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I. Introduction

The City Manager, in response to citizens' concerns and his interest in examining areas of higher risk liability for the City, requested that the City Auditor perform an audit of Public Works' construction contracts. The Auditor evaluated the level of risk and agreed to incorporate the City Manager's request into the fiscal year 2000 audit plan.

Our audit of the construction contracts in Public Works was conducted under the City Auditor's right to audit as documented in Section 61 of the City Charter, which authorizes the City Auditor to conduct performance and financial audits or special studies of all phases of the City of Berkeley government. Our audit of Public Works' construction contracts was integrated into the planned audit schedule submitted to City Council for fiscal year 2000.

The purpose of our review was to determine if the City was being appropriately billed for construction contracts; to determine if slow payment of bills was a real or perceived problem; and to determine whether this might affect who was willing to do business with the City of Berkeley.

The audit was conducted in accordance with *Generally Accepted Government Auditing Standards* issued by the Comptroller General of the United States. These standards require us to examine management controls that are relevant to the audit. Because of this requirement, we have included findings and recommendations that came to our attention during the course of the audit which we believe will strengthen the internal controls over Public Works' construction projects. Information was gathered for our report through inquiries, interviews, inspection of documents, direct testing of data, and data analysis.

The City of Berkeley Charter specifies internal controls over contracting, including a requirement that Council approves all expenditures over \$25,000 and a requirement for open, competitive bidding. The Charter also specifies the authority for entering into contracts.

We found that, in some instances, Public Works staff did not adhere to Council and Charter policy regarding expenditure limits and contract processing. We also noted some inadequate general administrative and quality controls. Contractors apparently were allowed to perform work at levels below contract specifications, while the engineering staff failed to document assurance that contractors complied with contract requirements.

We determined through audit tests that slow payments by the City were not a problem. Public Works' established payment terms are 35 days after receipt of contractor's billing. Over 87% of the billings tested were paid within 35 days. Based on this outcome, we concluded that late payment of bills should not have had a significant impact on contractors willing to do business with the City. Because we found no evidence of slow payments and few instances of billing errors, this report focuses primarily on the

findings and recommendations related to overall internal controls.

The period under review was July 1, 1996 – September 30, 1999. We examined four contracts, each specific to a project: Street Rehabilitation 98/99 Phase 1 (F-8284-98); Hopkins Street Sanitary Sewer (F-8030-97); Sanitary Sewer Project Glendale, Euclid, Creston, Vicente (F-0237-96); and Sanitary Sewer Rehabilitation Sterling (F-8200-98). The initial contract amounts totaled \$3,412,655. Additional cost in change orders amounted to \$579,984 (17 %). The combined cost of these four contracts was \$3,992,639.

The auditors' findings and recommendations, and the responses of the City Manager are summarized on the following pages.

II. Summary of Findings

Public Works Department

1. Expenditures Exceeded Council's Authorization

Expenditures in our test sample exceeded authorized amounts by \$173,075. Public Works should have requested Council's or the City Manager's approval for the expenditures. *We recommend that Public Works consistently seek the Council's or the City Manager's approval of expenditures in accordance with the City Charter. We also recommend that Public Works clarify and incorporate improved emergency procedures in the Project Management Manual. According to the City Manager, the Emergency Operation Center's procedures will also be updated.*

City Manager's Response *

Concur with finding and recommendation

2. Failed to Process New Contract

Public Works inappropriately generated a change order instead of processing a new contract. Failing to process a new contract not only violated City policy and Council authority but also cost the City an additional \$5,775. *We recommend that Public Works comply with the City Charter's requirements for processing new contracts. This includes, in an emergency, obtaining documentation of the City Manager's approval.*

* See detailed City Manager's response beginning on page ten

City Manager's Response *

Concur with finding and recommendation

3. City Staff Waived Failed Field Density Test Results

Field density tests were performed as a quality control measure by an independent testing company under contract with the City. Nineteen percent (19%) of the cases tested indicating failure to meet minimum standards were approved by the inspector without correction, retesting, or documenting acceptance of failed field density tests. *We recommend that failed field density test results be rectified and retested until minimum standards are met. Alternatively, staff should document waiving any failed test results, and this documentation should be approved by the project engineer. This should be incorporated into Public Works' Project Management Manual.*

City Manager's Response *

Concur with finding and recommendation

4. No Indication of Inspectors Review for Payment on Progress Payment Claim Forms

There was no evidence of review and approval by the inspectors on the Progress Payment Claim forms. The City was unnecessarily exposed to the risk of paying for work not performed or not performed properly. *We recommend that the inspectors indicate their review directly on the Progress Payment Claim form and that an approval procedure be incorporated into Public Works' Project Management Manual.*

City Manager's Response *

Concur with finding and recommendation that an approval procedure be developed.

