



## AGENDA REPORT

**Meeting Date:** December 6, 2016

**Item Number:** E-8

**To:** Honorable Mayor & City Council

**From:** Mark Cuneo, City Engineer  
Derek Nguyen, Project Manager

**Subject:** AGREEMENT BETWEEN THE CITY OF BEVERLY HILLS AND MICHAEL BAKER INTERNATIONAL TO PROVIDE ENGINEERING ASSESSMENT FOR THE NON-POTABLE WATER DISTRIBUTION SYSTEM AT CABRILLO RESERVOIR; AND APPROVAL OF A PURCHASE ORDER IN THE AMOUNT OF \$230,604 TO MICHAEL BAKER INTERNATIONAL

**Attachment:** 1. Agreement

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### **RECOMMENDATION**

Staff recommends City Council move to approve an agreement between the City of Beverly Hills and Michael Baker International to provide an engineering assessment for the non-potable water distribution system at Cabrillo reservoir; and issuance of a purchase order to Michael Baker International in the amount of \$230,604.

### **INTRODUCTION**

As part of a continuation plan to maximize the use of non-potable water being captured and stored at Cabrillo Reservoir, the City issued a request for proposals for the design of a non-potable water conveyance/distribution system from Cabrillo Reservoir to Santa Monica Boulevard and to develop a City-wide non-potable water distribution network master plan. The conveyance system is intended to provide non-potable water to several parks and street medians for landscape irrigation purposes. Staff recommends selecting Michael Baker International and entering into a professional services agreement for the initial engineering assessment of this project. Staff will return to the City Council to amend the agreement with Michael Baker International for a final design scope of work that is consistent with the findings of the initial assessment.

## **DISCUSSION**

The Cabrillo Reservoir is located on Coldwater Canyon Drive and Cabrillo Drive. The reservoir was constructed in 1918 and retrofitted in 1927 for structural improvements and again in 1938 for capacity expansion. In the late 1970's, the reservoir floor began to deteriorate and the reservoir was taken out of service. At the reservoir site, a naturally occurring underflow of groundwater exists. Groundwater accumulates in the abandoned reservoir and is currently conveyed to the adjacent storm drain system.

During the April 5, 2016, Study Session, the City Council discussed earmarking funding for a project to collect groundwater at the Cabrillo Reservoir and to construct a pipeline to Santa Monica Boulevard, to convey non-potable water to irrigate various local parks and street medians in the City.

On May 17, 2016, the City Council awarded a construction contract to install a containment liner system at the abandoned Cabrillo Reservoir to capture and store groundwater for municipal non-potable water uses. This project is currently under construction and completion is anticipated in Spring 2017.

On July 14, 2016, a Request for Proposals was advertised to solicit professional engineering services for the design of a non-potable water distribution system between the Cabrillo reservoir and Santa Monica Boulevard and to develop a City-wide non-potable water distribution network master plan to assist in evaluating opportunities to expand and implement non-potable water uses throughout the City. In August, two proposals were received from qualified engineering consulting firms. Staff from Public Works and a Public Works Commissioner reviewed the proposals for technical competence, staffing capability, project approach, past performance, price, quality/cost control, and the ability to meet required time frames. Michael Baker International is recommended to provide the services required for this project based on the qualifications of their staff and their related experience in providing similar services for municipal agencies. Staff contacted reference agencies and all respondents reported that Michael Baker International provided quality engineering services.

Staff met with the Michael Baker International team and identified critical items that need to be assessed prior to starting the design of the non-potable conveyance system/pipeline. The initial scope of services includes the following items:

- Validate the sustainability and quantity of the groundwater source
- Identify treatment requirements to meet Title 22 water quality standards
- Perform structural evaluation of Cabrillo reservoir
- Quantify non-potable irrigation demand for the parks and medians

Staff estimates that the initial scope of work will require five (5) months to complete. Staff recommends approval of an agreement for the initial assessment scope of work and approval of a Purchase Order in a not-to-exceed amount of \$230,604 including a contingency of \$20,964 (10% contingency). Pending the results of the initial assessment, staff will report back to the City Council in June 2017 and request an amendment to Michael Baker International's agreement to provide final design of the non-potable distribution pipeline and develop a City-wide non-potable water distribution network master plan that is consistent with the findings of the initial assessment.

