Overview

- Indiana QBS Coalition – Who are we?
- What do we do?
- Qualifications Based Selection
  - Why
  - How
Who are we?

- American Council of Engineering Companies (ACEC)
- American Institute of Architects (AIA)
- American Society of Civil Engineers (ASCE)
- American Society of Interior Design (ASID)
- Associated General Contractors of Indiana (AGC/I)
- Indiana Society of Professional Engineers (ISPE)
- Indiana Society of Professional Land Surveyors (ISPLS)
- Professional Engineers in Private Practice (PEPP)
- Society for Marketing Professional Services (SMPS)

Promoting Qualifications Based Selection

- DEFINITION: QBS is a negotiated, competitive procurement process for selection of professional services based on qualifications and competence in relation to the work to be performed.
QBS Legal Precedent

- Brooks Act –1972
  - Mandates QBS practices for federal agencies and local or state agencies when using federal funds
- Indiana
  - Allows public agencies to use QBS to select professional service firms

Risk

- Why select Doctors, Lawyers, Accountants, Engineers, Barbers, or Mechanics based on professional competence and creative ability?
  - High risk of failure if errors made
  - Lowest cost provider MUST cut corners to stay in business
Cutting Corners

- Lower level staff substitution
- Narrowly defined scope
  - Ignore alternatives (i.e., value engineering)
- No mentoring within professional firm
- Inexperience in particular market segment
  - Codes / regulations
  - Qualifications
- "Low ball" initial / prelim study as loss leader

Tactics Often Used To “Win”
Fee Based Selections:

- Including costs for only the services specifically requested in the Request For Proposals (RFP).
- Limiting the number of alternatives considered in studies and designs.
- Performing services utilizing less experienced personnel.
- Limiting the technical and quality reviews that are performed.
Leverage

- Cost of Professional Services
  - Typically 1.5% or less of life cycle costs of capital construction projects
- By careful selection of design, engineering, and other professional construction services, significant long term expenses can be minimized

"Typical" Project Costs

Engineering Services*
- Planning
- Design
- Bid Assistance
- Permit Assistance
- Construction Services

Construction

* Engineering costs will vary depending on the complexity of the project.
Well Engineered Projects Can Enable Owners To:

- Identify equipment and facilities that have the most economical life cycle costs.
- Reduce the probability of getting an improper bid or having bid disputes.
- Obtain lower and more competitive bids.
- Control costs during construction.
- Control life cycle operation and maintenance costs.
Project Cost “Savings” Example

- Project Description: Rehabilitation of your water treatment plant and the addition of residuals handling facilities.
- Preliminary estimates of the construction cost for the project is $8,000,000.

“Savings” Example (Cont’d)

- A fee based selection process is used to select an engineering firm to keep the engineering costs “competitive”.
- Instead of paying a more typical 10% for the planning and design services, the firm you selected agrees to plan and design the facilities for 8%.

(“Save” $160,000!)
“Savings” Example (Cont’d)

- To complete the design within budget the engineering firm quickly identifies the items that need to be rehabilitated and the residuals facilities that need to be added and begins developing the project documents.

- Life cycle costs for the various equipment alternatives are not considered.

“Savings” Example (Cont’d)

- During design you realize a small office and restroom will be needed in the new residuals handling facility.
- The scope in the request for proposals did not include any allowance for changes.

- The related design has to be completed quickly so as not to delay the project and the associated design fee which had to be negotiated is higher as a result.
  (“Lose” $30,000)
“Savings” Example (Cont’d)

- Building and fire code permits are required now that there is an office and restroom. Costs for preparing and tracking the permit submittals were not included in the design proposal.
  ("Lose" $12,000.)

“Savings” Example (Cont’d)

- Project documents are completed quickly and receive a limited review because of budget limitation.

  - One of the permits has not been finalized at the time of the bid.
“Savings” Example (Cont’d)

- Bids are received and the apparent low bid is below the original $8 million, but since the level of detail included in the documents was limited by the budget, bidders included additional dollars to cover unknowns.
  (“Lose” $60,000.)

“Savings” Example (Cont’d)

- After bids are received the outstanding permit arrives containing conditions that impact the construction. Bids would have been higher if the permit conditions had been incorporated in the bid documents, but final project costs are even higher because the costs to comply with the conditions have to be negotiated and handle through change orders.
  (“Lose” $18,000)
“Savings” Example (Cont’d)

- The design engineering firm is retained to provide construction services, but to keep costs down a less experienced resident representative is used.

