

# Testing and Special Inspection Firms – The Case for Qualification-Based Selection

*Dick Cowan, PE, PMP, DBIA – Davis Reed Construction, Inc.*

*David Redford, PE, GE – Wallace-Kuhl Associates, Inc.*

Special inspection and testing laboratory firms play an essential role in the goal of achieving high quality California school construction. They join the team of architects, engineers, project inspectors, builders, and subcontractors in achieving that goal. The people from the special inspection and testing laboratory firms are the expert eyes and brain-power to verify that the details of certain construction practices and the quality of construction materials required by DSA-approved school construction plans are attained.

Too often, however, the school districts awarding the contract for testing and inspection services base their selection solely upon price, with too little attention to qualifications and experience.

Typically, contracts are awarded based upon review and evaluation by the school district of Statements of Qualifications (SOQ's) accompanied by cost proposals. These are generally submitted in response to a Request for Proposal (RFP) issued by a school district, in which the project is described, the expected services are detailed, and minimum requirements with respect to testing firm qualifications are laid out. Theoretically, unqualified respondents are weeded out during the review/evaluation process, leaving the remaining respondents to compete as equals, with estimated fees being the decisive factor in who is ultimately awarded the contract.

There are two basic flaws inherent in awarding contracts on this basis. The first is the difficulty of fairly and realistically evaluating and comparing the respondents' fees at the project stage when proposals for testing and inspection services are typically sought. The second is the assumption that if a firm passes the first phase of review, i.e. is

not disqualified on the basis of lack of qualifications, that the remaining competing firms are all equal in terms of qualifications, experience, and value to the project.

## **First Flaw: Setting the Price**

In estimating special inspection and testing fees for a project, how does the proposing firm estimate the unexpected? Will the labs or special inspectors be called in to examine unexpected wet soils? Will X-rays show problem welds that will need corrections to be observed in either the field or shop? Will concrete cylinder breaks show a marginal concrete strength needing field testing to avoid removing material?

Additionally, the testing firm does not control the number of hours that must be spent inspecting various aspects of construction. For example, in constructing a masonry wall, one contractor might utilize eight masons working concurrently and complete the wall in a week, while another might only employ two masons and the wall construction may take a month. Regardless of the number of masons, full-time, continuous inspection by the testing firm is required. A wall constructed in a month may cost the same as a wall constructed in a week, but the cost of inspection will increase four-fold. The construction schedule which could predict the time required for many types of inspection has not yet been created.

In preparing an estimate for the purposes of a cost proposal, the testing firm is therefore left with no choice but to base their estimate of inspection hours upon a series of assumptions, which may or may not be accurate. The temptation is to base fees on unrealistically optimistic scenarios to increase the chance of being awarded the contract (due to a lower estimated total). The

end result is often an unrealistic budget for the school district, with the district being put in the position of having to find additional funds to cover the costs actually incurred.

Could rates alone make the selection simple? Probably not. The final cost from a firm close to the work which bills in half-hour increments at higher rates would be lower than a firm distant from the project which bills at 4 hour increments at lower rates.

## **Second Flaw: All Equally Qualified**

Is a firm's acceptance into DSA's Laboratory Evaluation and Acceptance (LEA) program enough? The most highly qualified firms typically have many years of experience, are financially stable, employ numerous inspectors who are qualified in multiple specialties, have extensive laboratory capabilities, maintain several types and levels of certifications, and ensure that their projects receive thorough supervision and oversight. A firm's ability to provide a qualified replacement inspector in the event of illness, scheduling conflicts, etc., a local laboratory to allow faster turn-around of laboratory test results, or an experienced engineer to evaluate a critical problem can be invaluable in terms of facilitating the project schedule. When it comes to construction, time is money. If construction must be delayed due to lack of an inspector or because materials test results are not quickly available, any cost savings expected due to awarding the contract to the low bidder testing firm become insignificant in comparison to the cost of the delay. Even greater costs are incurred if completed but substandard construction must be torn out and replaced due to lack of prompt test results or inadequate inspection. Maintaining a sufficient staff of quali-

*Continued on page 14*


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Continued from page 7

fied inspectors, ensuring regular calibration of equipment and maintaining certifications is expensive, however, and firms that pursue these goals may charge slightly higher rates to cover the cost.

**Better Approaches.** For a specific project, tell the firms applying for the testing and special inspection work, how their proposals will be evaluated, and make it specific. For example – Capacity – number of welding inspectors and masonry inspectors on staff – 30%; Experience – years performing DSA work--10 years gets maximum score – 30%; Resume's of civil engineer evaluating and reporting – 20%; Proposed fee – 20%.