Meeting Date: December 6, 2016

**FISCAL IMPACT**

Funding for this agreement is available in the FY2016/17 Capital Improvement Budget in Capital Improvement Project No. 0972, Cabrillo Reservoir and Non-Potable Water Project. A 10% contingency allowance in the amount of \$20,964 has been included in the total purchase order amount of \$230,604.



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George Chavez

Approved By

# **Attachment 1**

AGREEMENT BETWEEN THE CITY OF BEVERLY HILLS  
AND MICHAEL BAKER INTERNATIONAL, INC. TO  
PROVIDE ENGINEERING ASSESSMENT FOR THE NON-  
POTABLE WATER DISTRIBUTION SYSTEM AT CABRILLO  
RESERVOIR

NAME OF CONSULTANT: Michael Baker International, Inc.

RESPONSIBLE PRINCIPAL OF CONSULTANT: Steven Conner, Project Manager

CONSULTANT'S ADDRESS: 14725 Alton Parkway  
Irvine, California 92618  
Attention: Cindy Miller

CITY'S ADDRESS: City of Beverly Hills  
345 N. Foothill Road  
Beverly Hills, CA 90210  
Attention: Derek Nguyen, Project Manager

COMMENCEMENT DATE: On the Date of a Written Notice to Proceed

TERMINATION DATE: Upon satisfactory completion of all work  
required under this Agreement

CONSIDERATION: Not to exceed \$209,640; and more  
particularly described in Exhibit B

AGREEMENT BETWEEN THE CITY OF BEVERLY HILLS  
AND MICHAEL BAKER INTERNATIONAL, INC. TO  
PROVIDE ENGINEERING ASSESSMENT FOR THE NON-  
POTABLE WATER DISTRIBUTION SYSTEM AT  
CABRILLO RESERVOIR

THIS AGREEMENT is made by and between the City of Beverly Hills, (hereinafter called "CITY"), and Michael Baker International, Inc. (hereinafter called "CONSULTANT").

RECITALS

A. CITY desires to have certain services and/or goods provided as set forth in Exhibit A (the "Scope of Work"), attached hereto and incorporated herein.

B. CONSULTANT represents that it is qualified and able to perform the Scope of Works.

NOW, THEREFORE, the parties agree as follows:

Section 1. CONSULTANT's Scope of Work. CONSULTANT shall perform the Scope of Work described in Exhibit A in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions (the "Standard of Care"). CITY shall have the right to order, in writing, changes in the Scope of Work. Any changes in the Scope of Work by CONSULTANT must be made in writing and approved by both parties. The cost of any change in the Scope of Work must be agreed to by both parties in writing.

Section 2. Time of Performance. CONSULTANT shall commence its services under this Agreement upon the Commencement Date or upon a written receipt of a notice to proceed from CITY. CONSULTANT shall complete the performance of services by the Termination Date set forth above and/or in conformance with the Project timeline established by the City Manager or his designee.

Section 3. Compensation.

(a) Compensation. CITY agrees to compensate CONSULTANT for the services and/or goods provides under this Agreement, and CONSULTANT agrees to accept in full satisfaction for such services, a sum not to exceed the Consideration set forth above and more particularly described in Exhibit B, attached hereto and incorporated herein, based on the Project Budget and Summary set forth in Exhibit B.

(b) Expenses. The amount set forth in paragraph (a) shall include reimbursement for all actual and necessary expenditures reasonably incurred in the performance of this Agreement (including, but not limited to, all labor, materials, delivery, tax, assembly, and installation, as applicable). There shall be no claims for additional compensation for reimbursable expenses.

(c) Additional Services. CITY may from time to time require CONSULTANT to perform additional services not included in the Scope of Services. Such requests for additional services shall be made by CITY in writing and agreed upon by both parties in writing.

Section 4. Method of Payment. Unless otherwise provided for herein, CONSULTANT shall submit to CITY a detailed invoice, on a monthly basis or less frequently, for the services performed pursuant to this Agreement. Each invoice shall itemize the services rendered during the billing period and the amount due. Within 30 days of receipt of each invoice, CITY shall pay all undisputed amounts included on the invoice.

