

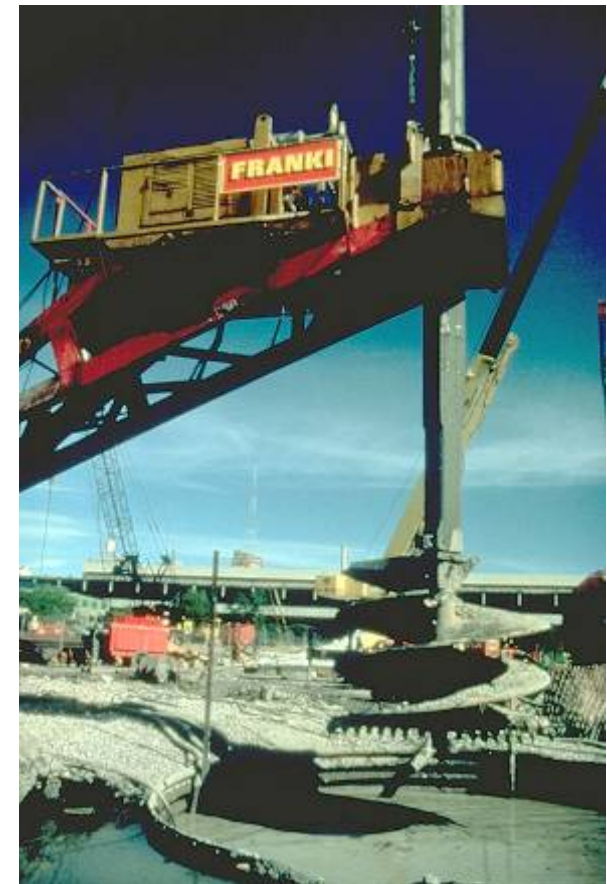
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# QBS Colorado

Updated: October 2009



## Qualifications Based Selection of Architectural and Engineering Services



Let's begin  
with a few  
examples  
of...

*AWARD  
WINNING*

CONSTRUCTION



More...  
*AWARD WINNING*  
CONSTRUCTION



More...  
*AWARD WINNING*  
CONSTRUCTION



More...  
*AWARD WINNING*  
CONSTRUCTION



More...  
*AWARD*  
*WINNING*  
CONSTRUCTION



AND THE WINNER IS...  
*THE LOWEST BIDDER!!*



## Avoid mistakes and save money, Qualification-based selection (QBS)

A process for the selection of design professionals by Owners. It is a negotiated procurement process for selection based **ONLY on qualifications and competence** in relation to the work to be performed.



# QBS is endorsed by:

- American Institute of Architects (**AIA**)
- American Council of Engineering Companies (**ACEC**)
- National Society of Professional Engineers (**NSPE**)
- American Public Works Association (**APWA**)
- American Bar Association (**ABA**)
- Association of General Contractors (**AGC**)
- American Society of Civil Engineers (**ASCE**)

# QBS... IT'S THE LAW

## for Federally and State-Funded Projects

- Federal: Brooks Act of 1972
- Colorado: SS 24-30-1401 to 24-30-1408,  
CRS 1988 and 1991

It's a good idea for everyone else!

# QBS Colorado

Comprised of members from:

- ❖ American Institute of Architects (AIA)



- ❖ American Council of Engineering Companies (ACEC)



- ❖ Professional Engineers of Colorado (PEC, NSPE)



- ❖ Colorado Association of Geotechnical Engineers (CAGE)



# OUR PURPOSE

- **Disseminate information** about QBS
- **Investigate** selection procedures and practices
- **Provide guidance** to public and private entities
- Provide professional **advice and assistance** to Architects and Engineers
- **Encourage** industry wide **practice of QBS**

# How to use QBS

## Classical QBS Process

1. Request for Qualifications (**RFQ**)
2. **Shortlist** the best qualified offerors
3. Rank and select the **most qualified**
4. Create specific Scope of Work (**SOW**)
5. **Negotiate** SOW and fees
6. **Contract** or try again



