

# QBS: A Step by Step Guide to Quality

1. Prepare a list of qualified consultants.  
For small projects, ACEC recommends selecting a single candidate based on quality of earlier work rather than going through the entire process;
2. Contact consulting engineers so selected, outlining the nature of the project and request expressions of interest from consulting firms so selected;
3. Identify three to five candidates to develop a short list;
4. Request proposals, emphasizing project approach, understanding of client's needs, commitment of staff and resources, and previous experience;
5. Interview candidate consultants separately to examine their qualifications and discuss the project and scope of services required. Clients may also wish to check carefully with recent clients of each consulting engineering firm;
6. Select the consulting engineer who is best suited for the project;
7. Negotiate fees and execute a contract with the selected consulting engineers. If negotiations are not successful, negotiate with second choice, and
8. Notify all those interviewed when a contract has been awarded.

**The Result: A sound investment, the best team, sustainable infrastructure.**

of the total life-cycle cost of a structure, yet if this 1-2% is wisely invested on design, governments can save significantly on construction and maintenance costs, which make up the remaining 98-99% of the life-cycle costs.

## QBS vs Cost-Based Selection

To ensure that clients who use engineering services receive the best design expertise, talent and innovation as well as the most appropriate technology, the most responsible and reliable way of choosing an engineer is **Qualifications-Based Selection (QBS)**

### Benefits of (QBS)

- A) Results in appropriate and wise investment at design stage which:
  - Fosters creativity
  - Selects best design team and most appropriate technology
  - Provides long-term value by reducing construction and life-cycle maintenance costs
- B) Places emphasis on the client's objectives and expectations of quality, well adapted to current conditions and future trends.
- C) Provides a transparent selection system that focuses on competence, creativity and proven performance.

### Dangers of low-bid selection

- A) Results in low investment at design stage which:
  - Discourages innovation and evaluation of alternative approaches
  - Results in use of less experienced personnel and fewer resources devoted to the project
  - Leads to missed opportunities for savings in construction and life-cycle maintenance costs
- B) Places emphasis on acceptable standards instead of expected quality.
- C) Selection focuses on lowest possible effort and lowest call on intellectual, conceptual and design resources.

## QBS is the Law in the U.S.—What about Canada?

In the United States, the federal government has enshrined the principles of QBS in the Brooks Act and 44 state legislatures have adopted the principles. Here in Canada, we were delighted to learn that even the Federal Public Works and Government Services Minister, the Honourable Scott Brison, has been stressing the importance of getting the right design. At the launch of Environment Week 2005, the Minister spoke of the need to ensure that government buildings and facilities were part of the environment solution. The Minister said: "We have also begun to develop a life-cycle assessment system for major building projects. That will allow us to design



Claude Paul Boivin  
President

innovative and energy efficient buildings even when it costs more up front." Coming from such a senior key policy maker, those are indeed encouraging words.

### Recommendation

Given that consulting engineers provide professional design services that can have an impact on the health and safety of Canadians and that employing the right design team and appropriate technology is vital to the success of each infrastructure project, **ACEC strongly recommends that the Government of Canada adopt legislation requiring that Qualifications-Based Selection (QBS) be used for federal procurement of engineering services.**

### Contact Us

Association of Consulting Engineers of Canada  
Association des ingénieurs-conseils du Canada  
616-130 Albert St., Ottawa ON K1P 5G4  
Tel.: (613) 236-0569  
Fax: (613) 236-6193  
www.acec.ca

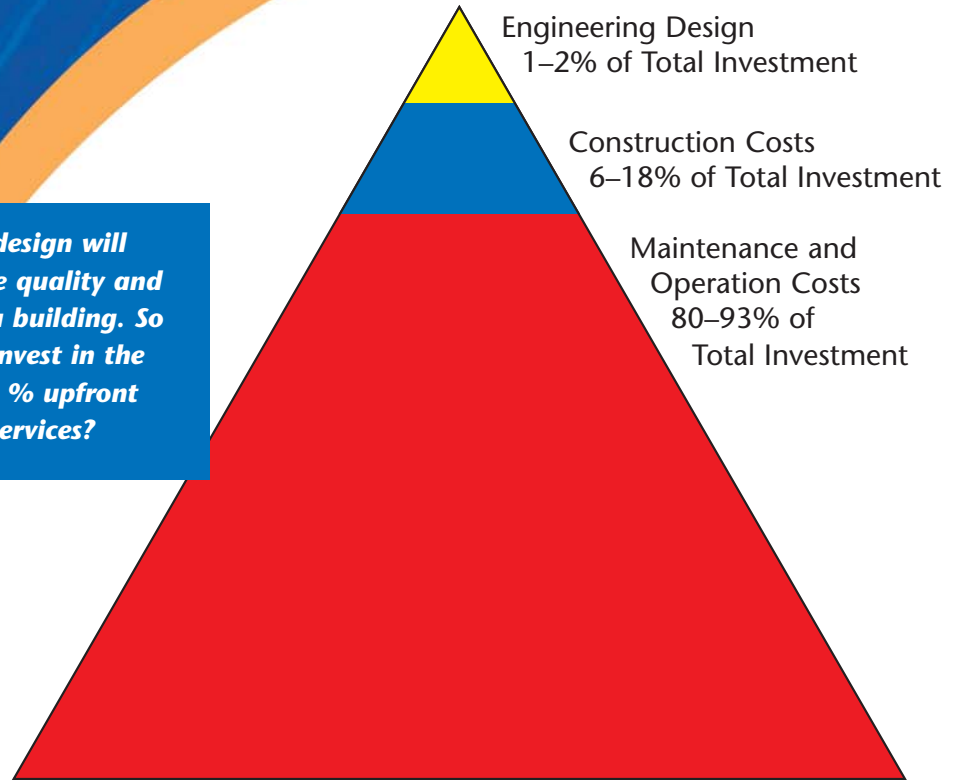
Consulting Engineers of Ontario  
10 Four Seasons Place, Ste. 405  
Toronto, ON M9B 6H7  
Tel.: (416) 620-1400  
Fax: (416) 620-5803  
www.ceo.on.ca



# concept

## Engineering Canada's Future

*The right design will determine the quality and longevity of a building. So why under-invest in the vital 1 to 2 % upfront design services?*



### Typical Life-Cycle Cost of a Building or Infrastructure Facility

## When Building Canada, Choose Quality and Avoid False Economies

To ensure the quality, reliability and safety of Canada's infrastructure, consulting engineers, who are involved in virtually all of its design, need to be chosen based on qualifications and not on low price bidding. While the more knowledgeable owners of buildings and infrastructure facilities understand the merits of Qualifications-Based Selection (QBS), there are others, most notably in the public sector, who believe that price should be the governing factor in selecting professional designers such as engineers. This misconceived notion of value can have many negative results for us all, including higher life cycle costs, unnecessary litigation, and projects that are simply lacking in imagination, aesthetics,

performance, and are ultimately unacceptable to the owners and the public.

### *Qualifications-Based Selection (QBS) Means Quality and Savings*

In building anything, making the right decision at the design stage is vital. That is why it is essential for governments to adopt a system like QBS that works in ensuring that the right design team is chosen and that the appropriate technology is employed. Essentially, QBS places the emphasis on quality, which means getting the right design team, fostering innovation and generating real savings. Engineering fees are generally only 1-2%



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**The Association of Consulting Engineers of Canada (ACEC)** represents the private sector engineering companies in Canada. Consulting engineering is a \$10 billion industry in Canada, with 30% of revenue coming from international work. The industry employs over 50,000 people.