

TO: James L. App, City Manager
FROM: Doug Monn, Public Works Director
SUBJECT: Award Contract to Black & Veatch Associates for Design of a Six Million Gallon per Day Water Treatment Facility
DATE: May 15, 2007

NEEDS: For the City Council to consider appropriating funding and authorizing engineering design for a water treatment plant.

- FACTS:**
1. The City will take delivery of water from Nacimiento Lake in June of 2010.
 2. To facilitate the use of water, the City will need to design and construct a six million gallon per day treatment facility at its Thunderbird well field.
 3. The project is estimated to cost approximately seventeen million dollars (\$17,000,000).
 4. The City solicited statements of qualifications/proposals from design firms and received three proposals.
 5. Selection criteria for the design firm was approved by the Council Ad-Hoc Committee on February 20, 2007; all three firms were interviewed March 1, 2007.
 6. The City's selection panel, in consultation with the Council's Ad-Hoc committee, unanimously recommends retaining Black & Veatch to provide design services for the treatment plant.
 7. In addition to extensive experience in the design of water treatment plants throughout the West Coast, Black & Veatch has been providing design services to the County of San Luis Obispo Flood Control & Water Conservation District in the development of the Nacimiento pipeline.
 8. Black & Veatch has provided the City with a cost of \$1,950,000 to design the treatment process and support structures, necessary tanks and blending pipelines, control systems, architectural and landscaping design of the treatment plant, and assistance with contractor outreach and bid phase services.
 9. Staff is requesting an allocation of \$2,150,000 to include a \$200,000 contingency to offset the cost of possible unforeseen conditions.

**ANALYSIS &
CONCLUSION:**

The Nacimiento Water Project will be an important asset to the City. The continued growth and economic vitality of the City and its inhabitants is predicated upon adequate water resources. Evaluations of the Paso Robles Groundwater Basin published in 2002 pointed to the limited yield of the region's well supply, prompting the City and others to initiate design of the Nacimiento Water Project. Further, deteriorating groundwater quality, particularly reflected as increasing salts levels, is observed throughout the Paso Robles Groundwater Basin such that left un-checked, would continue to deteriorate over the long-term. To ensure deliverability of higher

RESOLUTION NO. 07-

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF PASO ROBLES
APPROPRIATING FUNDS AND AWARDING A CONTRACT
TO BLACK & VEATCH FOR PROFESSIONAL ENGINEERING DESIGN SERVICES
ASSOCIATED WITH THE DESIGN OF A WATER TREATMENT PLANT

WHEREAS, the City of Paso Robles is a partner in securing water from Lake Nacimiento; and

WHEREAS, integration of Nacimiento Water into the City's distribution system will require the construction of a six million gallon per day treatment facility; and

WHEREAS, the construction of the treatment facility must be completed by 2010 to accommodate the acceptance of the Nacimiento Water; and

WHEREAS, the design process will require a professional engineering firm to ensure its functionality and completion by the required date, and;

WHEREAS, because of their demonstrated depth of experience, understanding of the purpose of the treatment plant, direct experience with the Nacimiento Pipeline Project, and the needs of the City, it would appear to be in the best interest of the City of Paso Robles and its water users to retain the service of Black & Veatch to provide Professional Engineering Design Services for the design of the treatment facility at a cost not to exceed. \$1,950,000 plus a contingency of \$200,000 for unforeseen design amendments.

THEREFORE, BE IT RESOLVED AS FOLLOWS:

SECTION 1. The City Council of the City of Paso Robles does approve a one time supplemental budget appropriation from the Water Operations Fund in the amount of \$2,150,000 to budget account 229-910-5452-544; and

SECTION 2. The City Council does hereby award a contract to Black & Veatch for Professional Engineering Design Services associated with the design of the treatment facility in the amount of \$1,950,000, and authorizes the City Manager to execute the contact.

PASSED AND ADOPTED by the City Council of the City of Paso Robles this 15th day of May 2007 by the following votes:

AYES:

NOES:

ABSTAIN:

ABSENT:

Frank R. Mecham, Mayor

ATTEST:

Deborah D. Robinson, Deputy City Clerk



or schedule, (5) progress relative to schedule and corrective action (if necessary) to be taken by Consultant and/or City, (6) summary of costs incurred during the period, and (7) summary of activities planned for the next reporting period.

