



Quad Knopf

MEMO

**Date:** January 31, 2013

**SS Item No.:** 2

**To:** Lemoore City Council  
City of Lemoore  
119 Fox Street  
Lemoore, CA 93245

**From:** Harry A. Tow, City Engineer  
David Jacobs, Assistant City Engineer

**Subject:** Public works projects: Plans and specifications, bid procedures; construction management; local preference

**cc:** Jeff Briltz, City Manager  
Joe Simonson, Director, Parks and Recreation Department  
Ray Greenlee, Parks and Facilities Superintendent  
David Wlaschin, Public Works Director

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Discussion:

We are pleased to have this opportunity to update the City Council on the public works project procedures and constraints, and we appreciate the Council's interest in assuring quality control and efforts to increase participation of local contractors.

The first section of this report will briefly outline our understanding of some Council concerns, noting questions which have arisen with respect to the processes and making recommendations where appropriate. It then outlines legal and technical public works project design, bid and construction management procedures. A third section summarizes our proposed recommendations.

We look forward to review of this subject area with the Council.

Section A. Outline of Council Concerns; Recommendations

Question

1. *Are the City's plans, specifications and bid documents sufficiently "tight" to assure quality contract products and longest-life facilities?*
  - a. The "bid documents" - and the "General Conditions" section of the Specifications - have been time-tested to assure their legality and their effectiveness in protecting the City's interests.

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- b. The plans and specifications for each project, while similar for the same types of projects, are prepared by the City Engineer's staff with a professional level of care, and are reviewed by the City staff.
- c. Materials and work processes are, to the extent possible, in full accord with Caltrans Standard Specifications. Where such correlation is not feasible (Caltrans Specifications may not cover or may not be feasible for small urban communities) the City's Standard Specifications and other standard specifications are referred to, or used as a guideline, to the extent appropriate for Lemoore's location and topography.
- d. Materials cannot be defined on a "sole source" basis. Absent a compelling reason to do so (for example; "we have sixty of these pumps of the same manufacture, and \$200,000 of maintenance supplies for them - we can't cost-effectively consider an additional pump of another manufacture") all materials must be bid on a "specified or equal" basis or on a regulatory-compliance (e.g., waterproof or explosion-proof) basis.

Little difficulty ensues in this regard for paving or pipeline projects; however, extra care must be exercised with respect to mechanical or electrical equipment to assure that "...or equals" are truly equal.

- e. It is not always cost-effective to specify materials or products guaranteeing longest-life. For example, new/reconstructed subbase/pavement thicknesses can be increased to the extent that they may almost never structurally fail. Such an increase is fiscally impractical; engineering judgment must be utilized to effect the best short-term and long-term designs for the City, with a view to most effective recycle costs, which considers both capital cost and maintenance cost over the project lifespan.

#### Recommendations

*The City Engineer will continue to review with the City staff, any equipment, mechanical or electrical, which is currently being utilized by the City and which the staff feels is providing unsatisfactory performance. The objective of such review will be to provide a basis for its exclusion as an "or equal" to specified equipment. Such review will also be a basis for not directly specifying such equipment. It is recommended that the present practice of having electrical design subcontracting engineers review all submittals for "or equal" compliance or full compliance with the Specifications requirements be continued.*

#### Question

2. "Why is the City liable for everything - why not the contractor or the equipment/materials supplier or the City Engineer"?

City liabilities for project-related costs or causes for legal action are potentially both short-term and long-term. The entire question of liabilities, individual or shared, is exceedingly complex. Issues briefly discussed here will be generic; questions of liability are, as the Council is aware, often determined through litigation or, even more often, by mediation after

litigation is initiated. The City may, as a primary or perceived deep-pockets target, follow initial suits with cost complaints against, and seek indemnity from, other parties which it deems wholly or partially responsible.

- Contractor liability

The City's construction contracts incorporate a one-year "guarantee" of replacement or repair of constructed facilities which provably fail during that period. Compliance with these guarantees is usually achievable. There is no corresponding short-term presumption of liability for third party or City employee monetary or physical loss during the one-year period, although the contractor is required to maintain insurance coverage for third-party accident/injury liability claims. During the short-term period, the contractor may (although it rarely happens) litigate against the City Engineer for perceived negligence related to design or construction management deficiencies.