5. No Indication of Inspector's Approval on the Daily Extra Work Report Form

The contractor submitted Daily Extra Work Forms for payment of storm drain work. There was no evidence of an inspector's signature as acceptance of the extra work on the line provided on these forms. *We recommend that the project engineer and/or inspectors document their approval of the daily extra work as provided for on the form.*

City Manager's Response *

Concur with finding and recommendation that an approval procedure be developed.

6. Insurance Not in Conformity with Contract Requirements

The contractor for one of the four sewer construction projects reviewed did not possess

* See detailed City Manager's response beginning on page ten

levels of insurance coverage as defined in the contract. This placed the City at unnecessary risk of liability. The certificate of insurance for a second project was not made available to the auditors. *We recommend that insurance levels be carefully reviewed to ensure that the City is not exposed to unnecessary risk of financial loss. We also recommend that when insurance coverage that varies from stated contract amounts is authorized by Public Works' staff, that the City's insurance waiver form be appropriately completed and processed.*

City Manager's Response *

Concur with finding and recommendation.

7. Inspectors Do Not Participate in Project Planning

Inspectors did not participate in the project planning process. Had they been part of the planning and review process prior to bidding, difficulties might have been identified earlier. This would allow for more accurate bids, fewer change orders, and additional costs savings to the City. *We recommend that management consider this option.*

City Manager's Response *

Concur with finding and recommendation.

8. Design-Related Change Orders Not Signed by Design Engineer

Change orders were not signed by the design engineer. Four construction contracts had over \$579,984.00 in change orders. Change orders represent changes in the designing engineer's initial scope of work. The design engineer should ensure the necessity of the change in the design scope by signing the design related change orders. *We recommend that the project design engineer sign design related change orders as evidence of their approval of the necessity for the additional work and that this review process be incorporated into Public Work' Project Management Manual. We also recommend that the engineer be evaluated on the impact of the nature of change orders generated for their designed project.*

City Manager's Response *

Concur with finding and recommendation.

9. General Provisions Outdated

The contracts' General Provisions contain many outdated and obsolete legal references and incorporate outmoded methods of contract management. *We recommend that the General Provisions be updated to reflect current industry standards and laws.*

* See detailed City Manager's response beginning on page ten

City Manager's Response *

Concur with finding and recommendation

10. No Audit Clause

There was no audit clause in the bid specifications. This limits the City's ability to provide quality assurance and to detect overcharges and overpricing by the contractors. *We recommend that an audit clause be included in all bid specifications.*

City Manager's Response *

Concur with finding and recommendation

Finance Department

11. Written Procedures Not Finalized

Purchasing's procedure manual has been in draft form for several years. *We recommend that Finance review, update and finalize their draft procedures.*

City Manager's Response *

Concur with finding and recommendation

12. Abstract of Bid Worksheet Not Signed

There were no signatures on Purchasing's "Abstract of Bids Worksheet". *We recommend that the Purchasing staff that performs and witness' the opening and reading of the contractors' bids sign the "Abstract of Bids Worksheet". The signature provides assurance that the bidding was properly conducted.*

City Manager's Response *

Concur with finding and recommendation.

* See detailed City Manager's response beginning on page ten

III. Background

Public Works construction contracts expenditures represent a significant portion of the City's budget. The fiscal year 2000 budget includes an appropriation of \$15,415,061 for "Transportation" and \$36,059,994 for "Environment". Classifications under "Transportation" include street capital improvements, maintenance, and enhancements. Classifications under "Environment" include clean city services, clean storm water inspection and enforcement, emergency sewer reconstruction and re-routing, maintenance of streets, sewer maintenance, storm drain maintenance, urban forest, and environmental review services.

