TO: HONORABLE CITY COUNCIL
FROM: CITY MANAGER                   DEPARTMENT: UTILITIES
DATE: MAY 20, 2002                  CMR: 248:02

SUBJECT: APPROVAL OF PROFESSIONAL ENGINEERING SERVICES CONTRACT WITH CAROLLO ENGINEERS IN THE AMOUNT OF $2,324,637 FOR THE DESIGN, PROJECT MANAGEMENT AND ADMINISTRATION OF PHASE I: RESERVOIR BOOSTER STATION IMPROVEMENTS; DISTRIBUTION SYSTEM WATER QUALITY ENHANCEMENT; EXISTING BOOSTER STATION IMPROVEMENTS; AND RESERVOIR, PUMP STATION AND WELL LAND ACQUISITION

RECOMMENDATION
Staff recommends that Council approve and authorize the Mayor to execute the attached contract with Carollo Engineers in the amount of $2,324,637 for the design, project management and administration of Phase I: Reservoir Booster Station Improvements; Distribution System Water Quality Enhancement; Existing Booster Station Improvements; and Reservoir, Pump Station and Well Land Acquisition.

BACKGROUND
The California Department of Health Services (DHS) recommends, as a best management practice, that water systems be able to supply their maximum day water demand plus the
system-required fire flow for an 8 hour period without being able to receive water from any of its normal suppliers or neighboring communities. In response to the DHS best management practices recommendations and to provide an analysis of the City’s water distribution system based on the City’s 1998 -2010 Comprehensive Plan, the Water Wells, Regional Storage and Distribution System Study (1999 Study) was performed. The Comprehensive Plan provided the foundation for the Capital Improvement Program recommendations made in 1999 Study. The 1999 Study involved a complete analysis of the City’s water distribution system. The Study provided recommendations for a stand-alone system that would provide maximum day plus fire flow demands for eight hours if the City connections to the San Francisco Public Utilities Commission system were out of service. The 1999 Study objectives were divided into three separate operational categories to help focus the analysis and organize the improvement recommendations. The three categories were:

1) Meeting system water demands under normal operations.
2) Meeting system water demands during a SFPUC supply shutdown (also termed “emergency operations” in the Study).
3) Maintaining distribution system integrity and water quality following the SFPUC’s scheduled conversion to chloraminated water in the fall of 2003.

Between 1999 and 2001, the Utilities Advisory Commission (UAC) reviewed the Study and supported its recommendations. In March 2000, Council approved FY2000/2005 Water Capital Improvement Program (CMR:141:00), which included the recommendations made in the Study.

DISCUSSION

The work to be performed under the contract is for the design, project management and administration of recommendations made in the Water Wells, Regional Storage, and Distribution System Study, December 1999 (Study) and includes the following projects in Phase I: 1) Reservoir Booster Station Improvements, 2) Distribution System Water Quality Enhancement, 3) Existing Booster Station Improvements, and 4) Reservoir, Pump Station and Wells Land Acquisition:

1. The Reservoir Booster Station Improvements project will enhance the reliability and performance of the water system by increasing flow capacity for both normal and fire suppression system demands. The flow capacities of the booster stations need to be increased to allow larger volumes of water to flow into the foothill
water pressure zones. More flow into the booster stations is needed to maintain water quality in the upper pressure zone reservoirs. The project replaces existing undersized pumps with larger pumps in the foothills pressure zones, and improves the existing electric services at the booster stations. The improvements will allow staff to pump water into the foothill reservoirs at more efficient rates and continue to provide high quality water for the community. This project will also add a redundant pressure regulating station to Pressure Area 4.

2. The Distribution System Water Quality Enhancement project will provide pump mixing systems at the Monte Bello, Dahl, Park, and Mayfield reservoirs; provide chloramine feed systems at each existing well site; and implement an expanded distribution system water quality monitoring program. In late Fall 2003, the SFPUC will change the disinfectant used in the Hetch Hetchy water supply from chlorine to chloramines. When this occurs, the City will not be able to store water in its reservoirs or distribution system for more than 20 days from the time the water enters the Palo Alto system. If the chloraminated water is not consumed by the Palo Alto water system demand within 20 days of receiving the water from the SFPUC, water quality events are very likely to occur in the distribution system. This project will improve the water circulation and mixing in the large City water reservoirs. The improved reservoir mixing will reduce high water age areas within the reservoirs that are prone to water quality degradation. During the expanded project design phase, water quality testing equipment and distribution system sites will be identified. The new water quality monitoring equipment and procedures will be used by staff to implement the expanded water quality-monitoring program.

