

DATE ISSUED: February 26, 2003

REPORT NO. 03-035

ATTENTION: Natural Resources and Culture Committee
Agenda of March 5, 2003

SUBJECT: Comparison of Construction Cost Estimates to Bids for
Public Works Contracts

SUMMARY

THIS IS AN INFORMATION ITEM ONLY. NO ACTION IS REQUIRED ON THE PART OF THE CITY COUNCIL.

BACKGROUND

During the Natural Resources and Culture Committee (NR&C) meeting of October 9, 2002, the City Manager was directed to return to the NR&C with a historical comparison of the project estimates for public works contracts versus the actual bids received.

Our comparison is based upon contracts awarded in fiscal year (FY) 99 thru FY03 (year to date). During this time frame 482 contracts were awarded by all departments for a total of \$685,168,463. This includes the category of contracts for public buildings and parks, water and sewer pipelines, streets and highways, water and sewer pump stations and plants, storm drains, and underground storage tanks.

The projects's estimate is developed either by the construction project manager if it is a project being designed in-house or by an engineering consultant if the design has been out-sourced. Factors that are considered in developing the estimate are the cost and quantity of material, cost of labor and equipment, the amount historically bid for similar types of work, the means of construction (ie: is there a need for special equipment or processes), accessibility to the site, unusual circumstances and difficulty of construction.

Factors that impact the actual bid prices are the overall economy and volume of construction in the region. Our local contracting community has stated that in addition to fluctuations in material and labor prices, the increased cost of insurance has also increased their bids.

In addition, some contractors have expressed the fact that the SCOPe program has, at times, resulted in the lowest bidder being declared non-responsive. The concern being that the project is awarded to the next lowest responsive bidder therefore the second low is not really representative of the "low bid".

DISCUSSION

In the aggregate, the dollar variance, estimate to bid price, for all projects combined for Fiscal Years 99 thru FY 03 (ytd) was +0.49%, +11.53%, +14.12%, -3.11%, +4.29% respectively. Although the overall variance for all projects combined annually was within +/- 10% for 3 out of 5 years, we have observed that in FY02 and FY03 (ytd) that the percentage of projects exceeding the project estimate has increased to 38% and 47% of all projects awarded. This is up from previous years of 31% in FY99, 37% in FY00 and 30% in FY01.

HISTORICAL COMPARISON OF ESTIMATES TO BID PRICE
(Table #1)

FISCAL YEAR	PERCENTAGE SAVINGS(+)/ DEFICIT(-)	PERCENTAGE OF PROJECTS ABOVE ESTIMATE	PERCENTAGE OF PROJECTS BELOW ESTIMATE
1999	+0.49%	31%	69%
2000	+11.53%	37%	63%
2001	+14.12%	30%	70%
2002	-3.11%	38%	62%
2003 (ytd)	+4.29%	47%	53%

Attached is a listing of all projects by type of project for FY02 and FY03 (year to date) as requested by the NR&C (Attachment A). A significant trend has been observed in the overall cost per lineal mile of sewer pipeline replaced. In FY99, a mile of sewer pipe could be replaced for \$705,000. The cost in subsequent years rises to \$850,000 in FY00, \$990,000 in FY01, and \$1,317,000 in FY02. It is believed that costs for this type of work are stabilizing in that bid to date for FY03 are \$1,370,000 per lineal mile of sewer pipeline. A portion of this increase in sewer pipeline costs is attributable to an increase in the number of sewer laterals relocated to more accessible locations, replacing sewer pipelines that are located deeper and in more constrained areas, an increase in regulations and extensive street overlay.

Similarly, the cost per square foot to construct a building has also risen significantly. Today the average cost for smaller buildings such as comfort stations is over \$300 per square foot, and the average cost for larger buildings is over \$225 per square foot. Market activity, labor rates, productivity, material costs and competition contribute to the escalating construction costs. Other influences on future construction costs will be new building program mandates such as

Leadership in Energy & Environmental Design certification and Americans with Disabilities Act requirements.

Underestimating the cost of a project could result in delays in the award of the contract while additional funding is being identified. Both the contractor and the community is affected. The contractor has reserved bonding capacity while the award of the project is delayed inhibiting their ability to bid on other work and causing a delay in the city being able to provide reimbursement for the cost. The community is affected having to wait for the benefit of the project. In addition, underestimating could impact the overall CIP as funds may need to be transferred amongst projects.

In order to ensure that estimates are developed utilizing pertinent information, staff from the Water and Wastewater Facilities Division have begun meeting quarterly with representatives of the construction industry to discuss current market conditions such as the cost of insurance, labor and materials. This information will be utilized to ensure that project managers develop quality estimates within industry standards.

Respectfully submitted,

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Approved: George I. Loveland
Senior Deputy City Manager

LOVELAND/BELLOCK/DVW

ATTACHMENT

[A. Comparison of Construction Cost Estimates to Bids for Public Works Contracts](#)