The Public Works Department is responsible for construction contract administration. This responsibility includes preparing bid documents, contracting, monitoring, inspecting, reviewing, and approving invoices for payment.

Completion of a construction project requires the professional expertise of design engineers, project managers, inspectors, and administrative staff. Generally, an engineer designs the layout of the project. The design engineer prepares cost estimates and bid packages. The project manager schedules pre-construction meetings, prepares public notices, maintains the bid specifications and the contract, and reviews the invoices before payment. The inspector monitors the construction site, coordinates construction activity between the contractor and the City, and reviews requests for progress payments. The administrative staff ensures that the paperwork flows through the system by preparing contracts and related documents. In addition, depending upon the expertise needed and the workload of the Public Works staff, consulting architectural or engineering firms may be retained.

The four contracts examined by the Auditor's office were unit price contracts. Unit pricing allows the City to pay only for materials used by the contractor on a unit fee basis. One example of this is payment for paving material at a contractually agreed upon price per unit rather than on a lump sum or cost reimbursement basis. In order to ensure acceptable contractor performance on a unit price contract, the City's inspectors must pay special attention to the quality and quantity of materials used and make frequent unannounced visits to the construction site. The following information describes the scope of services contracted by the City to be provided by the contractors for the sampled projects.

Street Rehabilitation 1998/99 Phase I (Streets/Gallagher & Burk)

The work performed on this project consisted of reconstructing and resurfacing approximately 22,800 linear feet of paved street. This included traffic control, removal of existing asphalt and base rock, replacing base rock and asphalt concrete, cold planing of asphalt concrete, failed area pavement repair, crack sealing, leveling, installing pavement reinforcing fabric, paving with Type A asphalt concrete, raising City and University of California owned manholes, monuments, and other drainage structures, traffic striping, pavement marking, and installation of raised traffic bars at various locations throughout

the City.

Change Orders were approved for 1) Overlaying the street with asphaltic concrete on Sunset Lane between Woodmont and Wildcat canyon 2) Removal and replacement of existing asphaltic concrete at three locations each on the 1600 block of 6th and 8th Streets 3) Repair of asphaltic concrete at the intersection of Blake and Dana. 4) Seal crackings and overlay of approximately 3,900 square feet of street with asphaltic concrete on 3000 block of Buena Vista Way.

Gallagher & Burk	
Original Contract Price	\$1,024,903.71
Change Orders (net)	(5,068.34)
Total cost	\$1,019,835.37

Hopkins Street Sanitary Sewer (Hopkins/J.S.J. Pipeline)

The work performed on this project included removal of existing sanitary sewer, construction of 1,130 linear feet of 18 inch diameter sewer, construction of 5,120 linear feet of 8-inch and 18 inch diameter sanitary sewer, rehabilitation of 3,400 linear feet of 6-inch and 8-inch diameter sewer, rehabilitation of 350 linear feet of 10-inch storm drain, replacement of 180 linear feet of 150-inch storm drain pipe, removal of manholes, rehabilitation of manholes, replacement of 3,000 linear feet of 4-inch sewer laterals, replacement of catch basins, storm drain pipe point repair, and related work.

Project locations:

- Hopkins Street between Neilson and Josephine Street
- Backline sanitary sewer and storm drain mains between Hopkins and Ada Streets near Monterey market.

Change orders were approved for emergency repairs of storm damage and storm impacted facilities to eliminate flooding and blockage problems such as 1) Installation of a PVC storm drain, a sanitary sewer, manholes and laterals, and construction of a concrete sidewalk, curb, handicapped ramps and gutters at Ada and California. 2) Repair of a storm drain manhole at Cedar and Shattuck. 3) Removal of concrete under asphalt. 4) Installation of storm drains at Sterling, the Alameda, Oak and Arch, Spruce, and Hillview Road. 5) Installation of storm drainpipe at Poe and Bonar and catch basins at Walnut and Vine. 6) Removal of a buried inlet and installation of a new drop inlet at Park Hills Road and Muir Way.

J.S.J. Pipeline

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Original Contract Price	\$1,057,600.00
Change Orders	317,347.70
Total cost	\$1,374,947.70

Sanitary Sewer at Glendale, Euclid, Creston, and Vicente (Glendale/K.J.Woods)

The work performed on this project included construction and rehabilitation of standard manholes as well as sewer rehabilitation.

