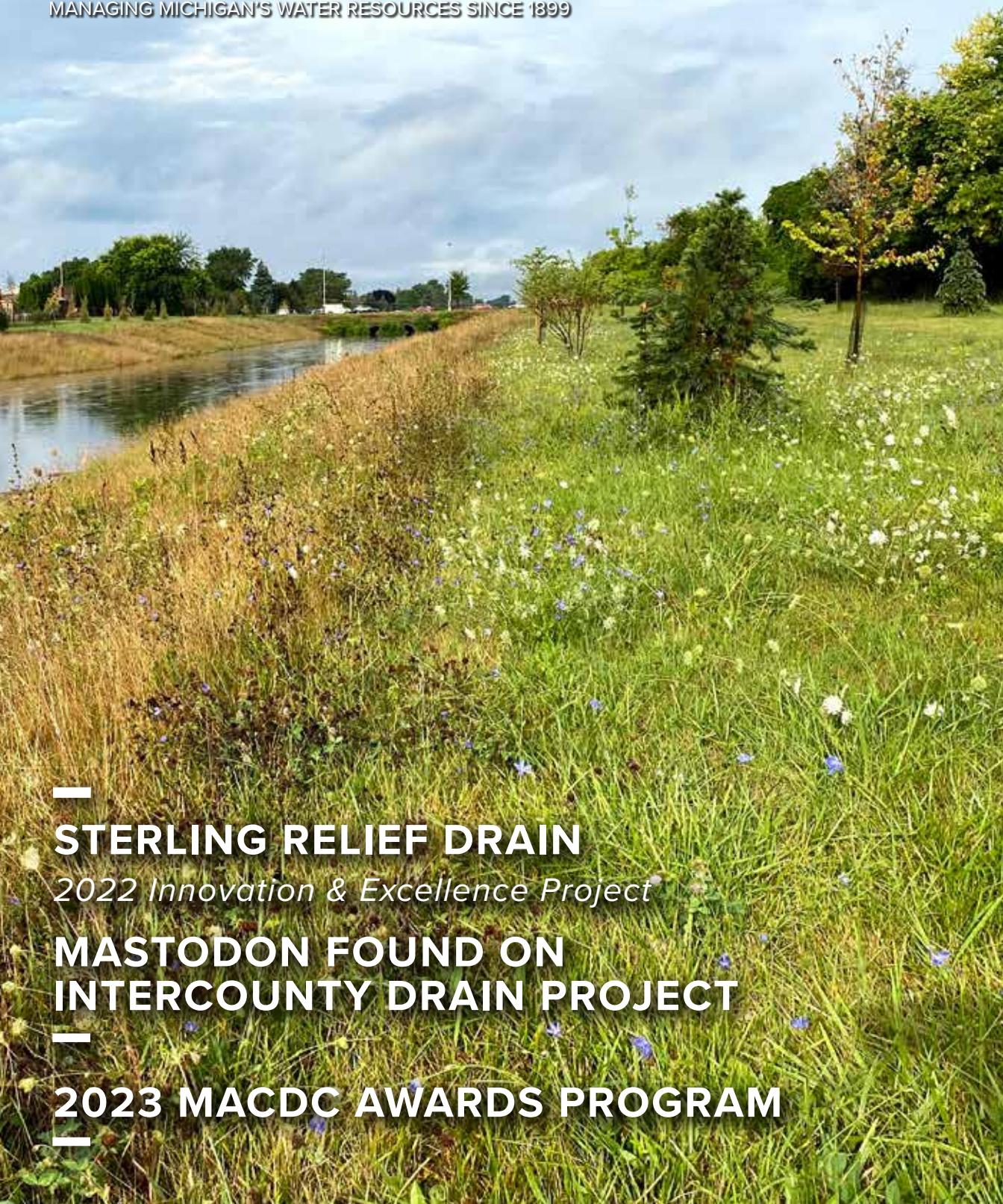


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# NEW RESEARCH STUDY: To Save Time and Money on Infrastructure Projects, Ignore Cost (For Now)

**By: Ron Brenke, PE**

**Executive Director, American Council of Engineering Companies of Michigan (ACEC/M)**

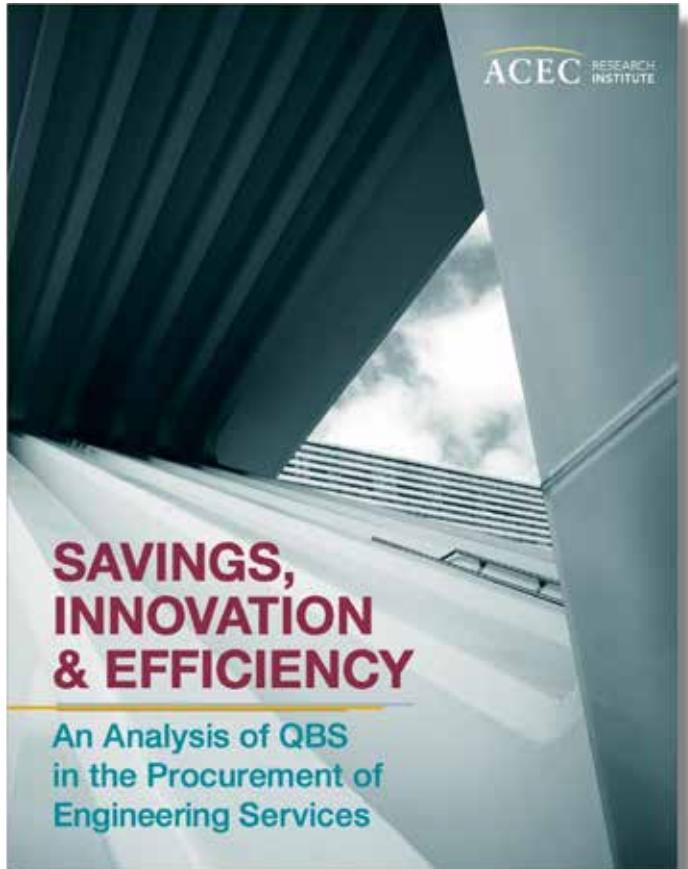
Two professors recently released an in-depth study comparing procurement methods used to select design professionals such as licensed engineers, architects, and surveyors. What they found runs counter to some conventional wisdom in the public sector.

