

## **BLUEPRINT READING FOR ESTIMATING Part One of two**

Article for the ET “Estimating Today”, the official publication of the  
**American Society of Professional Estimators or ASPE**

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This topic is also offered in workshop format at several locations including at the Society’s 51<sup>ST</sup> Annual Convention and Estimating Academy in Park City, UT and again in Houston recently. Watch ASPEnational.org for more opportunities like this and other on-line educational courses.

The question I usually get asked when discussing this topic with interested contractors is: “Why would it sound like blueprint reading for ‘estimating’ is unique. Isn’t blueprint reading just blue-print reading in all cases?” The answer to that is actually no. Blueprint for construction is not subject to interpretation by the contractor. There, the answers must be absolute, and come from the design team and owner in most cases, before work can progress.

We would all agree that today blueprint reading for estimating may not include the luxury of complete documents, yet we still need to provide the opportunity for our firm to bid. No we are not talking about conceptual or design build. We mean hard bid from so-called completed design drawings. In the case of Design Build there may be allowances for that unique use of the contractors experience, but that is an exception to this writing and another subject, not for this discussion here.

Here we will address the traditional format of owner procured, design team issued documents for construction bidding. Trained in Architecture, yet experienced in construction I always appreciate the opportunity to share some tips to both get through the bid preparation and pre-construction planning processes. Again note I emphasize: ‘pre’ construction. Years ago I developed a simple list of tips for bidding (Figure 1) and found some steps in reading blueprints (Figure 2) for of all things, a local phone book company. They wanted something they could use as ad filler in their Builders and Contractors sections. To my knowledge they still use them today.

My goal here is to yes, not only rely on the estimator’s experience but to create a comfort level so they may feel confident in their interpretation of the costs associated with any missing items found. Plus, then their strategic presentation in good scope letter presentations for clarification. While asked, the corrections, answers or addendums may not be published in time for a bid deadline. Leaving some to quit and not bid. Wasting all their prep and acquisition time for that project so far.

I start each blueprint reading workshop for estimating with my 6 standard tips for bidding see figure one here. So here you go. It still applies to most of us. We hope they are a useful reminder for some basic courtesy and professional practice.

## TIPS FOR BIDDING

1. Publish your scope of work early. An un-priced, unsigned proposal works. Refer to my article Bid and Proposal Writing
2. Identify and list exclusions clearly. Show your intended CSI division(s) too.
3. Give contractors enough time to evaluate your proposal
4. Publish prices timely. Unfortunately we all sometimes need to protect our prices. Last minute bids can cause you problems too.
5. Be available to answer questions. Do not just fax out your bid and disappear. Familiarize and delegate subordinates if necessary.
6. Finally dedicate a fax line. Don't answer it.

Now these are just some simple suggestions and obviously yours can more focused on your need and specifically for your firm's needs and practices.

As you prepare to glance at this initial set of tips in Figure 2 please consider this writing presumes review of paper documents. However review of online documents require the same patient review. Your contract will still read per "plans and specs" regardless if the estimator printed one or all; opened and reviewed one or all. It actually has never been easier to do this in preliminary review or take off planning. Set up in the conference room, fire up a projector, bring the bid team together and click up the drawings. Start planning your take off and any subordinate assignments. Have your proposal and scope writer start their outline at this point too. This team concept while novel will make everyone feel involved and help own both the process and project as a team.

We did mention to practice "planning your take off". That has several meanings and purpose. Initially review the spec documents and actual contract your customer needs to submit and see how the bid is to be formatted. Watch for alternates and break outs requested up front. There is no point taking off the whole object if part need to be separated later. Quantify that portion and its components as you go. The risk of submitting a bid and letting your customer value these break outs. Just makes no sense. Value them as accurately as possible from the beginning.

You may want to develop a procedure for your own firm and department. Here are some very basic steps to outline this process:

Figure 2

## STEPS IN READING A SET OF BLUEPRINTS

- Step 1: Review the plan index and check the list of blueprints in the set.
- Step 2: Move from one sheet to another until you are thoroughly familiar with the structure

- Step 3: Check the notes and specifications against the construction details
- Step 4: Study the plot plan to observe the location and orientation of the Building plus any unique structures.
- Step 5: Check the first floor or main floor plan to further orient the building
- Step 6: Observe features such as entry and hallways, doors, windows, tables or schedules, sections and elevations.
- Step 7: Study features that extend thru more than one floor, such as shear walls, plumbing, air conditioning and electrical.
- Step 8: Observe floor and wall construction or other framing details
- Step 9: Check the foundation plan and the detail sheets
- Step 10: Study the MPE drawings for architectural items that may carry through to the mechanical, plumbing and electrical drawings.

As you can see from this rudimentary list it is best used as an outline for a workshop format presentation. It certainly is not comprehensive as an all-encompassing process. That noted this would be a great time to refer you to the Society's website for a full slate of educational opportunities. Including several college quality courses on several degrees of blue print reading. Visit [aspenational.org](http://aspenational.org) >> Education Board. There is also an archive of my articles at [ConstructUtah.net](http://ConstructUtah.net) >> [Mountainlands Area Plan Rooms .com](http://MountainlandsAreaPlanRooms.com) or see Press Release.

In part 2 of this Article we follow up with how plans are produced, point of contacts, responsibilities and how to get answers. It must include discussion of the specs, especially division as it applies to all participants. It seems silly to call the new CSI divisions when they are today about 3 years old. However we will go over them. They do a great job clarify some redundant situations found in the old. We must also discuss the cost items found there that some estimators may not know exist or recall to add. No matter how seasoned the veteran, these reminders help us all. Then finally some greater detail in the plan documents themselves.

As always, good luck with your bidding  
Best Regards

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