There was a change order credit because the installed quantity was less than the base bid quantity.

K.J. Woods	
Original Contract Price	\$628,000.00
Change Orders	(53,467.00)
Total cost	\$574,533.00

Sanitary Sewer Rehabilitation at Sterling Avenue, Ridge Road, Miller Avenue, Shasta Road, and Whitaker Avenue (Sterling/McNamara)

The work performed on this project consisted of removal of existing sanitary sewer, construction of approximately 3,630 linear feet of 6-inch and 8-inch diameter sanitary sewer, rehabilitation of approximately 4020 linear feet of 6-inch and 8-inch diameter sanitary sewer, manhole removal, rehabilitation, construction, and replacement of approximately 2,400 linear feet of 4-inch sewer laterals, and related work.

Project locations:

- Ridge Road between LeConte and Highland Avenue
- Sterling Avenue between Keeler and Whitaker Avenue
- Sterling Avenue between Whitaker Avenue and Shasta Road
- Shasta Road between Sterling and Keeler Avenue
- Backline sewers bounded by Sterling Avenue, Miller Avenue, and Shasta Road.

Change orders were approved for: 1) An emergency repair on a Forest Avenue back easement, replacement of an existing sewer main to collect waste water, connection of an existing 12 inch drain pipe that was inadvertently not connected to the newly installed storm conduit on Spruce Street, and installation of two catch basins with 50 linear feet of 12-inch drain pipe to intercept excessive run-off in the hillside of Sterling Avenue 2) Containment of storm water flooding and sanitary sewer overflow at the intersection of Keith and Euclid. Contractor also replaced a section of pipe and installed 60 linear feet of pipe with a manhole and installed sheet piles while replacing sewer pipes.3) Repair of storm drain on Poplar Street 4) Installation of a temporary connection to replace sewage pumps and its

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appurtenance in pump station #5. 5) Installation of two catch basins, three standard manholes, and 580 linear feet of 12-inch drain pipe on Arlington between Mendocino and Los Angeles, replacement of two laterals at Vistamont, replacement of two standard manholes, 385 linear feet of 8-inch sewer pipe, rehabilitation of existing manhole, and reconstruction of 22 two-way clean outs, including reconstruction of lower laterals on Peralta between Portland and Vincente.

McNamara & Smallman	
Original Contract Price	\$736,682.00
Change Orders	286,641.39
Total cost	\$1,023,323.39

IV. Results of the Audit

Public Works Department

1. Expenditures Exceeded Council’s Authorization (Hopkins/J.S.J. Pipeline)

The Hopkins Street Sanitary Sewer project’s actual contract expenditures exceeded approved Council amount by \$173,075.

Hopkins Street Sanitary Sewer	
Original contract amount	\$1,057,600.00
Amendment for additional funding	144,272.00
Actual expenditures	(1,374,947.00)
Excess unauthorized expenditure	\$173,075.00

On September 30, 1998, the contract for JSJ Pipeline expired with an outstanding payment balance remaining. The contract’s 10% contingency was utilized for additional sanitary sewer work on Hopkins Street. Additional work was authorized to remove and dispose abandoned underground utility pipes and to excavate and remove the unknown concrete pavement beneath the asphalt surfacing. There was also an additional cost incurred due to schedule changes to prevent disruption of business during the holiday season.

On November 24, 1998, a new contract was approved by Council to pay the outstanding balance for emergency and urgent (El Nino) storm drain construction work in an amount not to exceed \$144,272. Public Works expended additional funds, which exceeded Council’s authorized amount by \$173,075.

Section 67.5 of the City Charter identifies specific criteria regarding expenditures in excess of the limitation established by ordinance. It states “any action providing for the expenditure of public money the amount of which exceed an amount set by ordinance (\$25,000) shall be authorized by resolution of the Council or shall be done by contract authorized by resolution of the Council.”

Public Works should have either stayed within the funding guideline authorized by Council, obtained the City Manager’s approval for the additional expenditures, or returned to Council to request authorization for the additional funding prior to the expiration of the contract.