Section 5. Independent Contractor. CONSULTANT is and shall at all times remain, as to CITY, a wholly independent contractor. Neither CITY nor any of its agents shall have control over the conduct of CONSULTANT or any of CONSULTANT's employees, except as herein set forth. CONSULTANT shall not, at any time, or in any manner, represent that it or any of its agents or employees are in any manner agents or employees of CITY.

Section 6. Assignment. This Agreement shall not be assigned in whole or in part, by CONSULTANT without the prior written approval of CITY, which shall not be unreasonably withheld, conditioned or delayed. Any attempt by CONSULTANT to so assign this Agreement or any rights, duties or obligations arising hereunder shall be void and of no effect.

Section 7. Responsible Principal(s)

(a) CONSULTANT's responsible principal set forth above shall be principally responsible for CONSULTANT's obligations under this Agreement and shall serve as principal liaison between CITY and CONSULTANT. Designation of another responsible principal by CONSULTANT shall not be made without prior written consent of CITY.

(b) CITY's Responsible Principal shall be the City Manager or his designee set forth above who shall administer the terms of the Agreement on behalf of CITY.

Section 8. Personnel. CONSULTANT represents that it has, or shall secure at its own expense, all personnel required to perform CONSULTANT's Scope of Work under this Agreement. All personnel engaged in the work shall be qualified to perform such Scope of Work.

Section 9. Permits and Licenses. CONSULTANT shall obtain and maintain during the Agreement term all necessary licenses, permits and certificates required by law for the provision of services under this Agreement, including a business license.

Section 10. Interests of Consultant. CONSULTANT affirms that it presently has no interest and shall not have any interest, direct or indirect, which would conflict in any manner with the performance of the Scope of Work contemplated by this Agreement. No person having any such interest shall be employed by or be associated with CONSULTANT.

Section 11. Insurance.

(a) CONSULTANT shall at all times during the term of this Agreement carry, maintain, and keep in full force and effect, insurance as follows:

(1) A policy or policies of Comprehensive General Liability Insurance, with minimum limits of Two Million Dollars (\$2,000,000) for each occurrence,

combined single limit, against any personal injury, death, loss or damage resulting from the wrongful or negligent acts by CONSULTANT.

(2) A policy or policies of Comprehensive Vehicle Liability Insurance covering personal injury and property damage, with minimum limits of One Million Dollars (\$1,000,000) per occurrence combined single limit, covering any vehicle utilized by CONSULTANT in performing the Scope of Work required by this Agreement.

(3) Professional Liability Insurance

A policy or policies of Professional Liability Insurance (errors and omissions) with minimum limits of One Million Dollars (\$1,000,000) per claim and in the aggregate. Any deductibles or self-insured retentions attached to such policy or policies must be declared to CITY. Further, CONSULTANT agrees to maintain in full force and effect such insurance for one year after performance of work under this Agreement is completed.

(4) Workers' compensation insurance as required by the State of California.

(b) CONSULTANT shall require each of its sub-consultants to maintain insurance coverage which meets all of the requirements of this Agreement.

(c) The policy or policies required by this Agreement shall be issued by an insurer admitted in the State of California and with a rating of at least a B+;VII in the latest edition of Best's Insurance Guide.

(d) CONSULTANT agrees that if it does not keep the aforesaid insurance in full force and effect CITY may immediately terminate this Agreement.

(e) At all times during the term of this Agreement, CONSULTANT shall maintain on file with the City Clerk a certificate or certificates of insurance on the form set forth in Exhibit C, attached hereto and incorporated herein, showing that the aforesaid policies are in effect in the required amounts. CONSULTANT shall, prior to commencement of work under this Agreement, file with the City Clerk such certificate or certificates. The general liability and vehicle liability insurance shall contain an endorsement naming the CITY as an additional insured with respect to liability arising out of this Agreement. All of the policies required under this Agreement shall contain an endorsement providing that the policies cannot be canceled except on thirty (30) days prior written notice to CITY.

(f) The insurance provided by CONSULTANT shall be primary to any coverage available to CITY. The policies of insurance required by this Agreement shall include provisions for waiver of subrogation.

(g) Any deductibles or self-insured retentions must be declared to the CITY.

