IN ESTIMATING, FAMILIARITY BREEDS ACCURACY

Alabama’s Acousti Engineering Has Effectively Welded the Estimators Experience, Knowledge, and Familiarity With a Project to the Computer

Trying to determine if estimating should be defined as an art or a craft is similar to deciding whether a diamond is white or clear colored.

In both cases, the definitions aren’t all that important and are defended more for the joy than for the accuracy. What does count is that both are highly important and are the support arches for their respective industry.

The jewelry industry depends on the diamond, and every construction company depends on its estimating.

To a professional estimator such as William “Phil” Neely, definitions aren’t nearly as important as a company’s philosophy toward its estimating. As vice president and director of education for Acousti Engineering, of Birmingham, AL, Neely is responsible for carrying out his company’s unique “familiarity” estimating approach which has posted a remarkable record for estimating accuracy and jobs-to-bids ratio.

From Acousti’s main office in Birmingham, Neely heads up the company’s estimating and training operation, coordinating the main office with four branch offices in the company’s trade area. So firmly is the “familiarity” philosophy ingrained in Acousti’s thinking that the company insists on training its own estimators from the beginning. bids only work that meets its special criteria—and incorporates a special computer operation that accelerates and strengthens an estimator’s performance.

Born in Birmingham, son of the late Harris, a career Air Force officer, and Doris Smith Neely, the 40-year-old Acousti executive has worked for Acousti nearly his entire career. After the University of Oklahoma, he went to work as an Acousti carpenter took one year out with another company, and then rejoined Acousti in the sales/estimating department in 1970.

He’s been with Acousti ever since. In 1982 Neely, married to the former Julia Godsey Neely and the father of two, was promoted to vice president.

Acousti is a diversified $13-million-a-year wall and ceiling contractor with specialties in drywall, acoustics, access flooring, insulated concrete roof decks, wall panels, exterior insulated wall systems, and a proprietary skylite system. A long time member of the Association of the Wall and Ceiling Industries-International, the company is also a member of American Subcontractors Association, CISCA, and the local Construction Specifiers Institute and Producers Council.

Phil Neely’s construction career is pinned to Acousti’s estimating approach. In thousands of projects he’s
We try to find out all we can about a job, including the identity of the superintendent.

experienced its response and success. Now he hires and trains other estimators in the same system, confident that they, too, will see the wisdom of "familiarity"—the type which breeds success.

DIMENSIONS: Before discussing the "familiarity" philosophy, may I ask you to detail the job setting priority that you mentioned. How does this work?

NEELY: Essentially, Acousti likes to choose the jobs that it will bid on, and I’m not certain we’re all that different from many other contractors. We pursue jobs that we feel best about securing on bid or negotiated basis.

Certain types of jobs we stand a better chance of obtaining so we select these on the basis of four criteria:

1. building types
2. location
3. general contractor identity
4. size and complexity of job

DIMENSIONS: Would you discuss these criteria? How about "building type"? What are you looking for here?

NEELY: Our track record shows we have a better chance if we go after a job that is highly finish oriented, that’s complex and requires skill and experience both from working personnel and headquarters backup. I mean the unusual, challenging job that often takes us right to the edge of technology. We can get a much better jump on our competition with these complex jobs than with your standard bid job.

DIMENSIONS: As opposed, say, to a standard box building such as a schoolroom addition?

NEELY: Well, I certainly didn’t mean to imply that we would exclude building types simply on the basis of a single criteria. We take all four criteria that I mentioned into consideration and no one totally outweighs the others.

DIMENSIONS: But type is the first consideration... looking for something unusual... difficult?

NEELY: Yes, preferably where other contractors will pull back a bit because some careful—and risky—planning is necessary, even difficult scaffolding conditions. You won’t always find the simple rectangular type building in this category—

DIMENSIONS: —and the second criteria: location? Is this close to home perhaps?

NEELY: We try to stay in our own trade area—Alabama and Northwest
Florida. Given certain circumstances—who the general contractor is—we may go out of our area, but other criteria would need to be right.

**DIMENSIONS:** What do you look for in a general contractor?

**NEELY:** Well, the first thing, obviously, is to select a GC who pays his bills . . . who has a reputation for treating his subs fairly.