Recommendation

We recommend that Public Works comply with Charter requirements to seek the Council’s or the City Manager’s authorization for the additional expenditures. We recommend that Public Works be mindful of contract expiration dates and seek the Council’s or the City Manager’s approval prior to contracts’ expirations. We also recommend that Public Works clarify and incorporate improved emergency procedures in the Project Management Manual. According to the City Manager, the Emergency Operation Center’s procedures will also be updated.

City Manager’s Response

We concur with the finding and recommendation. In this instance, procedures were not followed. If current procedures had been followed, we believe Council would have authorized the additional expenditures. Public Works will update the Project Management Manual to incorporate improved emergency procedures by September 30, 2000. The City Manager will update the Emergency Operation Center’s procedures by October 31, 2000.

2. Failed to Process New Contract and Paid \$5,775 Over Low Bid Amount

(Sterling/McNamara)

Two bid quotations were solicited for a construction project that involved removal and installation of two pumps with shoes, mounting hardware and system controls for existing sewage No. 5. The low bid was from East Bay Pump and Equipment Company for \$38,500. The contract was awarded to the lowest bidder. However, in order to avoid processing a new contract, Public Works prepared a change order to the McNamara & Smallman contract, and made the payment to McNamara and Smallman, but added an additional 15% (\$5,775) in excess of the low bid price. The extra \$5,775 was retained by McNamara & Smallman; the change order document states that this charge was to cover “all necessary expense and profit”.

Section 67 of the City Charter stipulates, “Each specific improvement and each purchase of supplies, equipment or materials the expenditures for which exceeds an amount (\$25,000) set

by ordinance, as provided for in Section 67(b) hereof, shall be done by contract authorized by resolution of the Council and said contract shall be let to the lowest responsible bidder after advertising for sealed proposals for five (5) consecutive days as required by this Charter.”

Public Works stated that the reason the change order was generated was because it was an emergency situation and processing a contract would have taken too long. However, Public Works should have adhered to City policy and gone to Council with a new contract. Failing to process a new contract not only violated City policy and Council authority but also cost the City an additional \$5,775.

Recommendation

We recommend that Public Works adhere to City policy by effectively processing new contracts as required by the City Charter. This includes, in an emergency, obtaining documentation of the City Manager’s approval.

City Manager’s Response

We concur with the finding and recommendation. In this instance, procedures were not followed. New procedures should provide that timeliness might have a higher consideration than current contract procedures. Public Works will update the Project Management Manual by September 30, 2000. The City Manager will update the Emergency Operation Center’s procedures by October 31, 2000.

3. City Staff Waived Failed Field Density Test Results (Hopkins/ J.S.J. Pipeline)

The City contracted with an independent testing company for field density sample tests on construction projects. The inspectors (City employees) reviewed the results of the tests as part of the quality control process. The auditor examined the summary of field density tests reports and noted instances where the field density test reports documented that minimum standards were not met. However, there was no evidence of retesting to ensure that corrections were made and that the minimum standards were ultimately attained. There were several instances where the independent field density test results indicated failure to meet minimum standards but were approved by the inspector without correction, retesting, or documenting acceptance of failed field density tests.

Section 501.17 of the bid specification stipulates “All costs incurred by the City for reinspection of poor workmanship, failing air tests, failing compaction tests, failing tests of any kind, and re-staking caused by the Contractor shall be deducted from the amounts due the contractor by contract change order. The Engineer’s decision as to determination of poor workmanship shall be final.”

The purpose of requiring independent field density tests and independent inspections is to enable the City to require corrections or adjustments to price when agreed upon standards are not met.

Recommendation

We recommend that failed field density tests results be rectified and retested until minimum standards are met. Alternatively, staff should document waiving any failed test, and this documentation should be approved by the project engineer. Contractors should be held accountable for failed results and the engineers should insist on quality levels as established in the contract specifications and paid for by the City. This should be incorporated into the Project Management Manual

City Manager’s Response

We concur with the finding and recommendation. Public Works agrees to clarify approval procedures for accepting failed test variations, fix responsibility for the accepted variance, and incorporate these amended procedures into Public Works’ Project Management Manual by September 30, 2000.