Task A.4 – Project Procedures Manual

Prepare and maintain throughout the project duration a Project Procedures Manual, which shall include the following:

- ▼ Project Scope of Work.
- ▼ Project communications protocol, including City's Construction Manager, if any.
- ▼ Project team organization and roles.
- ▼ Schedule of engineering activities.
- ▼ Directory of addresses and phone numbers for team members.
- ▼ Document filing procedures.
- ▼ Invoice format and invoicing procedures.

Five copies of the draft Project Procedures Manual shall be submitted to the City within one week of the notice to proceed with the work. Following receipt of review comments, ten copies of the final draft of the Project Procedures Manual shall be prepared and distributed to the project participants.

The Project Procedures Manual will be updated, as needed, to reflect the progress of the work and to account for changed conditions.

Task A.5 – Project Quality Plan

A Quality Assurance/Quality Control (QA/QC) plan will be prepared which will define the procedures to be followed to ensure a high quality product. The QA/QC plan will identify the schedule and level of effort planned for internal quality review and call for evidence of QA/QC review with each design deliverable.

Task A.6 – Project Standards Manual

A project standards manual shall be prepared at the beginning of the preliminary design phase. This memorandum shall address the criteria to be used for technical design work and CAD preparation of contract drawings. The memorandum shall be prepared to facilitate compliance with City standards and consistency among all of the design team disciplines.

Items to be addressed shall include:

- ▼ Conversion of surveying information to contract drawings.
- ▼ Drawing layout procedures.
- ▼ Drawing layer and text conventions.
- ▼ Standard abbreviations and symbols.
- ▼ Architectural/Structural criteria (wind loads, bearing capacities, seismic criteria, concrete design strength, etc.).



or electronic format. A list of all the documents collected under this task, including a brief item description, will be provided to the City.

Task B.3 – Surveying, Mapping & Utility Engineering

Complete surveying and aerial mapping of the WTP site and established transmission pipeline alignments shall be performed¹ as follows:

- ▼ Boundary and Topographic Survey and Mapping (NWTP). Consultant shall re-establish and map the City’s “Thunderbird” well site property APN 009-631-001, 18.46 acres +/- and the City’s 2.02 acres +/- property immediately north, APN 009-631-002. This will include procuring a Preliminary Title Report (PTR) and plotting any easements listed therein. This information will be shown on the Base Map described below. It is assumed that all monuments of record exist and are in acceptable locations and that no material discrepancies will occur. Horizontal Control shall be based on the previous control for the 2005 mapping. Vertical Control shall be based upon the City’s Benchmark system.
- ▼ Ground Survey and Base Map (NWTP). Consultant shall perform a topographic survey on the ground to locate surface structures such as water valve lids, water wells, sanitary sewer manholes, storm drain manholes, paint marks indicating underground utilities, bore holes, and other utility structures which are at surface within the project, to include contours at a one foot interval or spot elevations to be compiled to the 2005 aerial mapping, which contained a two foot contour interval. In addition, Consultant shall map the horizontal location of the underground utilities based upon the found surface structures and paint marks along with the City-provided Atlas Maps and As-Built Improvement Plans. This information along with the mapping above shall be compiled to form the “Base Map”.
- ▼ Boundary and Topographic Survey and Mapping (Transmission Pipelines). The mapping for the pipelines shall be an approximately 200 foot wide strip of land. It has been assumed that common trench for the pipeline shall be utilized from the WTP site to a point 4,300 linear feet to the north. The pipeline to the Main East zone shall continue 2,800 linear feet to the connection point at Oak and Santa Ysabel Road. The pipeline to the Main West zone shall continue 4,900 linear feet to the connection point at Spring and Niblick. An additional 2,500 linear feet of surveying for the Ronconi transmission pipeline shall be provided. The combined surveying length for the three pipelines is 14,500 linear feet.