**DIMENSIONS:** How effective are you in evaluating the supervisory skills of a general contractor? His supervision can often make or break a job.

**NEELY:** The supervisors and coordinating skills on a project are vital in our planning. On a major project, most of what we do is drywall; we’re the driving force on the job. If we’re to set the pace we need a good GC and superintendent who will work with us.

**DIMENSIONS:** But there’s no way to guarantee yourself a good superintendent, is there? How does any contractor plan for this possibility of poor management?

**NEELY:** Like every other sub, we try to find out all we can about a job, including the identity of the superintendent. Unfortunately, about the only time you are really successful in doing this is when a job is negotiated. On bid jobs you just can’t find out too often.

**DIMENSIONS:** Why?

**NEELY:** Well, most GCs don’t plan that far ahead on the average bid job so they don’t honestly know.

With a negotiated job, by the time we put the price in, the GC has pretty much planned it out . . . that’s why we can find out who we’ll be working with in the field. On large, bid projects, too, the GC often has time to work his supervision plan out . . .

**DIMENSIONS:** Then you will bid the super if you know his identity?

**NEELY:** Of course, and I would hope that every other sub does the same thing. Anything that will impact on your own productivity planning must be factored in.

**DIMENSIONS:** Of all the factors that you consider in an estimate, Phil, when does profitability planning count the most? Does the GC or his superintendent really have that much impact on your company’s ability to produce a profit?

**NEELY:** As important as each of these factors is, it’s Acousti’s philo-
NEELY: Our workforce is divided into a sales/estimating and an installation group—

DIMENSIONS: —and their separate purpose?

NEELY: Most of our projects—after the material takeoff is completed—are run on the computer which prices out the materials and calculates the labor in manhours.

That labor component is then analyzed carefully in a meeting between the estimator and our installation superintendent—the one who’ll run the job. They go over each detail of the plan entirely to familiarize the superintendent with the overall project, especially anything in the estimate that the estimator feels are key details . . . wall types, furring types, conditions, difficulty of installing . . .

An estimator constantly asks, “What is your own estimate for this labor?” and “What do you think about this?”

DIMENSIONS: Part of the “familiarity” philosophy? I mean your major concern is in evaluating labor content against material, right?

NEELY: You’ve asked two questions there. As for familiarity that element really starts with the first look at the plans. And on labor vs. materials—time you bid, for instance a project as labor intensive as drywall, you are at a risk. The principle holds: the higher the labor content, generally the higher is the risk and the major effort is to locate those jobs—like access floors—where the labor content is less so as to lower risk.

DIMENSIONS: You can’t ever predict labor with certainty, though, right?

NEELY: Correct, and that’s why a prudent contractor goes over every item as carefully as possible. In the final analysis, since the exposure risk lies in the labor there’s no excuse—ever—for missing material in an estimate.

There’s no excuse for overlooking material because you’re trained to pick it up and you should do it. But the labor element is subject to so many influences it can’t be controlled as well as you like.

Our success lies in the relationship we establish between our estimators and our superintendents. We spell out the work and the profits . . . both groups know what’s expected of them because they’ve shared in working up the figures.

DIMENSIONS: So a superintendent literally helps make the estimate and then must perform against his own recommendations. He can make an estimator look good, can’t he?

NEELY: And vice versa. It must be a two-way street. That’s the beauty of it. And the key to the whole thing is confidence: both in the people and in our system. From the beginning we train our own estimators in our procedure, one that we know works.

If our estimator follows our takeoff procedure he will produce an accurate material takeoff. The material takeoff is then introduced into our computer program and the preliminary estimate of labor content is completed.

Then the estimator and the installer
will work together to come up with what we hope will be a good, final labor estimate.

If these procedures are followed properly and the job is installed with no complications, we are almost assured of a profit.

Now, do this a couple of times and the estimator will gain confidence in our estimating system. He’ll know that he’s going about it right, that the rest of the company is in tune with the way he’s proceeding and his accurate take-off will take us closer to getting the job and making money on it.

DIMENSIONS: Let’s start at the start. How do you approach minimizing takeoff errors?

