

J.R. Huston Enterprises, Inc.

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[CT] Chapter 2 of HTPLIP, pp 6 - 10

[CT] Estimating System Overview

[CT] Figures included

- 2-1 Bidding overview: The OPPH Method
- 2-2 Bidding overview: The MORS Method

[OH] **PURPOSE:** To provide an overview of an estimating system

[OH] **INTRODUCTION:** Objectives of an estimating system

The primary objective of an estimating system is to calculate costs accurately. However, an estimating system should also provide:

- An accurate *PRICE* on a job for your company;
- A communicable *PLAN* the field can use to run the job;
- An objective quality-control *PROCESS* your bookkeeper can use to job cost the project. It will also help your estimators become more effective, and can be used to train new estimators.

**** Main point - The most common complaint I hear from landscape and irrigation contractors: "I don't know if I'm making money on this project."****

This *PROCESS* allows us to address the most common complaint I hear from landscape and irrigation contractors:

"I don't know if I'm making money on this project."

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Most estimating systems produce a questionable price for a job and little else. The system taught in this book will do all three of the above. It will provide a *PRICE*, a *PLAN* and a *PROCESS* – a quality-control process for controlling the entire spectrum of events that occur within your company.

[A] THE OVERVIEW

****How it works – start****

I have talked with thousands of Green Industry contractors and have personally worked with hundreds of them. The vast majority, almost all, of them had estimating systems which contained deficiencies. Some estimating systems did not account for all of the direct costs in a product. Others did not address general and administrative overhead costs effectively. I've seen some of these flaws cost contractors thousands of dollars. I have also seen more serious flaws cost contractors their company. The basic problem was that these contractors did not have a clearly, well thought out estimating system that addressed all of the contingencies that might arise.

****How it works – end****

We're going to cover a lot of ground in this book. In order to illustrate our points, we'll use two models, or business paradigms. The first is "The Company Overview" in Figure I.1. The second is "The Bidding Overview (The OPPH Method)" in Figure 2.1. (Figure 2.2., "The Bidding Overview (The MORS Method)," which will be discussed in detail in subsequent chapters, is included for comparison purposes.)

****Figure 2.1. The Bidding Overview (The OPPH Method)****

****Figure 2-2. The Bidding Overview (The MORS Method)****

Keep referring back to these models, especially if you get confused. Once you put a bid together, use the models to help you to review the bid in order to see if you've forgotten anything.

**** Main point - Be on the constant alert for "*LEAKS*." For every check you write, you should ask: "Where is this expense included in the bid?"****

Be on the constant alert for "*LEAKS*." For every check you write, you should ask: "Where is this expense included in the bid?"

In other words, you should be able to find that check (or see where that check is recovered) in these estimating models. Also, you want to look for areas where you may be "*DOUBLE-DIPPING*" – that is, where you're charging twice for the same cost.

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Let me guide you through the models and the three phases found in a bid.

[B] THREE PHASES OF A BID

[C] I. Producing the Finished Product or Providing the Service

This phase of the bidding process includes costs for materials physically included in the finished product or service provided, plus the labor, equipment and subcontractor costs associated with it. If it's part of the finished product or service provided, the cost is included here in Phase I.

A. MATERIAL is included "AT COST."

B. LABOR is calculated in FIELD-LABOR HOURS multiplied by either a crew average wage (CAW) or specific wage rates for differing classes of labor.

C. EQUIPMENT is included by multiplying hours used by the cost per hour (CPH) for each piece of equipment.

D. SUBCONTRACTORS are included "AT COST."

[C] II. General Conditions

Included here are costs for those items required to produce the finished product or provide the service (material, labor, equipment and subcontractors, as above), but which are not directly required to produce the end product or service. For instance, portable fences, toilets or traffic control may be required by or "tied to" a specific job being bid, but they're not directly required to produce (mow) the mown lawn, plant or trim the trees, fertilize the site, mulch the planting areas, etc. Off-site labor time (load and unload, drive, warranty, supervision, job administration, picking up materials time, etc.) is usually included in general conditions.

Although there's sometimes a fine line between Phase I and II items, the detailed discussion and list of general condition items in Chapter 12 should clarify any confusion concerning them. It should also be noted that deciding whether a particular item should be in Phase I or II is less critical than ensuring that it's accurately included in one of them.