3. The Existing Booster Station Improvements project will improve the water system’s ability to move larger volumes of water out of the foothills on a daily basis. Additional flow capacity out of the foothill pressures zones is needed to meet fire demands in lower water pressure zones during emergencies. The project will replace undersized pressure reducing valves in the foothill water regulating stations and provide additional system capacity for conveying water from the reservoirs in the foothills to the lower system pressure areas during normal operations and emergencies. The Existing Booster Station Improvements Project will also include piping changes and additional control valves at the stations.

4. The Reservoir, Pump Station, and Wells Land Acquisition projects will design a new water reservoir, well, and pump station for pressure areas 1 and 3 at El Camino Park or at an alternate suitable site. The final reservoir site will be determined as part of a public outreach process which is included in the
professional engineer’s scope of work. Seven potential reservoir sites were identified in the 1999 Study. The Study identified the El Camino Park site as the most economical and feasible for a reservoir, pump station, and well. If SFPUC water system were out of service, the proposed reservoir would be a major component in meeting the emergency and fire water supply in pressure area 3. Pressure area 3 includes all of the land owned by Stanford University within Palo Alto, bounded by El Camino Real, Quarry Road, Pasteur Drive and San Francisquito Creek. A new well is also needed in conjunction with the reservoir to meet normal emergency demands in pressure area 3. The new well for pressure area 3 will be designed to deliver 1,000 gallons per minute. The projects will also include instrumentation, controls, piping, and valves for the proposed facilities.

Selection Process
Staff, with the concurrence of the City Attorney, has determined that professional engineering services is exempt from complying with the financial disclosure provisions of the City's conflict of interest code, because the professional engineering services range of duties and services to be provided under the contract are limited in scope or are primarily ministerial in nature.

The professional engineering services scope of services are detailed in Exhibits of the contract and generally include the following; public outreach, pre-design, design, environmental documentation, and project management and administration for:

- Evaluation of the original design criteria used in the 1999 Study;
- Acquisition of the data necessary for the analysis of the key project issues;
- Engineering analysis of the data obtained in the above task;
- Environmental documentation for the projects and assessment of permits and easements necessary for the construction of the projects;
- Conducting a public outreach program;
- Preparation of the design documents including plans, profiles, details, specifications, and an engineer’s estimate for the bidding and construction of the four-above mentioned projects.

Staff sent a request for proposals to six consulting firms on July 25, 2001. Firms were given thirty days to respond to the request. A non-mandatory pre-proposal meeting was held on August 9, 2001; two firms attended the meeting. One firm submitted a proposal. Those firms not responding indicated that they did not submit a proposal because their current workload inhibited them from performing the work.
Staff carefully reviewed the sole proposing firm's qualifications and submittal in response to the RFP relative to the following criteria:

- Scope of Proposal
- Sequence of Work
- Schedule of Work
- References
- Project Understanding and Approach
- Design Experience
- Completeness of Proposal
- Completion Time
- Project Team Experience with City Issues

Carollo Engineers was selected because of its professional qualification; strength of the proposed project team; past successful experience with designing similar complex projects; familiarity with the project design and construction issues and City procedures; and experience working with the City.

**RESOURCE IMPACT**

Funds for this project are included in the FY 2001-03 Water Capital Improvement Program budget.

**POLICY IMPLICATIONS**

The approval of this contract is consistent with existing policies. This recommendation is consistent with the Council-approved Utilities Strategic Plan goal to build value for citizen owners, investing in utility infrastructure to deliver reliable service (Supporting Objective #2), and operating the distribution system in a cost effective manner (Key Strategy #1).

**ENVIRONMENTAL REVIEW**

Based on the findings of the pre-design and project environmental documentation included in the contract scope of services, the proposed design may constitute a project for the purposes of the California Environmental Quality Act (CEQA). The scope of services includes preparing the necessary CEQA documents identified in the pre-design of the project.
ATTACHMENT
A: Contract between the City of Palo Alto and Carollo Engineers for Professional Engineering Services

PREPARED BY: Romel Antonio, Charles Borg, Roger Cwiak and Scott Bradshaw

DEPARTMENT HEAD: ____________________________________________
JOHN ULRICH
Director of Utilities

CITY MANAGER APPROVAL: ______________________________________
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