- The less experienced resident representative requires more “senior office engineer” support during the course of construction. (You “save” nothing.)

“Savings” Example (Cont’d)

- Because of the limited detail in the contract documents and the inexperience of the resident representative, change orders as a percent of total project costs, which usually run about 2%, come in at 3.5%. (You “lose” $120,000.)
“Savings” Example (Cont’d)

- The designer did not factor in the trucking and disposal costs for the residuals into the selection of the dewatering equipment. O&M costs for the new facilities are 1.2% higher than what they would have been if you had installed and used dewatering equipment that produced a drier cake.

(You “lose” $1,016,000!)

“Savings” Summary

<table>
<thead>
<tr>
<th></th>
<th>“Savings”</th>
<th>“Losses”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering</td>
<td>$160,000</td>
<td></td>
</tr>
<tr>
<td>Office &amp; Restroom</td>
<td></td>
<td>$30,000</td>
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<tr>
<td>Fire &amp; Building Codes</td>
<td></td>
<td>$12,000</td>
</tr>
<tr>
<td>Bid Unknowns</td>
<td></td>
<td>$60,000</td>
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<tr>
<td>Permit Conditions</td>
<td></td>
<td>$18,000</td>
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<tr>
<td>More Change Orders</td>
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<td>$120,000</td>
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<tr>
<td>Life Cycle Costs</td>
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<td>$1,016,000</td>
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<tr>
<td><strong>Total</strong></td>
<td>$160,000</td>
<td>$1,256,000</td>
</tr>
</tbody>
</table>
Engineered, designed, & built by the lowest bidders?

Recommendation…

– Identify and select the most qualified consultant,
– Clearly define the needed scope of service,
– Negotiate a reasonable fee based on:

  • Project Complexity
  • Expertise and Personnel Needs
  • Level of Effort Required
How? – Step 1

- Establish Evaluation Criteria
  - Technical Qualifications
  - Experience with similar projects
  - Reputation with existing clients
  - Timeliness, mobility, current workload
  - Other factors specific to the project

How? – Step 1

- Solicit Statement of Qualifications from selected firms (SOQ)
- Develop short list of 3-5 firms
  - Investigate references
  - Evaluate other completed projects
  - Due diligence on firm
- Interview and objectively rank firms
  - Design concepts and creative approaches
How? – Step 2

- Invite highest ranked firm to assist in scope definition
- Establish the contract terms – based on the scope
- Reach agreement
  - Yes – proceed to Step 3
  - No – go to next best qualified firm from the short list

How? – Step 3

- Ask for a fee proposal
- Still in agreement?
  - Yes – enter into contract and proceed with work
  - No – go to Step 2 with next best qualified firm from short list
When Defining The Scope And Negotiating The Fee…

- Include time for equipment and process comparisons using life cycle cost comparisons.
- Include time for quality reviews.
- Identify the specific professionals you want involved in the reviews.
- On larger projects, consider using a more formal Value Engineering process to identify project savings.

Accommodating Change….

- Recognize that as you and your consultant work through a design project, regardless of how carefully the scope was prepared, changes are often needed. Consider budgeting some additional funds at the start of the project so that you can accommodate most if not all of the design changes without delaying the project.
Using The QBS Process Will…

- Increase the likelihood of getting the appropriate solutions to your needs.
- Increase the likelihood of getting those solutions implemented without costly delays or overruns.
- Insure that you and your professional consultant are working together from the start of the project toward the same objectives.

Conclusion

- QBS
  - Legal
  - Cost effective
  - Competitive
  - Simple
Finally...

- Promote the use of the QBS process to your community leaders and public works officials early and often. (Community leaders and officials change periodically and may not initially recognize the adverse impacts cost-based professional service selections can have on your utility’s long term performance.)
- Insist on using a selection process that will increase your chances of managerial success.

Where to Get Help

- Indiana QBS Coalition
  - 317-637-3563
  - www.ai.org/qbs
- Facilitator - State of Indiana
  - Jim Bain
  - 765-564-1056
  - falconadvisors@insightbb.com
- www.acec.org/advocacy/qbs.cfm