- City Engineer liability

City Engineers like any other employees whether City or private, can make design errors or omissions which may result in requests for corrective change orders. The costs of such change orders fall into two categories: The first is where a change order represents a 'project betterment' resulting in no more cost to the City than if the work required by the change order had been included originally in the plans and specifications. Such change orders may be initiated by either the City or the contractor. The second is where a change order results in additional costs to the City because of an error or omission in the plans and specifications.

The City Engineer, like all reputable consulting firms, carries errors and omissions insurance with, in this instance, a coverage amount of \$2,000,000.

Engineering for public works will, over time, inevitably involve some minor cost errors and omissions whether such engineering is performed by a City employee or a contract employee. In neither case is it customary to assess such costs against the individual employee. Engineers are legally required to exercise a professional level of care to avoid liability for the second type of errors and related contract cost increases mentioned above. There is no universally applicable quantitative measurement of such level of care. Thus it is usually a question that must be resolved through either a judicial or mediation process. On a complex civil engineering project it is not uncommon to define in advance what would be presumed to be "professional level of care" vs. "negligent performance". Two percent to three percent of construction costs is frequently used in such contract documents as a guide for evaluation of engineering performance. Errors and omissions involving negligent performance on a project at less than these percentages are generally considered within the professional level of care. An advantage to the City of having a contract engineer rather than an in-house City employee serving in that position as an engineer is the availability of the contract engineer's insurance coverage for insured error or omission-related costs. Such insurance covers both short-term and long-term liabilities.

Recommendations

*The City staff continue, within their time constraints, to provide effective oversight during the preparation of plans and specifications (although the City Engineer retains prime responsibility for their quality and accuracy), and the City Engineer maintain existing standard contractor and engineering liability insurance coverage requirements.*

Question

3. *How can maximum local contractor success in bidding on public works contracts be encouraged?*

State law requires that major public works projects with a cost exceeding locally-established limits, (\$50,000 in Lemoore), be advertised and bid, and that such contracts be awarded to the licensed responsible bidder who submits the lowest bid price.

It is possible to adopt a nominal percentage local-preference for bids by local contractors. Such adoption must be undertaken by the Council on an overall, not a project-by-project basis and it must be sustained by findings based on an analysis of the cost benefit to the City. The definition of "local" must be included in the analysis. Such adoption may be subject to challenge by a contractor or group of contractors. It may also result in a reduction of the number of bidders or an increase in direct bid costs to the City. It is, however, a policy undertaken by some cities. It is easier to sustain a cost-benefit analysis in larger communities with increased local-purchase sales tax potential and a possibly greater in-city residency of workers. A local-preference discount cannot apply to most projects funded wholly or in part by State or Federal funds.

Encouragement of local bidders and increased participation by local contractors may be assisted by increased non-preferential project notification procedures. Such non-preferential procedures might include for example, direct notification of all bidders on similar previous projects, or requests of local contractors to advise the City of types of projects about which they would like to be directly notified. Posting of City public works projects "out to bid" on the City's website may be useful as well, as might "post-card" notices to local contractors.

A suggestion has been received from a local contractor that the City's Standard Specifications or applicable portions thereof, no longer be incorporated in the bid documents themselves. It has been asserted that this would reduce potential overlap or conflict and would make bid estimating easier. This suggestion could be implemented by bid document reference to them as available at the City Hall or Corporation Yard.

Recommendations

- a. *The City staff undertake additional project bid notification procedures – previous-bidder notification, local bidder interest listing, website posting.*

- b. City Standard Specifications be eliminated from, but referred to in bid documents.*

Question

4. *Why do project bids often vary widely, with very low or very high bids?*

There are a number of reasons. A contractor may anticipate the possibility that he will be the only bidder and thus realize a large profit. Contractors having difficulty surviving in these economic times may submit a very low bid, involving little or no profit, to try to obtain project award and "keep afloat". Contractors who are busy may submit higher bids to assure making a profit if the bid is awarded to them. Contractors may submit higher bids if they are not able to take time to fully solicit a larger number of subcontractor or materials supplier quotes. A failure to fully understand the requirements of the plans or specifications may also influence bid submittal prices. Contractors may occasionally make errors in preparing a bid. Certain types of provable errors can be a basis for bid withdrawal. There is little the City Engineer can do to narrow bid spread in these economic times. Most cities are thus facing the same problems.