*Savings, Innovation & Efficiency: An Analysis of QBS in the Procurement of Engineering Services*, distills the results of research conducted by Paul S. Chinowsky, University of Colorado Boulder and Gordon Kingsley, Georgia Institute of Technology, examining the benefits of Qualifications-Based Selection (QBS) in the procurement of engineering and design services. The study was commissioned by the ACEC Research Institute.

QBS is a structured competitive procurement process, designed to match the most qualified professional services firm to a project, based on the alignment between a project's characteristics and a firm's experience, staffing, expertise, and past performance.

What sets QBS apart from other procurement methods is that in QBS, the owner selects the most qualified provider based on responses to a Request for Qualifications, and then together, the owner and professional develop a detailed scope of services and fees for the project.

QBS does not preclude the consideration of price in the overall process. Instead, price discussions take place at the appropriate stage of the selection process, when the scope of services has been well defined, with a preferred candidate who has a clear understanding of the project.



*[Image: 1. 2022 QBS Study.jpg. Caption: Researchers from the University of Colorado Boulder and Georgia Tech compared procurement methods used to select design professionals such as engineers, architects, and surveyors.]*

Organizations like the American Council of Engineering Companies (ACEC) and the American Public Works Association (APWA) have advocated for QBS as the preferred procurement method for selecting architects, engineers and other design professionals. But a few lingering myths have served as barriers to comprehensive adoption of QBS.

The 2022 study provides data, gathered across a host of project types, sizes, and geographic regions, that debunks the most common objections to using QBS.

## STUDY CONT.

### **MYTH 1. Selecting design professionals based on qualifications and past performance results in a higher fees and costs.**

A concern that some officials and members of the public raise about using a qualifications-based selection process rather than a traditional request for proposal and bid submitted in advance of selection is a fear of “paying too much.” There’s an assumption that the most qualified provider will charge a higher fee, resulting in more costly projects.

In reality, selecting more qualified consultants does not equate to higher design fees.

The Chinowsky/Kingsley report cited the results of three different studies published between 2017 and 2020, comprising a collective 334 projects, and found no correlation between greater consultant qualifications and higher design fees (Shalwani 2017, Lines and Shalwani 2019 and Adamtey 2020).

In fact, the Adamtey study, published in the International Journal of Construction and Research, found that QBS performed better in terms of cost when compared to best value procurement in 160 Design-Build projects built between 2008-2019.

One likely contributor to the improved cost performance of QBS projects is the quality of designs produced by highly qualified firms. It’s no secret that poor design documents lead to increased construction costs. In fact, 79% of all contract modification costs – e.g., change orders – are due to design errors and omissions discovered during construction. The price of these errors can make up almost 10% of the project’s total cost.

Selecting the most qualified professional service provider can potentially save as much as 25 percent of the total project costs through a combination of shorter development and construction schedules, scope control and improved engineering.

Research proves that the best use of taxpayer money is to select engineering firms for this work competitively, based on their qualifications and experience, instead of price alone.

*Paul Chinowsk, Study co-author*

### **MYTH 2: Using the QBS procurement method takes longer than other procurement types.**

Investing the time in using QBS, with its structured process of issuing a Request for Qualifications, ranking of firms based on those qualifications and then co-developing the detailed project scope with the top ranked firm, can feel like an investment that busy municipal professionals don’t have time to make.

However, better design documents produced by more qualified engineers and architects typically results in shorter project schedules. QBS was found to have the fastest construction speed, compared to low bid, best value and single source procurement, due to increased quality of design documents. When looking at construction milestones, QBS-based projects had a 50 percent increase in the number of projects that met all schedules.

### **MYTH 3: It’s better to include price in the evaluation process.**

Advocates for including price in the procurement process assert that greater consultant qualifications are inherently associated with higher design and construction costs. However, as we’ve seen from the three studies included in the Chinowsky/Kingsley report, there’s no correlation between greater consultant qualifications and higher design fees.

Use of cost as a factor can appear to be the correct approach to a busy official who is primarily focused on the contracted design cost, rather than the overall project costs and schedule impacts over the course of the project. But this research proves that the best use of taxpayer money is to select design firms competitively, based on their qualifications, and to discuss costs in collaboration with the most qualified firm.

“The clarity and simplicity of the process when QBS is used enhances project outcomes and owner satisfaction, while other methods such as low bid procurement can lead to unintended consequences including cost overruns and longer timelines,” said Paul Chinowsky, University of Colorado Boulder.

We have an opportunity for greater savings to our taxpayers through increased use of QBS at the local level, particularly among counties, municipalities, schools. According to the QBS study, counties, municipalities, school districts and other agencies are found to be using QBS 41-60% of projects. Increasing the use of QBS among these stakeholders would increase cost savings and improve project outcomes for all.

*About the Author:*

*Ron Brenke, PE is the Executive Director for the American Council of Engineering Companies of Michigan (ACEC/M). ACEC/M is the association representing the business interests of Michigan engineering, surveying, architectural and related scientific firms who provide professional knowledge to the built environment and strive to protect the health and safety of the public. For more information, visit the ACEC/M website at [www.acecmi.org](http://www.acecmi.org) or contact ACEC/M at 517.332.2066.*



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