The topographic mapping for the transmission pipelines shall be performed using aerial mapping techniques with ground control (15 aerial target locations). A color digital orthophoto mosaic with a .2’ pixel resolution shall be provided. All mapping shall be done in Imperial Units to a scale of 1 inch = 40 feet with a 1 foot contour interval. The mapping shall show all visible major features such as

¹ Optional surveying and mapping services for the pipeline alignments to Ronconi and Sherwood Wells are addressed in Task G.8



be plotted in the field as the data are being obtained. A dozer will be provided to assist the CPT rig in traversing the site.

- ▼ Evaluation and Preliminary Geotechnical Report. Prepare a Preliminary Geotechnical Report for the Project that will discuss the potential for the WTP site to be impacted by geologic hazards and geotechnical considerations for design. The report will include a discussion of the data review and logs of the explorations, graphics, and a map showing the approximate locations of the field explorations. A draft copy of the report will be submitted in electronic (PDF) format for review by the City. The preliminary geotechnical report is to provide sufficient information regarding liquefaction potential to proceed with foundation and facility design.

Phase 2 – Design-Level Geotechnical Services

Under this phase of work, Consultant will perform design-level geotechnical services for the Project, including data review, field exploration, laboratory testing, and geotechnical analysis as a basis for preparing the geotechnical reports for the design. The design-level geotechnical services will consist of the following:

- ▼ Field Exploration. Perform a field exploration consisting of drilling exploratory bore holes to supplement the CPT soundings obtained during Phase 1. The following tentative field exploration plan at the site is shown below. Borings will be drilled using a truck-mounted drill rig equipped with hollow-stem-augers. The borings will be sampled at approximately 5-foot intervals using standard penetration test (SPT) and modified California split spoon samplers. Closer spaced samples will be obtained in the upper 10 feet of the borings. Bulk samples of selected materials will be obtained from the cuttings retrieved from the auger flights. The borings will be backfilled with the excavated materials upon completion of drilling. The samples will be used to classify the soils encountered, and will be retained for subsequent laboratory testing. A summary of the proposed borings is provided in Table 1 below

This scope of work specifically excludes the search for, and evaluation of, hazardous materials in soil, water, or air. In the event that hazardous materials are encountered during the field exploration, Consultant will be required to report the contamination and to follow protocols required by various agencies. The cost for work performed in association with the discovery of unanticipated hazardous material will be provided on a time and materials basis, and is not included in this proposal.

TABLE 1 - Summary of Proposed Borings

Structure	Tentative Field Exploration
Water Treatment Plant	5 borings to 50 feet 5 borings to 20 feet
Transmission Pipelines	10 borings to 15 feet
Salinas River Crossing	2 borings to 75 feet



- ▼ Earthquake occurrence and the estimated probabilistic peak ground accelerations having a 10 percent probability of being exceeded in a 50-year and 100-year period.
 - ▼ Considerations for near field (short period) and far field (long period) earthquakes; and
 - ▼ Plotted response spectra (pseudo acceleration, displacement, and velocity) for critical damping of 0.5, 2, 5 percent, and extrapolated to a period of 15 seconds.
16. Expansive soil conditions.
 17. Slab-on-grade.
 18. Pavement recommendations for parking lots and access roads based on traffic indices (TI) provided to us.
 19. Construction considerations regarding groundwater conditions, need for temporary slopes or shoring, and excavation characteristics of the soils encountered.
 20. Site drainage.

Task B.5 – Technical Memorandums

The following technical memoranda (TM) will be developed which will form the basis for the plant facilities.

- ▼ **TM 1: Treatment Alternatives.** Performance criteria for the new treatment plant facilities will be defined and five potential treatment alternatives will be identified. A detailed evaluation of each alternative will be performed and a workshop held with City staff to review the evaluation and recommended treatment alternatives. Treatment processes as allowed per DHS' Lake Nacimiento body contact legislative waiver will be taken into account.
- ▼ **TM 2: Facility Layout/Site Plan.** Based on the results of TM 1, prepare a preliminary phased and ultimate plant layout for the project. The layout shall consider such criteria as site conditions, physical separation of major structures, future expansion, length of chemical pipe runs, and consideration for plant operator safety. The layout will also address architectural/aesthetic treatment according to the newly-adopted City gateway standards.

