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From: J.R. Huston Enterprises, Inc.

POC: Jim Huston, 303-794-9597, jhuston@jrhuston.biz, www.jrhuston.biz

Rev date: 09-10-2004

Format: MS Word

Topic/title: Bidding large construction projects

INTRODUCTION

Two landscape installation contractors did work in Southern California. Bob did commercial projects while Ken did residential work, both did a little over one million dollars in annual sales or \$100,000 per month. Both were able to double their sales for a short period. Bob did so for one month and Ken did so for a three month period. This was going to be an incremental increase, which would result in increased sales for the year since they would be able to sustain \$100,000 in sales per month for the remainder of the year. Theoretically, they thought that if they doubled sales and did not increase their general and administrative (G&A) costs, that they should see their 30% gross profit margins (20% G&A overhead plus 10% net profit) bid into the increased \$100,000 in sales turn in to net profit.

The theory sounded good. However, both lost money (and lots of it) on the increased sales. Bob lost money for one month while Ken lost money for three months in a row.

What went wrong?

Both companies were comfortable doing \$100,000 of installation work per month. Each company had four experienced crew leaders with the right amount of skilled labor and equipment to handle the normal load of work. While Bob and Ken spent a lot of time in the field supervising crews, they also had a reasonably qualified but under utilized field supervisor who did “some” of the supervising.

When they doubled the workload, Bob and Ken needed eight crews with qualified crew leaders, not the four that they had. Both also had a “delegation” and a “planning” problem. They were doing too much of the supervision. Why have field supervisors if you are not going to let them run the show? The field supervisors were probably barely qualified for their positions and both owners had to continually manage them instead of focusing on marketing, overall quality control and building the company. When the work load doubled, no one was prepared to handle it. Crew productivity fell through the basement floor because no one planned the daily work load. Crisis management quickly became the norm as crew leaders, who were stretched way too thin, didn’t have the correct materials or personnel to do the work. Job profitability vanished almost over night.

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“IF YOU BUILD IT, THEY WILL COME”

Large construction projects are a two-edged sword. They cut both ways. They can make you lots of money or they can lose you lots of money, and lots of sleep. However, you have to plan them in great detail. You also have to plan for them. Sudden growth can kill you if you are unprepared for it. You not only have to bid these jobs correctly, you have to have the right company infrastructure (experienced crew leaders and members, equipment, estimating system, job costing, supervision, etc.). Consequently, steady growth is best. This gives you the time to get an experienced team, equipment and systems (infrastructure) in place.

In the 1989 movie *Field of Dreams*, Kevin Costner’s character, Iowa farmer Ray Kinsella, built a baseball field in hopes that the ghosts of Shoeless Joe Jackson and the other seven Chicago White Sox players banned from the game for throwing the 1919 World Series, would appear and play ball once again. Hence the phrase, “If you build it, he (Shoeless Joe) will come.”

In (somewhat) like manner, if you build your company’s infrastructure correctly, sales will in all likelihood follow. Infrastructure should precede revenue. Before you go out and tackle large construction projects, you have to prepare your company for them. Otherwise, your field of dreams may turn into a field of nightmares. Here are some tips.

BIDDING LARGE CONSTRUCTION PROJECTS

Large may be a relative term. However, for our purposes, I’m going to define a large job as one over \$100,000. For 99% of the contractors doing construction projects, this is a “large” job. Here are “some” key check points to keep in mind.

1. Do your preparation work:

- Ensure that you have the latest set of plans and addendums.
- Contact the landscape architect (LSA) and discuss the details with them.
- Don’t antagonize the LSA. This will come back to haunt you.
- Build a team with the LSA, owner, general contractor (GC), developer, etc.
- Obtain “written” quotes from subcontractors and suppliers.
- Do a detailed takeoff and use a digitizer or planimeter.
- Walk the site and look for problem areas (rock conditions, ledge, obstructions, access issues, water sources/issues, drainage, utilities, etc.)
- If you are designing the project yourself, consider all of the above.
- Have your field supervisor visit the site.