## Section 12. Indemnification.

(a) Indemnity for Design Professional Services. In connection with its design professional services, CONSULTANT shall hold harmless and indemnify CITY, and its elected officials, officers, employees, servants, designated volunteers, and those CITY agents serving as independent contractors in the role of CITY officials (collectively,

“Indemnitees”), with respect to any and all claims, demands, damages, liabilities, losses, costs or expenses, including reimbursement of attorneys’ fees and costs of defense (collectively, “Claims” hereinafter), including but not limited to Claims relating to death or injury to any person and injury to any property, which arise out of, pertain to, or relate to in whole or in part to the negligence, recklessness, or willful misconduct of CONSULTANT or any of its officers, employees, subcontractors, or agents in the performance of its design professional services under this Agreement.

(b) Other Services. In connection with any and all claims, demands, damages, liabilities, losses, costs or expenses, including attorneys’ fees and costs of defense (collectively, “Damages” hereinafter) not covered by Section 12(a), CONSULTANT shall defend, hold harmless and indemnify the Indemnitees with respect to any and all Damages, including but not limited to, Damages relating to death or injury to any person and injury to any property, which arise out of, pertain to, or relate to the acts or omissions of CONSULTANT or any of its officers, employees, subcontractors, or agents in the performance of this Agreement, except for such loss or damage arising from the sole negligence or willful misconduct of the CITY, as determined by final arbitration or court decision or by the agreement of the parties. CONSULTANT shall defend Indemnitees in any action or actions filed in connection with any such Damages with counsel of CITY’s choice, and shall pay all costs and expenses, including all attorneys’ fees and experts’ costs actually incurred in connection with such defense. CONSULTANT’s duty to defend pursuant to this Section 12(b) shall apply independent of any prior, concurrent or subsequent misconduct, negligent acts, errors or omissions of Indemnitees.

(c) All duties of CONSULTANT under this Section 12 shall survive termination of this Agreement.

### Section 13. Termination.

(a) CITY shall have the right to terminate this Agreement for any reason or for no reason upon five calendar days’ written notice to CONSULTANT. CONSULTANT agrees to cease all work under this Agreement on or before the effective date of such notice.

(b) In the event of termination or cancellation of this Agreement by CITY, due to no fault or failure of performance by CONSULTANT, CONSULTANT shall be paid based on the percentage of work satisfactorily performed at the time of termination. In no event shall CONSULTANT be entitled to receive more than the amount that would be paid to CONSULTANT for the full performance of the services required by this Agreement. CONSULTANT shall have no other claim against CITY by reason of such termination, including any claim for compensation.

Section 14. CITY’s Responsibility. CITY shall provide CONSULTANT with all pertinent data, documents, and other requested information as is available for the proper performance of CONSULTANT’s Scope of Work.

Section 15. Information and Documents. All data, information, documents and drawings prepared for CITY and required to be furnished to CITY in connection with this Agreement shall become the property of CITY, and CITY may use all or any portion of the work submitted by CONSULTANT and compensated by CITY pursuant to this Agreement as CITY deems appropriate.

Section 16. Records and Inspections. CONSULTANT shall maintain full and accurate records with respect to all matters covered under this Agreement for a period of five years. CITY shall have access, without charge, during normal business hours to such records, and the right to examine and audit the same and to make copies and transcripts therefrom, and to inspect all program data, documents, proceedings and activities.

Section 17. Notice. Any notices, bills, invoices, etc. required by this Agreement shall be deemed received on (a) the day of delivery if delivered by hand during the receiving party's regular business hours or by facsimile before or during the receiving party's regular business hours; or (b) on the second business day following deposit in the United States mail, postage prepaid to the addresses set forth above, or to such other addresses as the parties may, from time to time, designate in writing pursuant to this section.

Section 18. Attorney's Fees. In the event that either party commences any legal action or proceeding to enforce or interpret the provisions of this Agreement, the prevailing party in such action shall be entitled to reasonable attorney's fees, costs and necessary disbursements, in addition to such other relief as may be sought and awarded.

Section 19. Entire Agreement. This Agreement represents the entire integrated agreement between CITY and CONSULTANT, and supersedes all prior negotiations, representations or agreements, either written or oral. This Agreement may be amended only by a written instrument signed by both CITY and CONSULTANT.