4. No Indication of Inspector’s Review for Payment on Progress Payment Claim Forms (All Projects)

There was no evidence of the inspectors’ review for payments on any of the Progress Payment Claim Forms on all four projects. Public Works’ procedures did not require a sign off by the inspectors. However, the inspectors stated that they were responsible for monitoring the construction site, coordinating construction activity between the contractor and the City, and reviewing the requests for progress payments to ensure that the City received acceptable materials and fairness in the estimated value of work performed.

In addition, both the inspectors and the project manager stated that the inspectors reviewed the Progress Payment Claim Forms and that the inspectors’ approvals for payments were indicated on yellow post-its. Although nothing led the auditor to believe that the inspectors were not approving the Progress Payment Forms, evidence of their approval (the post-its) was not available. If the project managers do not require the inspectors to sign the claim forms when they approve payment, the City is not holding staff accountable.

Section 66 of the City Charter stipulates that “no progressive payments can be provided for or made at any time which, with prior payments, if there have been such, shall exceed in amount at that time ninety percent of the value of the labor done and the materials used up to that time, and no contract shall provide for or authorize or permit the payment of more than ninety per cent of the contract price before the completion of the work done under said contract and the acceptance thereof by the proper officer, department, or board.”

The act of authorizing progress payments brings with it the process of granting permission for payment on behalf of the City. This is normally associated with a signature from the authorizing representative in this case, the inspector, to record this decision. To facilitate a more

appropriate control mechanism, the inspectors should indicate their approval for payment by signing directly on the Progress Payment Claim Form.

Recommendation

We recommend that the inspectors indicate their review by signing directly on the Progress Payment Claim Forms and that an approval process be incorporated into Public Works' Project Management Manual.

City Manager's Response

We concur with the finding and recommendation. Public Works will incorporate approval procedures into the Project Management Manual by September 30, 2000.

5. No Indication of Inspectors Approval on the Daily Extra Work Report Form

(Sterling/McNamara)

There was no evidence of the City representative's (inspector's) signature as acceptance of the extra work documented on the line provided on the contractor's Daily Extra Work Report Forms. When the contractor performs extra work it is documented on a Daily Extra Work Form. The work forms detail daily the equipment and materials utilized, laborers' name, job classifications, and hourly rates.

There is a signature line for the contractor and a signature line for the City's representative. These forms were signed by the contractor. However, there was no evidence of the inspectors' approval on the forms. The Daily Extra Work Forms indicated performance of storm drain work from November 1997 through February 1998.

As indicated in Finding 4, inspectors should also document their approval for payment by signing directly on the Daily Extra Work Form in the space provided. Again, the City is not holding the inspectors accountable for quality control.

Recommendation

We recommend that the project engineer and/or inspectors document their approval of the daily extra work as provided for on the form.

City Manager's Response

We concur with the finding and recommendation. Public Works will incorporate approval procedures into the Project Management Manual by September 30, 2000.

6. Insurance Not in Conformity with Contract Requirements (Hopkins/JSJ Pipeline and Glendale/K.J. Woods)

Our review of the insurance certificates revealed that one of the four contractors did not possess adequate levels of insurance coverage as specified in the contract. The certificate of liability

insurance provided to the City by the contractor indicated limits of \$1,000,000 per injury and \$1,000,000 per occurrence, half of the required insurance level for the project. In addition, evidence of insurance was not provided for a second contract.

The Notice to Bidders for sewer construction contracts required that the contractors obtain a certificate of public liability and property damage insurance in an amount of not less than \$2,000,000 per injury and \$2,000,000 per occurrence, and \$2,000,000 combined liability limit.

In addition, Section 701.13 states “Before commencing the work, the Contractor shall furnish to the City Attorney of the City satisfactory evidence of public Liability and Property Damage insurance with limits of liability as listed in the Notice to Bidders.”

Inadequate insurance coverage places the City at unnecessary risk of liability.

Recommendation

We recommend that insurance levels be carefully reviewed to ensure that required minimum levels of insurance are obtained to limit the City’s exposure to unnecessary risk of financial loss. We also recommend that when insurance coverage that varies from stated contract amounts is authorized by Public Works’ staff, the City’s insurance waiver form be appropriately completed and approved.

City Manager’s Response

We concur with the finding and recommendation. Public Works will update their Project Management Manual to incorporate insurance waiver procedures by September 30, 2000.