General condition items include but are not limited to the following:

- Crew pickup trucks, crew drive time, load/unload time

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- Supervision labor and related vehicles
- Labor and equipment to mobilize equipment to and from the job site
- Material hauling labor and equipment costs
- Portable toilets, portable fences, permits, licenses, soil tests, as-builts
- Warranty labor and equipment
- Dumpsters, dump fees, lock boxes, freight charges, storage containers
- Traffic control, security, “rent-a-cops”
- Plant watering labor, design fees, commissions, estimator time, etc.

[C] III. Margins and Markups

[D] A. Sales tax

Appropriate sales tax markups are applied to materials and other items as required by state and local laws. In some states, tax is now applied to the final price of the job, not just to the materials.

[D] B. Field labor burden

Labor is marked up by a predetermined percentage in order to recover FICA, FUTA, SUTA, general liability insurance, field-crew vacations, holidays, sick days, workers’ compensation insurance, medical insurance, etc.

[D] C. General and administrative (G&A) overhead or indirect costs

A number of methods are commonly used by contractors to recover G&A overhead. Quite often, a percentage markup is used on materials, labor (including labor burden), equipment and subcontractors (or just one or two of these items); or a G&A overhead cost per field-labor hour is used. We will use a G&A overhead cost per field-labor hour.

[D] D. Net profit margin

When added together, the items identified up to now produce your break-even point (BEP). NET PROFIT is then ADDED to your BEP.

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The specific amount of net profit to add on to a particular job is determined by:

- (1). How badly you need the job
- (2). Its size
- (3). The risk involved
- (4). What the market will bear
- (5). Your ability to negotiate and to win the confidence and trust of the client.

[B] E. Contingency factor

Contractors will sometimes add a fifth category I often refer to as the “aggravation factor.” Basically, this is additional money tacked on to the price of a job that will make it worth it to you to incur additional risk or to put up with certain situations or individuals (architects, engineers, owners, developers, homeowners, etc.) with whom you’d rather not deal.

Remember that, except for the contingency factor, you’re constantly attempting to differentiate between and to determine two numbers in the bidding process: Total costs (which include direct and general and administrative overhead costs) or the BEP, and the maximum price the market will bear.

[B] **COMPLETING THE BID**

We can now equate or define **estimating** as determining those costs involved with Phases I and II in Figures 2.1 and 2.2, plus sales tax and labor burden.

The *bidding process* is completed when we add G&A overhead, net profit and a contingency factor, if used, in Phase III to the first two phases (plus sales tax and labor burden) and arrive at the *final price* for a particular job.

The gross profit margin is comprised of the G&A overhead, contingency factor and net profit margin.

****Main point - One last note: direct costs consist of all costs in Phases I and II, plus sales tax on material and labor burden added to field labor. Indirect or general and administrative overhead costs are all other costs that cannot be directly identified and tied to a particular job.****

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[B] ROUNDING and DECIMAL POINTS

Whenever feasible, round up the numbers used in your bids. For instance, if a crew average wage (CAW) calculates to be \$14.57, I'd round the CAW for bidding purposes to \$15. Seldom, if ever, do I use less than whole numbers when calculating costs. The few extra cents added to costs for materials, labor, equipment, etc. will in most cases not affect your competitiveness at the bid table. By simplifying your mathematics in this manner, you'll make calculations much easier and eliminate mistakes.

However, you must use common sense when rounding decimals. For example, you wouldn't round hydroseeding, which has a cost of eight cents per square foot, to \$1 per square foot.

[A] SUMMARY

The primary objective of an estimating system is to calculate costs accurately. Don't lose sight of this. However, a good estimating system should also provide much more than just accurate costs. It should also produce a Price, a Plan and a Process.

Formatting your bids properly and the data contained in them are very important. We break the bidding process into three phases. They are: 1) the production of the finished product or providing the service; 2) general conditions; and 3) margins and markups.

Direct costs are comprised of all the costs in Phases 1 and 2, plus the sales tax on materials and field labor burden applied in Phase 3.

The break-even point (BEP) is calculated when we add indirect general and administrative overhead costs to the total of all the direct costs contained in the bid. A contingency factor, if desired, and net profit are then added to the BEP in order to arrive at the final price for the job.

The gross profit margin is comprised of the G&A overhead, contingency factor and net profit margin.

****Main point - Remember: Think costs (both direct and indirect). Think market (what the market will bear). Then consistently price and negotiate your work between these two.****