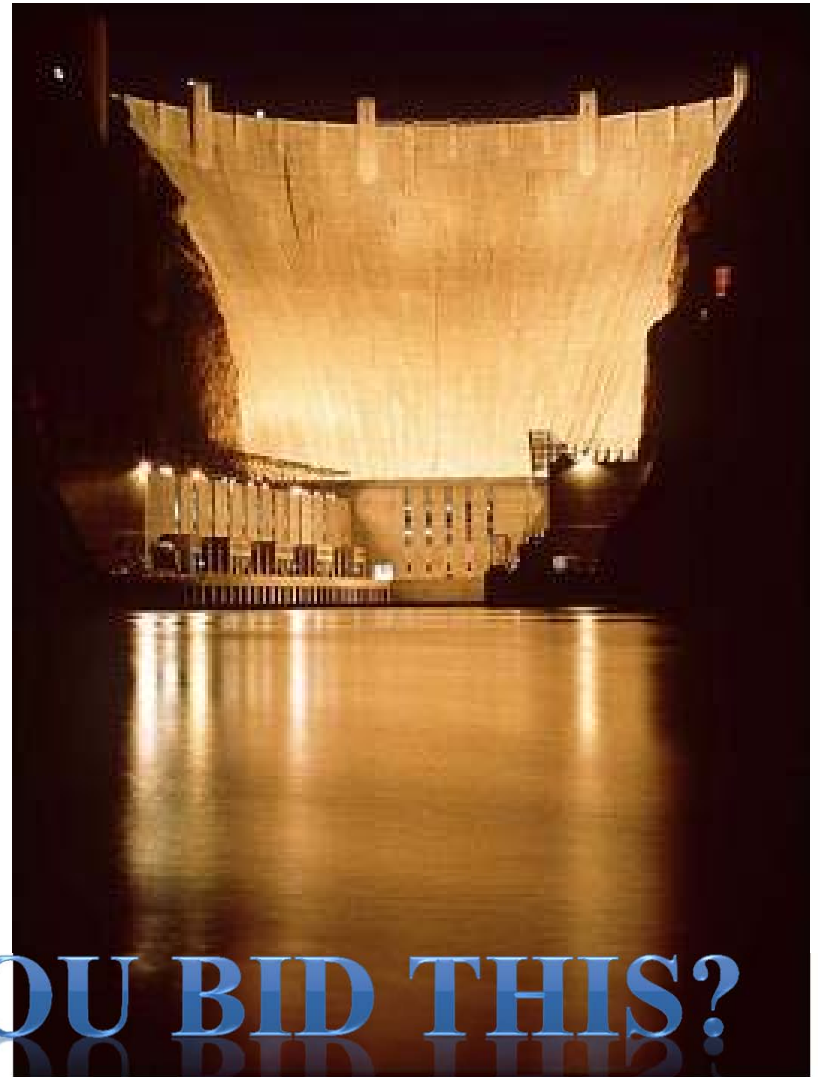
## QBS Might Seem Complicated

**There are many different ways  
to select a Design Professional  
*Why not take the lowest bid?***

***...what are you really after?  
Creativity, Innovation, Value***

# Professional A/E Services

- Require **critical thinking** skills, **intellectual** effort
- Involve **investigation, analysis, and research**
- **Problem-solving**



**HOW CAN YOU BID THIS?**

# Professional A/E Services

Remember what we're after...a GOOD design

- **Services are Creative** by nature
- **Not a tangible commodity**



- Design is only about **1%** of total life cycle cost
- **Significant impact** on lifetime cost



# So Why use QBS?

The other 99% of a project's life cycle cost is dependent on the quality of the 1% spent on design.



It's smart business.

# Why Use QBS?



It's not just about money...

- Results in **productive, team relationships**
- Creates partners with **common goals** and expectations through **communication**
- Promotes a **thorough understanding**
- Allows **fair and reasonable fees**
- **Flexible**



## Without QBS...Low Bid

# You Get What You Pay For

- Lowest bidder has to “win”
- Execution by economics (shortcutting?)
- Opposition of interests
- Easiest design vs. best design
- Oversizing vs. optimal selection
- Minimization of critical detail/review
- Inflexible



# SEVEN REASONS TO HIRE CONSULTANTS BASED UPON QUALIFICATIONS

1. QBS is a **competitive process** based upon qualification criteria.
2. QBS leads to **better quality** projects – **lowest life-cycle cost**.
3. QBS allows the owner is to review a **variety of alternates** including the least costly, allowing the owner to select the most cost-effective solution.
4. QBS allows for the development of a **detailed and clear scope** that benefits the owner. Bids for engineering services are rarely compared on an equal basis.
5. QBS **assures best effort**. In fee-based selection, the competing firms will likely submit a price for the least effort envisioned
6. QBS results in **lower administrative cost** by allowing competing firms to develop the details of the project scope.
7. It's the **law** for federally and state funded projects.