7. Inspectors Do Not Participate in Project Planning (All Projects)

The inspectors were responsible for monitoring the construction site and coordinating construction activity between the contractor and the City. However, the inspectors did not participate in the planning process of the projects. If the inspectors were included in the planning process and were required to review the plans and site of the project prior to preparation of the bid package then the inspectors could identify any potential difficulties up-front in the planning phase instead of discovering all the problems during the monitoring phase after construction has started. The difficulties identified by the inspectors during the planning phase should be incorporated into the bid package. This could have allowed for more accurate bids, fewer changes orders, and additional costs savings to the City.

Recommendation

We recommend that management consider including the inspectors during the planning phase of the construction projects.

City Manager's Response

We concur with the finding and recommendation. Public Works will do this when appropriate.

8. Design Related Change Orders Not Signed by Design Engineer (All Projects)

Change orders represent changes in the designing engineer's initial scope of work. There are several types of change orders. Change orders could be generated for differing site conditions, additional items requested during the course of construction, or changes to the initial scope due to a design oversight.

There was over \$579,984 in change orders on the four projects tested. None of them were signed by the design engineer. The engineer should be able to determine whether scope changes to his/her design, in the form of change orders, were appropriate. If an extraordinary number of change orders were processed, it might be an indication of poor professional design and the engineer should be held accountable.

If the design engineers were required to approve change orders it would ensure the necessity of additional work performed by the contractor and would hold the designing engineer responsible for significant changes to their professional estimate of scope of services

Recommendation

We recommend that the project design engineer sign design related change orders as evidence of their approval of the necessity for the additional work and that this review process be incorporated into Public Work's Project Management Manual. We also recommend that the engineer be evaluated on the impact of the nature of change orders generated for their designed project.

City Manager's Response

We concur with the finding and recommendation. Recommendation will be incorporated into the Project Management Manual by September 30, 2000.

9. General Provisions Outdated (All Projects)

The General Provisions contain many outdated and obsolete legal references and incorporate outmoded methods of contract management. This exposes the City to unnecessary risk of liability. The legal department received a quote from an outside law firm to provide a completely new document. However, Public Work's management has not authorized the expenditure yet.

Recommendation

We recommend that the Public Works work with Legal to update the General Provisions to reflect current industry standards and laws to limit the City's unnecessary risk of liability.

City Manager's Response

We concur with the finding and recommendation. Public Works is currently working with Legal to update the General Provisions to be completed by September 30, 2000.

10. No Audit Clause (All Projects)

The City's ability to provide quality assurance and to detect overcharges and overpricing by the contractors was limited because there was no audit clause in the bid documents. The City should clearly stipulate the right of the City to audit all books and records of the contractor and sub-contractor pertaining to the terms and condition, including all modification and amendments, of the contracts. Included in the right to audit should be access to books, records, journals of account, supporting documents, invoices, receipts, insurance statements, bank statements, payroll journals, cancelled checks, contracts and sub-contracts and amendments, timecards, employee records, progress billings, and reasonable access to the contractor's employees upon written notice.

Recommendation

We recommend that a construction contract audit clause be developed and included in all construction bid specifications.

City Manager's Response

We concur with the findings and recommendation. Since July 1999, all construction contracts contain an audit clause.

Finance Department

11. Written Procedures Not Finalized

Purchasing's procedure manual has been in draft form for several years according to a February 20, 1996, Council item submitted by the City Manager. Procedures are methods employed to carry out activities in conformity with prescribed policies to ensure compliance with management's intent, to ensure uniform application when dealing with routine transactions, and to reduce the possibility of fraud and error. A draft is subject to change and is not a formal direction of management. It is not enough to simply draft procedures; management should commit to procedures by formally adopting them and distributing them to the appropriate personnel.

Recommendation

We recommend that Finance review, update, and finalize their draft procedure.

City Manager's Response

The Finance Director cannot put any "due" date on this item. Until the financial and

system support for the City’s purchasing functions is determined through the upcoming budget process, she is unable to commit to completing this task.