Consultant is to provide a separate alternative conceptual site plan layout that would incorporate the City's Water Yard² on the proposed treatment plant site. Any design- or cost estimating-related work in Task B – Preliminary Design and Task C – Final Design Phase, required in support of relocating the City's Water Yard to the WTP site, would be authorized per an amendment to the Agreement.

A workshop will be held with City staff to review the preliminary layouts.
- ▼ **TM 3: Operations Plan & Hydraulic Analysis.** Following the preparation of the Facility Layout/Site Plan, Consultant shall prepare a TM to document the proposed method of operations for the new facilities, including waste streams

² The existing water yard is less than two acres and includes parking for trucks, equipment and vehicles; offices for staff; maintenance bays; and parts inventory. There is no refueling bay.



- ▼ **TM 8: Regulatory Agency Requirements.** Identify jurisdictional agency requirements for implementation of the new facilities. Discuss how major foreseeable regulatory concerns will be addressed in the facility design. Lay out basis of design of a laboratory located within the plant for operator use in assessing regulatory compliance associated with of varying chemical dosages and operational modes. The laboratory facility shall be configured to support operation of the WTP and optimization of chemical dosing (polymers, coagulants, etc.).
- ▼ **TM 9: Solids Handling.** Performance criteria for the new solids handling facilities will be defined and two potential alternatives will be identified. A detailed evaluation of each alternative will be performed and a workshop held with City staff to review the evaluation and recommended solids handling facilities alternatives.
- ▼ **TM 10: I&C, Controls, and Communications.** Identify performance criteria for control schemes at the new facilities. Identify requirements for communications with other City facilities as needed. Provide recommendations for instrumentation and control systems at the new water treatment plant.
- ▼ **TM 11: Well Retrofit & Blending Study.** Evaluate the facility requirements associated with installing new pumps, motors and controls at the Thunderbird and Ronconi Wells. In addition, perform a feasibility level analysis of constructing a new blending pipeline and controls for a future tie-in of a proposed blending line from the Sherwood Wells for arsenic level compliance. Discuss electrical changes (i.e smaller horsepower pumps) anticipated at the Thunderbird and Ronconi Wells.
- ▼ **TM 12: System Modeling and Surge Analysis.** In connection with the treated water pump station and TM 11 study, Consultant shall describe the various hydraulic conditions to be simulated using the City's existing hydraulic network computer model, then the City, under a separate contract with Boyle Engineering Corporation, will obtain those runs. Model results will be provided to Consultant in a timely manner in accordance with the approved project schedule.

Where alternative approaches are presented for City consideration, Black & Veatch will provide an economic comparison of alternatives within each Technical Memo and a recommended course of action. Five (5) copies of each draft TM will be submitted to the City for review. Following receipt and resolution of review comments, five (5) copies of the final TM will be prepared and distributed to the City. Consultant will provide five (5) binders to hold the TM's, and the final TM's will be transmitted to the City for insertion into the binders.

Task B.6 – Investigate Plant Utility Requirements

Investigate the requirements for the utilities that will be required for the proposed treatment plant including the following:

- ▼ Water
- ▼ Electrical Power
- ▼ Natural Gas (if required)



- ▼ Civil design criteria.
- ▼ HVAC design criteria.
- ▼ Electrical design criteria.
- ▼ Structural design criteria, especially considerations for liquefaction potential.
- ▼ Instrumentation design criteria.
- ▼ Miscellaneous support systems.
- ▼ Plant utility requirements.
- ▼ Discussion of the hydraulic analysis and hydraulic profile.
- ▼ Design concepts and alternatives as developed to meet project goals and objectives.
- ▼ Construction scheduling requirements to be included in the construction documents, including anticipated permit limitations.
- ▼ Proposed construction features and materials selection for planned facilities. Materials shall conform to City's standards.
- ▼ Staffing plan.
- ▼ Procurement plan – outline the recommended method of procuring major pieces of equipment and/or systems (i.e., membrane filtration system) and how each procurement relates to the overall prime construction contract.
- ▼ Project schedule including design, bidding, construction, and post construction activities.
- ▼ Other elements of the project as appropriate to define scope and objective.

The work completed will be summarized and presented to the City staff in a technical review workshop. The comments obtained from the City staff at the workshop will be documented in minutes and incorporated into the final report.