Section 20. Exhibits; Precedence. All documents referenced as exhibits in this Agreement are hereby incorporated in this Agreement. In the event of any material discrepancy between the express provisions of this Agreement and the provisions of any document incorporated herein by reference, the provisions of this Agreement shall prevail.

Section 21. Governing Law. The interpretation and implementation of this Agreement shall be governed by the domestic law of the State of California.

Section 22. CITY Not Obligated to Third Parties. CITY shall not be obligated or liable under this Agreement to any party other than CONSULTANT.

Section 23. Severability. Invalidation of any provision contained herein or the application thereof to any person or entity by judgment or court order shall in no way affect any of the other covenants, conditions, restrictions, or provisions hereof, or the application thereof to any other person or entity, and the same shall remain in full force and effect.

Section 24. Estimates. CONSULTANT's opinion of probable construction costs provided for herein are to be made on the basis of CONSULTANT's experience and qualifications and represent CONSULTANT's reasonable judgment as an experienced and qualified professional generally familiar with the construction industry. However, since CONSULTANT has no control over the cost of labor, materials, equipment, or services furnished by others, or over any contractor's methods of determining prices, or over competitive bidding or market conditions, CONSULTANT cannot and does not guarantee that proposals, bids, or actual cost of construction will not vary from opinions of probable construction costs prepared by CONSULTANT.

Section 25. Means and Methods. CONSULTANT shall not be responsible for construction means, methods, techniques, sequences or procedures of construction

contractors, or the safety precautions and programs incident thereto, and shall not be responsible for such construction contractors' failure to perform work in accordance to the contract documents.

EXECUTED the \_\_\_\_ day of \_\_\_\_\_ 2016, at Beverly Hills, California.

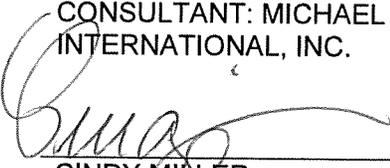
CITY OF BEVERLY HILLS  
A Municipal Corporation

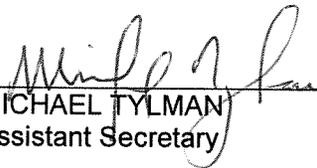
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JOHN A. MIRISCH  
Mayor of the City of Beverly Hills, California

ATTEST:

\_\_\_\_\_  
BYRON POPE (SEAL)  
City Clerk

CONSULTANT: MICHAEL BAKER  
INTERNATIONAL, INC.

  
\_\_\_\_\_  
CINDY MILLER  
Vice President

  
\_\_\_\_\_  
MICHAEL TYLMAN  
Assistant Secretary

APPROVED AS TO FORM:

  
for LAURENCE S. WIENER  
City Attorney

APPROVED AS TO CONTENT:

\_\_\_\_\_  
MAHDI ALUZRI  
City Manager

   
\_\_\_\_\_  
GEORGE CHAVEZ  
Assistant City Manager/Director of Public Works

  
\_\_\_\_\_  
SHARON L'HEUREUX DRESSEL  
Interim Risk Manager

EXHIBIT A  
SCOPE OF WORK

CONSULTANT appreciates the opportunity to be of service to CITY for design of CITY's Non-Potable Water Distribution Project at Cabrillo Reservoir (or "Project"). CITY desires to have CONSULTANT perform the first phase design services required to fully define the Project, with follow-on design tasks to be authorized in subsequent phases. The first phase design tasks will accomplish the following goals:

- Validate the sustainability in writing by CITY and quantity of the non-potable water supply source;
- Identify required treatment requirements of the non-potable water supply source to meet Title 22 water quality requirements, as well as additional treatment needed to meet drinking water quality requirements;
- Provide comprehensive structural evaluation of the Cabrillo reservoir to identify improvements necessary for utilizing the full capacity and to meet current seismic codes and/or how the reservoir can operate without structural retrofitting;
- Quantify demands from CITY-identified non-potable water users and quantify non-potable pipeline required; and
- Evaluate cost of constructing a new non-potable water system versus constructing improvements to CITY's potable water system to establish a new drinking water supply source.

CONSULTANT shall perform the following scope of work required to conduct the first phase of design.