12. Abstract Bid Worksheet Not Signed

There were no signatures on the purchasing department’s *Abstract of Bids Worksheet*. The design engineer prepared the bid package and mailed it to potential bidders. The engineer informed the purchasing department that the bid package was mailed and that the opening bid date was scheduled. The contractors submitted the bid documents to the purchasing department before the scheduled due time and date. The purchasing department publicly opened the bids. Purchasing verified that all items were included in the bid package, for example, bid bonds and waivers, and read the bid totals. As the bids were read, the purchasing department recorded the bid amounts on the *Abstract of Bids Worksheet*. The lowest responsible bidder was identified and scheduled to meet with the affirmative action officer. The engineer verified the bid amounts and formally awarded the contract to the lowest bidder.

The process of awarding contracts brings with it the responsibility of attesting to the information recorded by Purchasing. This is normally associated with a signature from the authorizing representative. To document the control mechanism currently in place, Purchasing should indicate their attestation to the contract award process by signing the *Abstract of Bids Worksheet*.

Recommendation

We recommend that the Purchasing representatives who perform and witness the opening and reading of the contractors' bids sign the “Abstract of Bids Worksheet” as evidence of their attesting to the documented information and contract award process.

City Manager’s Response

We concur with the finding and recommendation. Finance will implement the recommendation immediately.

V. Conclusion

We were not able to fully determine whether the City was being appropriately billed for construction contracts because the contracts reviewed did not contain an audit clause that would allow the auditors to conduct a detailed examination of the contractors’ records and expose areas of overpricing and overbilling. However, we noted potential risk in a number of areas:

- Inadequate and out of date written procedures and contract documents
- Insurance not in conformity with contract requirements

- Failure to follow up on or document acceptance of failed field density tests
- Lack of evidence of review and approval of documents
- Occurrence of expenditures in excess of Council authorization

The City Charter requires Council oversight of contracts and specifies controls over the bidding and awarding of contracts. These controls were established to protect the City from fraud or favoritism in the procurement process, and to ensure accountability and proper stewardship of public funds.

The auditors were not able to identify why established internal controls were not always adhered to by Public Works. Although there is evidence that, in some cases, there were emergency situations, we believe that the prompt implementation of our recommendations will improve oversight of Public Works' contracts.

We recommend that:

- Public Works consistently seek Council's or City Manager's authorization for expenditures; and process new contracts in accordance with the City Charter
- The City Manager update the Emergency Operations Center's procedures by October 31, 2000
- Failed field density test results be rectified and retested until minimum requirements are met. Alternatively, that staff document waiving any failed test, and that this documentation be approved by the project engineer
- Inspectors indicate their review by signing directly on the Progress Payment Claim Forms
- Project engineers and/or inspectors document their approval of the daily extra work performed by the contractor
- Insurance levels be carefully reviewed to ensure that required minimum levels of insurance are obtained by the contractors or when insurance coverage varies from stated contract amounts that the City's insurance waiver form be appropriately completed and processed
- Management consider including the inspector during the planning phase of the construction projects
- The project design engineer sign design related project change orders as evidence of their approval of the necessity for additional work performed by the contractor
- Public Works update their Project Management Manual to reflect updated procedures by September 30, 2000
- Public Works work with Legal to update the General Provisions to reflect current industry standards and laws
- A construction contract audit clause be developed and included in all construction bid specifications
- Finance review, update, and finalize the City's Purchasing Manual
- Purchasing representatives who perform and witness the opening and reading of the contractors' bids sign the "Abstract of Bids Worksheets"

Based on these concerns we feel it is beneficial to continuing performing audits of City construction contracts.

VI. Authority to Audit

The City Auditor's right to audit is documented in Section 61 of the City Charter. It states that, "The Auditor shall have the authority and responsibility to conduct performance and financial audits or special studies of all phases of the City of Berkeley government in accordance with government auditing standards. Such audits may include financial, compliance, efficiency and economy, and program results auditing. The Auditor shall consult with the Mayor, City council, and City Manager regarding the selection of audit entities, but the final decision of what to audit shall remain with the Auditor. The Auditor shall furnish the City Council with a planned audit schedule by the beginning of each fiscal year. The Auditor may modify the audit schedule as necessary and will notify the City council of such modifications."

The auditors would like to thank Public Works staff for their cooperation and professional contributions during the course of the audit.