The draft PDR will include drawings, schematics, flow diagrams, and process and instrumentation diagrams (P&IDs) that summarize the work and identify the recommended design criteria for the project facilities.

Ten (10) copies of the draft PDR will be submitted to the City for review. Following receipt and resolution of review comments, ten (10) copies of the final PDR will be prepared and distributed to the City.

Task B.9 – Preliminary Opinion of Probable Construction Costs

Prepare an initial opinion of probable construction cost at the completion of the preliminary design phase including construction costs, engineering costs, testing, permits, contingencies, escalation, and an allowance for administrative costs. The cost estimate will incorporate the engineer's experience with similar projects. Contact will be made with equipment suppliers and manufacturers to obtain budget pricing for major equipment items.

The initial construction cost estimate will be provided at the completion of the preliminary design phase and will also be included as a chapter in the PDR.



- ▼ Filtration will be based on conventional media filters.
- ▼ Chemical feed building will be approximately 6000 sq ft, slab on grade, to house hypochlorite feed and storage and up to 3 other chemical feed and storage systems. Building will be single story with containment areas as required for the chemicals used.
- ▼ The treated water pump station will house 4 pumps for current capacity plus space for 4 additional pumps. Building will be up to 4500 sq ft with no basement. Removable skylights will be provided to facilitate pump removal. Two welded steel tanks are planned for treated water storage. No standby power facility is currently planned for the site, and the raw water reservoir is an optional feature.
- ▼ Admin/Control building will be up to 5000 sq ft and will house offices, locker rooms, control room, and a single bay maintenance area. Building will be single story with no basement.
- ▼ All buildings will be of CMU construction with siding and/or veneer exterior.
- ▼ CCTV and building security systems are not included.
- ▼ Fire protection systems will be provided where required by building codes for the Chemical Feed Building.
- ▼ Electrical circuit and raceway schedules will be provided as part of the construction documents.
- ▼ The transmission pipelines will be designed as shown on the attached Figure 1.
- ▼ The final design will also include new pumps, motors and controls at the Thunderbird and Ronconi Wells as needed.

Complete construction drawings, details, and sections for the work will be prepared. Drawings, sections, and details will be drawn at an appropriate scale to produce clear, accurate, easy-to-read drawings. Construction drawings will be complete and will be subject to final review and acceptance by the City.

All drawings will be completed using AutoCAD 2005. The drawings will be prepared on 22x34-inch sheets and in accordance with City standards. As an example, facility drawings, including P&ID's will be similar in appearance to Consultant's drawings being produced for the Nacimiento Water Project.

Project technical specifications, special provisions, and contract bid documents will be prepared using Microsoft Word. The technical specifications Divisions 2 through 16 will be prepared using Consultant's standards. The front-end contract documents will be developed using the City's standard front-end contract documents.

Design packages will be submitted for review at the 60 and 90 percent complete levels. For each submittal, five (5) sets of half size (11x17-inch) drawings, front-end contract documents, and technical specifications will be provided for review and comment by City staff. Each design progress deliverable will be accompanied by evidence of Black & Veatch's internal QA/QC review. A two week review period is allocated for City review of each submittal.

Design review workshops will be conducted to present, discuss, and review the contract documents at each of the design stage submittals. Each workshop will be conducted with City staff to present the information and findings of the design team



Consultant shall conduct a contractor outreach program for the Project. Outreach shall include conducting a series of interactive workshops leading up to the Project bid opening. The task budget includes two (2) workshops. Workshops will include a presentation and question and answer session.

In preparation for the workshops, Consultant shall contact contractors to raise awareness of the Project, and prepare announcements in printed media including local newspapers, trade magazines and publications.

Consultant shall assist City in preparing contractor prequalification materials (including any subcontractor prequalification) and evaluating prequalification submittals.

TASK D – BID PHASE SERVICES

Task D.1 – Pre-Bid Conference

In addition to the contractor outreach (Task A.9), a pre-bid conference will be conducted at a date, time, and location selected by the City to:

- ▼ Instruct prospective bidders and suppliers as to the types of information required by the contract documents and the format in which the bids should be presented.
- ▼ Review special project requirements and contract documents in general.
- ▼ Receive requests for interpretations that will be issued by addendum.
- ▼ Conduct a site visit.
- ▼ Prepare minutes of the conference and issue to all attendees by addendum.