To score the fee portion, districts can describe the scope of work and the schedule, then request fees in terms of unit rates, and request information regarding the testing firm's policies pertaining to cost factors such as travel time, minimum time charges, mileage, report fees, etc. A second option is for the school district to provide an estimate of hours, reports, and trips for each aspect of the testing or inspection services and let proposers place their units against that estimate.

The cost of testing and inspection accounts for a mere fraction of the project budget; however, the repercussions of inadequate inspection or delays associated with testing or reporting can be far-reaching. In many instances, focusing primarily on price encourages the selection of less qualified testing firms. While price can be a factor in the selection process, it should be secondary to consideration of the benefits that can be realized by a qualification-based selection process. 

– Dick Cowan, PE, PMP, DBIA is with Davis Reed Construction, Inc., a C.A.S.H. Associate Member firm. He can be reached at [dcowan@davisreedinc.com](mailto:dcowan@davisreedinc.com).

– David Redford, PE, GE, is with Wallace-Kubl Associates, Inc., a C.A.S.H. Associate Member firm. He can be reached at [dredford@wallace-kubl.com](mailto:dredford@wallace-kubl.com).

## C.A.S.H. Monthly Meeting Minutes, Wednesday, March 24, 2010

Continued from page 12

April 9 is the deadline for applications for the United States Environmental Protection Agency 2010 Smart Growth Assistance.

## Annual Conference Planning Committee Update – Cathy Allen

Cathy noted that planning for the 32nd Annual Conference begins today immediately following the General Membership meeting. Call for workshop and roundtable topics

are available on the C.A.S.H. website and will be going out to members via email and in the *C.A.S.H. Register*.

## Implementation Committee Update – Bill Savidge

The next meeting is scheduled for Thursday, April 8. The meeting will be webcast live and is available on the OPSC website.


## C.A.S.H. Architects Committee/High Performance Schools Committee Update – Steve Newsom

Steve noted that June 30 is the last day DSA will accept fire sprinklers as a deferral item.

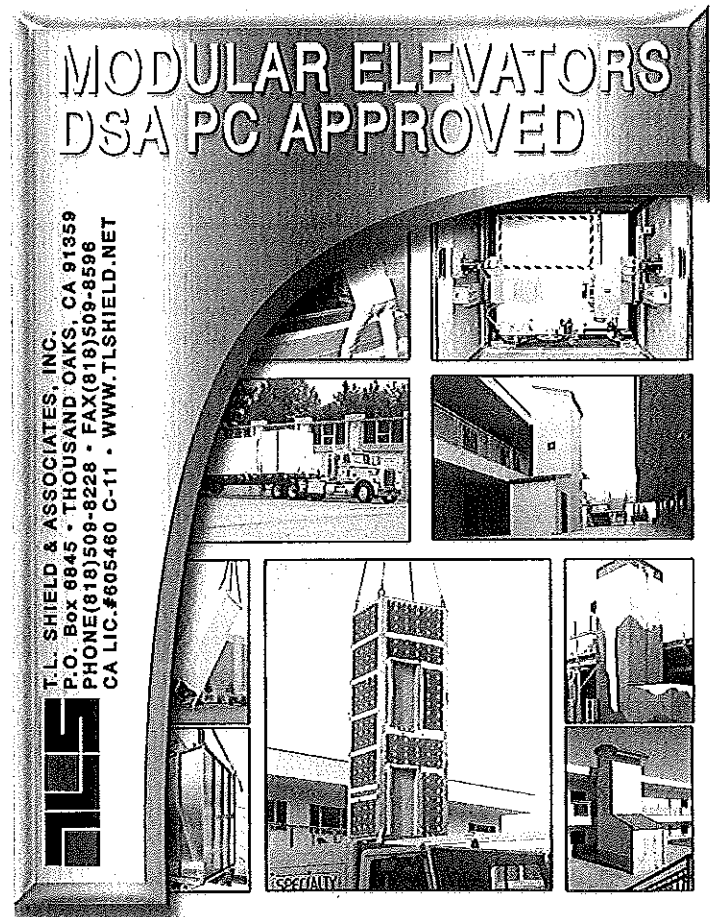
The High Performance committee has been working on getting more funding into the High Performance Program.

## Californians For School Facilities – Anna Ferrara

Anna reported on the QSCB bond allocations. The dates for the Spring trip to Washington, D.C. are May 3 and 4. Anna encouraged more districts to join and participate.

The meeting adjourned at 12:25 p.m. 

– C.A.S.H. Staff



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