NEELY: Organization is the only way I can describe it. We’ve developed a procedure of breaking each job down—and this applies to any of our products—into its simplest component.

I mean that when we take off a set of plans, we have our estimators take off one wall type in one area of the building.

DIMENSIONS: One small element at a time . . . break it up? Is that right?

NEELY: That’s right. Nothing terribly strange about that. In any job there are several different wall types—one-hour walls, smoke partitions, shaft walls, standard walls, etc.

Each type, of course, is detailed with partition legends or schedules. Depending on how the architect wants them to appear we use the standard cross hatching or schedule a drawing with A, B, C—that sort of thing.

We have our estimators concentrate on one wall type at a time. When you first look at the plans for a reasonably sized job they can look mighty complex with details, elevations, notes, etc. An individual can’t immediately comprehend all of this complicated but vital information so it helps to break it down and analyze the whole project in its parts. We have our estimator go through the entire job breaking out the individual wall types one at a time. In this way, he becomes totally familiar with the project. He goes over the plans with one wall type, then goes back over it again for another wall type, and then again, and again and again, each time getting a better feel for the whole thing. He begins picking things up, acquainting himself with check points, developing a thorough insight.

DIMENSIONS: “Familiarizing” himself with the project . . . sort of filling his mind’s eye?

NEELY: In many cases he’s looked at those plans so many times that he goes to bed with the job. Really, it’s not uncommon for any good estimator figuring a big, complex job to wake up in the middle of the night with details he left out.

By the time he’s about finished with those plans he knows everything about that job. We like to say he’s “familiar.” The biggest side benefit, for a new estimator especially, is to remove the trauma in facing a set of
plans which can be awful foreboding.

We help our estimators understand that a 30-story building’s plans need be no more difficult than those of a 2-classroom school addition. It’s all in scale.

You simply break the job down into components and build it back again, one piece at a time.

**DIMENSIONS:** Then from the takeoff straight to the computer for the number crunching?

**NEELY:** We apply our own company production rates—based on our own records and history on similar jobs and conditions—to the takeoff and this is done by our own company estimating computer program.

In addition to calculating our total production manhours on a job we also breakdown our estimate into several categories, namely framing, hanging, finishing, and a category called others.

**DIMENSIONS:** Would I be correct in assuming you can obtain other reports and that the number crunching is comprehensive?

**NEELY:** Of course, in all respects except the takeoff and the estimator-supervisor data which are, as I’ve explained, manual operations. There are obviously many different components in any construction job and applying a production rate to each of these components would be a horrendous task if done manually, not to mention the exposure to error.

When you stop to consider all the necessary number crunching required of a modern estimate you can quickly see the value of the computer.

**DIMENSIONS:** Then all of your estimators are sold personally—not obedience to company policy—on computer estimating?

**NEELY:** I think any contractor who recognizes a computer for what it is, an invaluable tool for handling large amounts of information, knows full well how important it can be.

You know, estimating has always been an individualized system. Every estimator perceives his craft or skill in a personal way, and what our company has done is simply given our estimators a system that makes maximum use of their individual skills, but leaves the number crunching to a machine.

It’s an estimator’s job to think, to analyze, to assess conditions and complications and place a value on them, to apply human experience and knowledge to a situation and not compete with a dumb but fast electronic machine in a clerical function. If one of our estimators wants he can order up an installation calculation using 8 elements—and as many as 30. Now that’s flexibility. Think how long it would take a pencil pusher to do that, and how many mistakes he might make.

Once upon a time a contractor got a sheaf of yellow sheets for an estimate. Today, a computer provides a concise, comprehensive printout that contains all the data that’s necessary—and can include a materials purchase list, too.

**DIMENSIONS:** You speak as one who trusts your computer. Was it absolutely necessary for Acousti to write its own estimating program?

**NEELY:** We wrote our own program but we based it on other estimating software programs that we knew about. Naturally, our system has some proprietary elements but it contains the major features of the usual off-the-shelf system—such as?

**NEELY:** Oh, that would be material summaries, manhours and linear feet calculations.

We also use an off-the-shelf program called Lotus 1-2-3 to calculate our “what if” analyses. With this software, we can pretty much calculate in spreadsheet form any problem or contingency, including different overhead or profit figures, on a construction job and see the financial consequences. Let’s face it, though, these calculations are only as good as the data you put into the question so you must be careful in using them.