Per Task C.3 above, camera-ready construction contract documents will be supplied to the City. The City will be responsible for reproduction and distribution of the construction contract documents and addenda during the bid phase.

This assumes that there will be only one contract with a prime contractor. No separate MSS and/or integrator contract contemplated.

Task D.2 – Miscellaneous Bid Phase Services

The following services will be provided during the bid phase:

- ▼ Prepare final Invitation to Bid
- ▼ Interpret construction contract documents and provide written responses to questions from bidders requiring clarification during the bidding period.
- ▼ Prepare addenda to the contract documents as required.
- ▼ Assist City during bid opening.
- ▼ Review and evaluate the qualifications of the apparent successful bidder and the proposed major or specialty subcontractors. The review and evaluation will include such factors as work completed, equipment that is available for the work, financial resources, and technical experience.
- ▼ Prepare and distribute formal bid tabulation sheets, evaluate bids, and make written recommendations to City concerning contract award.



Task E.3 – Contractor Requests for Information (RFI)

Consultant shall interpret the construction contract drawings and specifications, and provide written responses to questions from the contractor requiring clarification during the construction of the project. A log will be maintained by the CM and periodically distributed to the Consultant, City and contractor. Consultant's fee includes a budget for the review and response of one hundred fifty (150) RFIs has been established. Consultant will respond to all RFI's in a timely manner, so as not to affect progress of the work.

Task E.4 – Review Requests for Change Order

Consultant shall provide engineering support to the City and CM in its review of change orders, including providing a written recommendation regarding City's approval of the change order request and providing any engineering documents required to effect the change.

Task E.5 – Record Drawings

Consultant shall prepare record drawings once the project construction has been completed based on contractor-furnished "Redline" construction contract drawings. Final record drawings will include all revisions to the original design including revisions resulting from RFIs, change orders, field orders, and any other changes that occur during the construction of the project, as documented by the contractor. Final record drawings will be submitted to the City in both hard copy and electronic format.

TASK F – STARTUP ASSISTANCE/TRAINING AND O&M MANUAL

Task F.1 – O&M Manual

A hardcopy operation and maintenance manual will be prepared.

A sample section will be prepared and submitted for client review. After comments are received a final version will be submitted. The remaining chapter subsections will be based on the approved content and format. A submittal schedule will be submitted outlining the Consultant's chapter subsection submittals and the City review schedule.

Equipment manufacturers O&M manuals will be reviewed by the Consultant. The manufacturer's O&M manual requirements are listed in the design specifications and these will be used as the review guideline document.

The O&M manual will include a 5-year scheduled maintenance/warranty inspection schedule for the plant and related facilities.

Task F.2 – Operations Plan for DHS Approval

An Operations Plan will be prepared for approval by the DHS. The format required by DHS will be followed to obtain approval. This effort will include preparation and modification of the O&M manual standard operating procedures for the facility. Coordination with the City is required to obtain City operations information. Other



authorization by the City upon mutual agreement on the required scope and budget for each.

Task G.1 – Reservoir Water Quality Optimization

Reservoir modeling quality modeling services will be provided as follows:

- ▼ Incorporate refined demands into the model
- ▼ Utilizing model capabilities, evaluate alternative internal baffling configurations and age of water calculations
- ▼ Summarize the findings of the model and recommend the best suited alternative to be implemented into the reservoir design documents

Task G.2 – Potholing Services

To determine the actual location of existing utilities beyond the level described in Task B.3, Consultant will define the location of critical existing underground utilities, and the City will provide excavation equipment and an operator to perform the potholing. The Consultant will be present to observe the potholing activity and to record the findings of the field measurements. Surveyed locations for critical underground utilities will be performed, as deemed necessary.

Task G.3 – SCADA System Design or Modifications

The construction of the proposed new facilities could have an impact on the City's existing SCADA system. If requested, Consultant will review the SCADA system and make written recommendations regarding modifications that could be incorporated into the Project. Provide engineering design and procurement recommendations for SCADA system modifications.

