the list started in step four.

6. Quantify each of the conditions on the list by measuring or counting. *Take linear measurements wherever possible.* (Change to *area measurements* [i.e. flooring, ceilings, etc.] and *counts* [i.e. columns, corners, etc.] only when necessary. Separate quantities into subtotals for each of the various floor levels and/or areas involved in the job.

7. Identify labor, material, and equipment components necessary to build each condition listed in steps four and five (with the specific type, size, and quantity requirement) for each component (in accordance with drawings and all other bid/contract documents).

8. Evaluate the costs associated with each of the components identified in step seven; integrating the cost and quantity for each of these components, establish a unit price for each condition listed in steps four and five.