**DIMENSIONS:** What kind of hard-
ware are you talking about?

NEELY: We use the regular IBM PC. It’s big and powerful enough for any task we give it.

We don’t go overboard on devices. Several drywall computer programs make use of a probe and wheel type of device for quickly measuring distances, but they just don’t fit our scheme of things. When we takeoff a wall, we take off any and all specialties to that wall . . . corner bead, trim, that sort of thing.

The wheel/probe won’t do that: it requires several passes to enter lineal footage, door frames, corner conditions . . . that sort of thing. We want our estimators going back over that wall several times, but we don’t want them going back over one type of wall repeatedly.

DIMENSIONS: Recognizing that many contractors are reluctant—traumatized, really—about computers, what would you say to convince them that a serious look is worthwhile?

NEELY: The first thing is to review the software availability. Now testing software is a major industry problem and I don’t know what the solution to this dilemma would be, but you do need to have a good idea what’s out there.

Second, review the way you’re doing things now, what’s good about your own estimating operation and what could be strengthened.

The next step is matching up the software to your own needs.

Acousti, as I recall, reviewed eight computer estimating programs then reduced that to three. Our main issue was to resolve whether to use a program that provided a total job or assembly approach versus the exploded or break-out way. We decided to stay with the exploded strategy.

The assembly approach may be fine for a general contractor who is interested in overall figures, but subs probably are better off breaking out.

DIMENSIONS: How about the fear thing? Some horrible memories are leftovers from converting accounting to computers.

NEELY: Times and computers have changed. Today, there’s nothing to fear in a changeover to computer estimating. All it’ll do is speed you up and cut down on mistakes.

I know a lot of contractors still remember the nightmare of changing over to computerized accounting—and the long and difficult time they had while their accounting was being switched over. They want no such
chaos with their estimating. Truth is, with proper selection in software, the transition is virtually painless and fast.

**DIMENSIONS:** The biggest fear is mistakes. What safeguards can the computer offer against what many feel is a subjective operation, something that can’t be quantified in computer terms?

**NEELY:** Let’s understand one thing: no program is available that will guarantee you against human error . . . or outright mistake. You type in a 5 and the computer understands that only . . . not that it should have been a 6.

Estimating is done by people. They’re the ones who put numbers into the machines. That dumb machine can merely crunch the numbers faster than by hand.

We have several people look over every estimate, and this process is designed to uncover mistakes. When I finish a takeoff or an estimate, I have another estimator look it over. Then the superintendent goes over it in detail.

Estimating is a team approach.

**DIMENSIONS:** Let’s turn now to Acousti’s final criteria: size and complexity. What is behind this judgement?

**NEELY:** This is probably the least pertinent criteria. Our company is in a market that is inhabited by many small contractors and they are very capable of doing the straightforward, traditional job. Fact is, they can often do these simple jobs cheaper than we can.

As a response, we’ve carved out a niche of jobs . . . in size and complexity . . . where these competitors will have a tough time competing successfully against us.

**DIMENSIONS:** You’re not talking about bidding the competition, are you?

**NEELY:** No, competition is not one of our criteria. It’s a factor in the pricing, yes, as it is with any contractor, but that’s all it is: a factor.

**DIMENSIONS:** As a final question, you’ve been in construction estimating now for nearly two decades. What’s been the biggest change?

**NEELY:** The basic concept of estimating is still pretty much the same, but the computer has made the most powerful impact.

It’s produced what every estimator needs: time plus accuracy. If a simple machine can reduce estimating time by about 40 percent then it’s worthy of serious consideration.

Many contractors recognize that their profits have improved since they installed computers. It’s just a number crunching tool and doesn’t impair subjectivity one bit.

When you get right down to it, the human element is just as vital as ever:

A computer can apply your own labor production rates. But you entered these numbers originally and you can correct or adjust them any time.

The computer can figure out markup. But you entered and can still correct these numbers, too.

So what’s changed? Well, just set your numbers into the computer and tell the machine to apply them to your takeoff—and watch the speed with which an error-prone operation is done accurately.