# But again, IT'S NOT JUST ABOUT THE MONEY!!!



Date: April 23, 1987  
Where: Brand new mega Sav-On Foods Store, Station Square  
Burnaby, British Columbia  
Event: Approximately 6,400 square feet of the roof-top parking lot collapsed into the food store, injuring 20 people.

*A Commissioner's Inquiry by the Canadian Government determined that one of the major factors that led to the ultimate collapse of the structure was the selection of the Structural Engineer on the basis of competitive bidding.*

Although competitive bidding bids were required, the structural engineering work had been awarded to the third lowest bidder for the \$5.4 million Sav-On Foods building. Unfortunately, *this bidder's fee was subsequently negotiated down by the building's development manager.*

*In the Commissioner's Report, it was stated that: "with tendering [bidding], relatively intense competition has driven fee levels down, and this has raised questions about the quality of professional services in this environment."*

*The Commissioner's Report went on to state that "bidding for Professional Services...caused a great deal of concern."*

*The report stated that one approach to correcting the situation was to "pressure the owner of the building to provide sufficient compensation to permit the Engineer to do the work properly."*

# But again, IT'S NOT JUST ABOUT THE MONEY!!!



Date: July 17, 1981

Where: Hyatt Regency Hotel, Kansas City, Missouri

Event: Two elevated walkways over the lobby of the collapsed during a party, killing 114 people and injuring over 200 others.

The engineering services on this structure had been awarded on the basis of low bid, and the design professional services were limited by contract. In order to keep his fees low, and because of the "practices of the industry at the time and past dealings with the fabricator, the Engineer had specified that the detailing of the rod connections of the two walkways to the building be done by the fabricator".

A 1984 U.S. House of Representatives Subcommittee report on Structural Failures in Public Facilities (House Report 98-621), stated that one of the six factors of critical importance in causing the structural failures in this particular project was the selection of architects and engineers based on bid.

When such selection is generally made on a "low bid" basis, the report stated as one of its findings: "...there is a tendency to unrealistically reduce the price when price is known to be the primary basis for the contract award...use of "low bid" procedure has frequently resulted in insufficient funds allocated to a project to adequately verify the accuracy of design and to thoroughly check plans before construction...selection of an Architect or Engineer solely on price-competition basis provides the potential for reductions in quality due to initial underestimation of the costs and resources required to adequately perform the work."

# CONCLUSIONS

## BENEFITS OF QBS

- Increased competition
- Allows for consideration of non-conventional, long-term, and sustainable and efficient designs
- Results in significant, life cycle cost savings
- More comprehensive plans and specifications for construction
  - Reduce construction change orders
  - Reduce time delays
  - Reduce potential for disputes and unfortunate legal expenses
- Creates a cooperative relationship between Client and Consultant
- Improves the defined Scope of Work

**QBS raises the bar**

it's good for the client and good for the profession

# CONCLUSIONS

- Good consultants truly desire to find the best, most economic, and creative solutions to achieve the long-term goals of a project

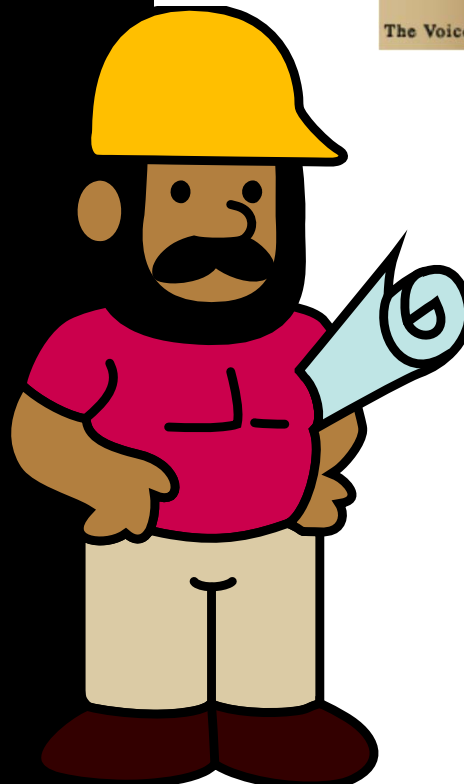
**It's who we are...and**  
***QBS is the best chance for clients***  
***to allow this resource to be tapped***

- The main advantage of a QBS system is that the design professional and the client are working in a collaborative, sustainable spirit to maximize the quality, value, cost effectiveness and usefulness of the final product.



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