2. Bid the project:

- Prepare your bid using a proven software program.
- Break the job into phases and bid the job in the sequence that you will install it if at all

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possible. This will make the bid easier to analyze and manage. Here are some examples.

- Site work
- Soil preparation
- Front yard, back yard, hardscape
- Models, common areas, production lots
- Irrigation
 - Point of connection
 - Controllers
 - Main line
 - Lateral line
 - Valves
 - Heads
 - Etc.
- Planting
- Trees, shrubs, sod
- Ground covers
- Maintenance
- General conditions

Don't forget general conditions as their costs usually comprise 6 to 10% of the price of a project. Be creative with general condition costs. One contractor in New England was bidding a \$500,000 project. Drive time totaled over \$17,000. He decided to rent a house near the project, which saved him over ten thousand dollars in labor and burden cost.

Another contractor in the west didn't include load/unload time and drive time in his bids. This cost him over \$40,000 a year.

Have someone, other than the bidder, review the bid.

Let's talk about some potential problems and opportunities for the four main cost categories in a bid: materials, field labor and burden, equipment and subcontractor costs.

Materials

As I mentioned before, always get written quotes for materials and file them in the job folder. When bidding large jobs, inform your suppliers about it and let them know that you need their best pricing if you (and they) are going to get the work. However, be careful. I've seen vendors broadcast to their other customers jobs my clients were bidding, which no one else knew about. All of a sudden, three to four other contractors show up bidding the job because the vendor couldn't keep quiet.

Arrange to pay your vendors when you get paid. This can even out cash flow considerably.

Consider growing your own materials if at all possible and if there is enough time. This can

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save you significant costs in your bid.

If the owner, GC or developer wants to buy the materials, be careful.

- Don't provide a warranty for them. Or if you do, put the labor, equipment and any other costs in the bid. Be sure to spell out who pays for the replacement materials.
- Bid the job as if you were going to pay for everything, including materials. Include G&A overhead and net profit. Then subtract out only the costs that the owner is going to pay. Why should you lose the G&A overhead recovery and net profit on these items? You are doing all of the work. You deserve these markups and margins.

Be prepared for drought conditions and impeded water sources. Include in your proposal and contract a "drought clause" that states that your bid includes normal watering from predetermined sources on the site. If water is unavailable or if a drought occurs, you bill for the extra costs on a time and materials (T&M) basis.

Don't forget to include freight charges, time to stage and water materials in holding areas and related equipment costs.

Field labor and labor burden

Bid the correct crew size and average wage rate in the bid. A contractor in Northern California was pricing a large residential design-build project. There were approximately 5,000 hours in his bid. I queried him as to the average wage that he used to bid the project. He said that he used the wage rate for a three person crew. I then asked him what size crew he would use to install the job. He responded that he would use a nine person crew. The average wage for the nine person crew was \$2.00 per hour cheaper than the three person crew used to bid the job. As a result, this contractor over estimated his labor costs by \$13,000 (5,000 hours x \$2.00 = \$10,000; \$10,000 x .3 labor burden or \$13,000 total. Adding a 20% net profit markup to the \$13,000 cost (\$13,000 x .2 = \$2,600) would cause him to add \$15,600 to his bid, which was unnecessary.

Check your productivity rates. Have your field supervisor or one of your crew leaders check your production rates. Also consider the impact on production that equipment will have.

Most contractors use three person crews for installation work. If additional labor is needed, they simply send two or three crews. This simplifies bidding since the crew average wage usually remains the same.

Equipment

Significant productivity gains have been realized in the green industry the last fifteen years due to improvements in equipment technology. Manufacturers have made great strides in fabrication techniques due to the digital technology revolution that is sweeping the world. However, the green industry has also caught the attention of manufacturers who, only until recently, only made large equipment such as dozers, graders, earth movers, etc. They have realized the excellent

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market opportunity in the smaller equipment markets. As a result, landscape and irrigation contractors not only have more equipment options, they have more equipment designed specifically for green industry applications. Mini-excavators, tracked loaders, mini-skid steers and soil renovators, to name a few, have improved field labor efficiency significantly.