Task G.4 –Pre–Qualification of Contractors

Consultant will conduct a formal pre-qualification process for the general construction contractor for the Project. The scope of work is described below:

- ▼ Prepare an Invitation to Pre-Qualify (IPQ) for the Project and distribute to interested contractors.
- ▼ Provide supplemental information to interested contractors, and answer questions about the Project.
- ▼ Review Pre-Qualification forms received, evaluate, and recommend list of pre-qualified contractors to City.
- ▼ Modify front-end contract documents to include list of pre-qualified bidders.
- ▼ Participate on appeals panel as-needed.
- ▼ Coordinate with City.



Task G.5.5 – Procurement Contract Administration

Consultant will assist the City with engineering services associated with administration of the equipment procurement contract. The City will act as the primary contact with the equipment contractor, and will administer the procurement contract, including document control.

Consultant will assist the City with the following activities:

- ▼ Submittal reviews;
- ▼ Respond to requests for information (RFI's);
- ▼ Attending review meetings (as-needed; 3 meetings budgeted);
- ▼ Review the engineering aspects of any change orders; and
- ▼ Issue design clarifications.

Task G.6 – Factory Inspection and Witness Testing Services

Factory inspection services shall be performed to inspect pipe and equipment manufacturing processes. Consultant's staff experienced in factory inspection will visit the manufacturer's facility, witness manufacturing, and prepare a written report summarizing the factory visit.

Witness onsite equipment performance testing, provide assistance to the equipment manufacturer in gathering data, and provide clarifications to the Contract Documents as needed. Provide initial coordination effort between the Contractor, City, and the equipment manufacturer prior to testing.

Deliver written report to City within five days of test or inspection.

Task G.7 – Specialty Inspection Services

Specialty inspection services will be provided by the Consultant for the following services:

- ▼ Special structural inspection services will be provided for compliance with Building Code requirements on critical structural components of the construction including, but not limited to, rebar placement, concrete pouring, subgrade compaction, masonry construction, structural steel framing connections, etc. An inspection report will be generated for each site visit and provided to the City.
- ▼ Geotechnical Field Observations. Geotechnical field observation services will be provided by the Consultant's geotechnical subconsultant to confirm if the exposed conditions are consistent with the design basis. The geotechnical subconsultant will prepare a site visit report for each site visit and submit to Consultant for distribution to the City.
- ▼ Material Testing Services. Testing of work performed including concrete, asphalt, in-situ moisture content and field density of soils, etc. shall be performed by the Consultant's geotechnical subconsultant to determine compliance with the construction contract documents.

**2007 - 2008
BLACK & VEATCH CORPORATION**

BILLING RATES

OWNER: City of Paso Robles
PROJECT: Nacimiento Water Treatment Plant Project
ENGINEER: Black & Veatch Corporation

Note: These rates shall be in effect from Design NTP through end of Bid Phase Services

Black & Veatch Corporation		
Bill Rates		
Classification	Typical Title	Hourly Rate
Vice President / PM 14	Project Director	\$200
PM 12/13	Senior Project Manager	\$180
PM 11 / Engineer 6, 7, 8	Project Manager/Senior Project Engr.	\$170
Engineer 5	Project Engineer	\$155
Engineer 4	Senior Engineer	\$145
Engineer 3	Staff Engineer	\$130
Engineer 1 or 2	Staff Engineer	\$115
Technical	Senior Technician	\$120
Technical	Adv. Technician	\$105
Technical	Technician	\$95
Designer	CAD Manager / Sr. Engineering Designer	\$120
Designer	Adv. Engineering Designer	\$105
Designer	Designer/Drafter	\$95
Contract Administrator		\$90
Word Processing		\$70
Clerical		\$70

Office expenses shall be reimbursed on a basis of \$8.75 per labor hour billed to cover in-house reproduction & printing, telephone, computer, postage, local travel (within 50 miles of site) and other general office expenses.

Mileage shall be reimbursed at a rate of \$0.445 per mile.

Subconsultants and other direct costs, including outside reproduction charges and long distance travel (beyond 50 miles to site) will be reimbursed at cost plus 10%.