Recommendations

*The City Engineer develop for Council review a draft policy regarding procedures when a bid received is excessively low or, as the low bid, is excessively high, continue to prepare tightly-designed plans and specifications to minimize the opportunities for contractor bid errors.*

Question

5. *How can the Council be better informed regarding proposed public works projects and the bidding process/results?*

Current procedures begin with the inclusion of projects in the two-year capital improvement program. The Council next deals with the project when it is presented to the Council, together with a revised cost estimate, for bid authorization; it then comes back to the Council for bid award.

There is an inherent delay to accomplish project design and funding agreements between the time the capital improvement program is approved and project bid authorization. To assure continuing Council familiarity with public works projects that are in the pipeline, the City Engineer can supplement existing City staff/City Council liaison regarding such projects.

Recommendations

- a. Through the City Manager, the City Engineer prepare a written executive summary of the project and its projected costs to the City Council as a basis for bid authorizations.*

- b. *Similarly, the City Engineer prepare a written recommendation regarding project bid award.*
- c. *The City Engineer attend the Council meetings at which bid authorization and project bid award are to be considered.*
- d. *The City Engineer report, in writing through the City Manager, written quarterly executive summary reports regarding major public works projects in progress, noting progress any potential problems of which he is aware, and resolution of construction concerns.*

Section B. The Current Public Works Design/Bid/Construction Management Process

1. City staff identifies a conceptually needed project, and a preliminary cost estimate; Council considers inclusion in the two-year capital improvement program (C.I.P.).
2. Given C.I.P. approval, staff directs City Engineer to proceed with draft design and bid documents.
3. City Engineer identifies project parameters and constraints-timing, budget, State/Federal regulations, rights-of-way and utility conflicts, and reviews these with City staff.
4. City Engineer prepares draft plans, specifications, bid documents and updated preliminary cost estimate and at the needed point or points in the preparation process, dependent upon project complexity, reviews these with City staff.
5. After such reviews, final plans, specifications, bid documents and cost estimates are submitted to City staff for review, and staff requests Council authority to advertise for competitive bids. The City Engineer then stamps the documents.
6. City Engineer initiates the bid advertisement process (up to thirty days in length), advertising twice in a newspaper with local circulation, and sending bid documents to "bid boxes" serving the Lemoore area.

During this bid period, the City Engineer responds to potential bidders' questions, issuing addenda as required for clarifications.

7. All bids are opened at a City staff-chaired open session and bid documents inspected for compliance (bid bonds, experience resume, requested materials supplier information).

The bid opening is normally scheduled for a week before the succeeding Council meeting.

8. The City Engineer recommends award to the Council based on the low base bid submitted by a properly licensed contractor.

9. A notice to award and a notice to proceed are issued by the City Engineer; after required insurance and performance bond documents are received.
10. A pre-construction meeting is held with a contractor representative, a City staff member and the City Engineer or his representative in attendance. Such meetings should include project site or sites inspection, and be held, at least in part, at the project site if there are not multiple sites involved.
11. The City staff, or the City Engineer, provides an inspector to assure that the materials, workmanship, and results are as specified in the contract documents. The City Engineer provides construction management services.

Changes in the work desired by the City, suggested by the contractor, or necessitated by a design error or an omission in the plans or specifications may be authorized by the City Engineer (with City staff concurrence) during the course of the work. Interpretations of the plans and specifications not requiring a change order will be provided by the City Engineer as required.

12. On larger projects, progress payments will be requested monthly by the contractor for approval by the City Engineer.
13. At the conclusion of the project, and when work is determined by the City Engineer to have been completed in accord with the plans and specifications, final payment of the amount due the contractor will be approved by the City Engineer with concurrence by City staff. ("Final payment" deducts 5%, which is held for 30 days.) If any labor or material liens have been filed against the contractor, "final payment" will be delayed until these are resolved. The work performed under the contract will be warranted for one year after project completion.

#### Budget Impact

No direct impact.

#### Recommendations

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