In the early 1990s, a client in New England billed under \$100,000 per year per full-time field crew member. Due to improvements in equipment and its utilization, this contractor now bills over \$150,000 per year per full-time field crew member. In other words, a 3 person crew would bring in under \$300,000 in revenue in the early 1990s. Today, this same crew brings in over \$450,000 per year in revenue.

A client in Utah was bidding an 80 acre golf course. His bid was well over \$1,000,000 when he asked me to review it. Bidding was tight and he was up against some very large competitors. I introduced him to another contractor who used a Rotadairon soil renovator on a similar golf course site in Idaho. Without even seeing the machine, my client bid it and its improved production rates in his bid. The improved productivity dropped my client's bid by \$50,000 and he won it by about \$15,000. To this day, this contractor swears by this piece of equipment. Study equipment and its effect upon your total labor hours in a bid.

Finally, calculate a cost per hour (CPH) for each piece of field equipment used on the job. Calculate the number of actual running hours that the equipment will be used on the job and multiply those hours by the CPH. This will give you the cost for equipment to include in the bid. Do not put field equipment costs in G&A overhead.

Subcontractors

"If in doubt, sub it out." These are words to live by. If you are uncertain of certain phases or portions of the project, subcontract the work to someone who knows what they are doing.

The contractor in Utah who won the large golf course project, subcontracted over \$500,000 of it to a local irrigation contractor who he knew well and who had done lots of golf work. Normally, my client would have put a 15% margin on the subcontractor's price. However, due to the minimal risk involved and to the tight market, my client only marked up the sub's work by 3%. His choice was whether he wanted 3% of \$500,000 or 15% of nothing.

3. Know your market:

Know your market. A client in New England does over \$3 million in commercial installation work a year. His average gross profit margin (GPM) is approximately 25%. This means that the total of G&A overhead and net profit on a job equals 25%. During the recession of the late 1980s and early 1990s, he would not get any jobs if his GPM on bids was over 18%. Here are some benchmarks to keep in mind.

Commercial installation jobs:

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<u>Type work</u>	<u>GPM range</u>
• All commercial work	20 to 30%
• Open bid work	20 to 25%
• Negotiated work	25 to 30%

Residential installation jobs:

<u>Type work</u>	<u>GPM range</u>
• All size installation work	30 to 40%
• Jobs over \$100,000	30 to 35%
• Jobs under \$10,000	35 to 45%

Subcontracted work normally has a GPM of 10 to 20% added onto it. The norm throughout the United States is 15%.

Keep these GPM benchmarks in mind as you bid your work. Monitor and track it from job to job. However, if you have a lot of subcontractor costs in a bid, price the subcontracted work separately from the work that your crews will do.

CONCLUSION

Bidding large construction projects can be fun and they can add to your bottom line, if you know what you are doing and if you have the proper company infrastructure to handle them. Many contractors bite off more than they can chew because they only see the opportunity and not the hidden pitfalls. Old generals choose their battles wisely. That's how and why they get to be "old" generals. Don't let your ego get out of control. If it does, your company will soon follow. Build your company and its infrastructure in steady, incremental steps.

A few final cautions

If you land some really big jobs, don't forget to keep marketing your company. Otherwise, you might wake up one morning without any backlog and have to start marketing all over from scratch. Also beware of hitching your wagon to a "Sugar Daddy". Remember, it is not a question of "if" you will lose your Sugar Daddy but "when".

This article was adapted from James Huston's new book, audio book and MS Excel CD, *How to Price Landscape & Irrigation Projects*. The author is president of J.R. Huston Enterprises, Inc., which specializes in construction and services management consulting to the Green Industry. Mr. Huston is a member of the American Society of Professional Estimators and he is one of only two Certified Professional Landscape Estimators in the world. For further information on the products and services offered by J.R. Huston Enterprises, call 1-800-451-5588, e-mail JRHEI at

J. R. Huston Enterprises, Inc.

jrhei@jrhuston.biz or visit the J.R. Huston Enterprise web site at <http://www.jrhuston.biz>.