**1. Task 1: Project Management, Communications, and Meetings**

- A. Project Management: Steve Conner will serve as Project Manager and be the primary point of contact, and coordinate all communication with CITY staff. Mr. Conner will also be responsible for preparing Project invoices, including preparation of monthly status reports, and updating the Project schedule.
- B. Project Kickoff Meeting and Review: Upon issuance of the written Notice-to-Proceed, CONSULTANT shall meet with CITY staff to kick off the Project, review CONSULTANT's proposed work plan, coordinate information CONSULTANT requires from CITY, review Project goals and latest developments. CONSULTANT has budgeted for its Principal-in-Charge, Project Manager, and Structural Manager to conduct the Project kickoff meeting. In addition, CONSULTANT's budget includes

attendance by its specialty subconsultants, Carollo Engineers, and Richard Slade & Associates.

- C. Weekly Conference Calls and Monthly Coordination Meeting: As demonstrated in current projects with CITY, weekly conference calls have proven to be an effective method of communication to keep the CONSULTANT team and CITY abreast of the latest Project developments and develop strategies to tackle Project issues as they arise. For the four month schedule anticipated for this Project, CONSULTANT has budgeted a total of twelve (12) weekly 1-hour conference calls with CITY. In addition, CONSULTANT has budgeted for two monthly coordination meetings with CITY, attended by CONSULTANT's Project Manager and Project Engineer. CONSULTANT's Principal-in-Charge will participate in the weekly conference calls, and/or monthly coordination meetings, as required. In addition, sixteen (16) hours has been budgeted for CONSULTANT's specialty subconsultants to participate in the weekly conference calls and/or monthly coordination meetings, as required.

## 2. **Task 2: Design Technical Memoranda**

- A. Reservoir Design Technical Memorandum: The purpose of this task is to identify a recommended course of action for CITY to either place the Cabrillo reservoir back into service as a non-potable or potable reservoir, and what structural improvements, if any, are required to do so. This effort also includes evaluating the cost of structural upgrades needed to ensure an acceptable useful service life as compared to the cost of replacing the Cabrillo reservoir with a new tank. The structural assessment of the Cabrillo reservoir performed by Melvyn Green & Associates, Inc., dated April 27, 2016 evaluated the original wall design of the reservoir, constructed in 1918, and did not take into consideration the reservoir addition. Their structural evaluation also does not appear to have included a seismic evaluation of the reservoir, which would identify, among other improvements, required freeboard height needed to protect the reservoir from structural damage due to sloshing water resulting from a seismic event. To fully define what improvements are necessary to bring the reservoir back into service, and also to identify operational constraints that may be necessary in lieu of structural upgrades (i.e. lower water operating level), CONSULTANT shall perform a structural evaluation of the entire reservoir, including a comprehensive seismic evaluation.
1. Site Visit / Reservoir Inspection / Inspection Report: CONSULTANT shall first perform a visual inspection of the reservoir interior, including the roof, to document existing conditions. CONSULTANT shall prepare an inspection report, including photographs, indicating areas of concern to be addressed.
  2. Structural Assessment: Once the site visit is completed, CONSULTANT's structural team will perform a reservoir structural assessment. Due to the extent of the analysis required to perform a comprehensive structural evaluation of this uniquely

shaped reservoir, the CONSULTANT team proposes to perform a structural assessment in stages, where the results are reviewed with CITY at the completion of each stage to determine if the next stage of analysis will be required. There will be three stages of structural evaluation, as follows:

- a. Stage 1: Structurally evaluate the original walls constructed in 1918 to identify if and at what level the reservoir can operate without performing any structural retrofit. The analysis will include all loading conditions, including seismic. The original 1918 reservoir walls have reinforcing steel on the wrong side of the wall when the tank is empty. If for any reason the tank is empty, these walls should be supported on the inside as cracks may develop on the earthen side, which will not be visible from inside and can make the reservoir susceptible to leakage when the reservoir is filled. At Stage 1, it is assumed that the 1927 walls are structurally adequate to carry the loads produced by the reduced water operating level. The roof members will not be checked for structural adequacy, but the seismic shear load from the roof will be calculated and transferred to the walls. Upon completion of the Stage 1 structural assessment, CONSULTANT shall be able to inform CITY whether or not the reservoir is able to operate at a reduced water level, and what this water level will need to be. Should the results of this Stage 1 structural assessment identify a water operational level that is unacceptable to CITY (i.e. a very low operating level) or if it is determined the reservoir cannot operate at all without the 1918 walls undergoing some type of retrofit, then CONSULTANT shall proceed with Stage 2 structural assessment. CONSULTANT shall not proceed with Stage 2 structural assessment until the results of Stage 1 are reviewed with CITY.
- b. Stage 2: Stage 2 structural assessment will build upon the analysis performed under Stage 1 structural assessment to identify the retrofit design required for the original 1918 walls in order to operate at a higher water operating level. Stage 2 structural assessment will identify what retrofits will be required for the original 1918 walls to operate at a higher water operating level. The higher water operating level will be determined based upon the Stage 2 structural analysis that will determine the maximum water level the reservoir can operate at without requiring retrofit of the 1927 walls. The work product resulting from this stage will be development of retrofit design sketches for the 1918 walls and identification of the maximum water operating level that can be achieved without retrofitting the 1927 walls. The results of the Stage 2 structural assessment will be reviewed with CITY to determine if it makes sense for CONSULTANT to proceed with the Stage 3 structural assessment. CONSULTANT shall not proceed with Stage 3 structural assessment until the results of Stage 2 are reviewed with CITY.
- c. Stage 3: Stage 3 structural assessment will build upon the analysis performed under Stage 2 structural assessment to identify the retrofit design required for both the original 1918 walls and 1927 walls in order to achieve a maximum water level meeting freeboard requirements. Stage 3 structural assessment will determine the structural adequacy/deficiencies of the 1927 walls, if any. The work product

resulting from this stage will be the development of retrofit design sketches for the 1918 and 1927 walls in order for the reservoir to operate at its maximum possible water level, while meeting freeboard requirements per ACI 350. The results of the Stage 3 structural assessment will be reviewed as well with CITY.

3. **Reservoir Cost Analysis**: For the various reservoir retrofit options identified as part of the structural assessment identified above, CONSULTANT shall prepare capital cost estimates and compare these costs with the cost of replacing the Cabrillo reservoir with a buried or partially buried cast-in-place or pre-stressed concrete reservoir at the Cabrillo reservoir site. CONSULTANT shall have cost estimates prepared to accompany each stage of the structural assessment that will be discussed with CITY, with the cost of replacing the reservoir in its entirety as a comparison tool to evaluate the economic feasibility of the proposed improvements.
  4. **Reservoir Design Technical Memorandum**: CONSULTANT shall prepare a technical memorandum ("memo") that summarizes its findings and recommendations. The memo will include design sketches of the proposed improvements that will be used for subsequent design phases. CONSULTANT shall provide an electronic copy in PDF format, plus three (3) hard-bound copies of the draft and final technical memo to CITY.
- B. Water Supply and Treatment Design Technical Memoranda**: The goal of this task is to better define the sustained flow that can be reliably captured from the local shallow groundwater supply source and define what treatment is necessary to use this water supply source under two scenarios: 1). Non-potable water supply, meeting Title 22 requirements; and 2). Drinking water supply source, meeting EPA and California DDW drinking water regulations. The following sub-tasks are required to accomplish this task:
1. **Flow Monitoring Plan**: CONSULTANT shall provide a plan to CITY to install equipment capable of measuring actual flow rates from the natural underflow groundwater currently being collected in the Coldwater Canyon Sump. CONSULTANT assumes CITY will implement the proposed plan and will collect flow data for CONSULTANT's use. CONSULTANT expects at a minimum, one month's worth of data will be acquired by CITY.
  2. **Hydrogeologic Evaluation**: Richard Slade & Associates prepared a report dated February 14, 2007, which assessed whether or not it would be feasible for CITY to use collected water in the Coldwater Canyon Sump to either augment CITY's domestic water supply or to divert the collected water for other beneficial uses. At the time this evaluation was performed, actual flow rates could not be ascertained. The estimated rate of flow of 200 gpm was determined based upon pipe diameter; however, the report noted that the rate of flow is expected to vary greatly by season and from year to year. This follow-on hydrogeologic evaluation proposes to utilize the flow monitoring data from Task B.1., as well as evaluate potential flow

production within the watershed to attempt to determine if flows are appreciably different than what was observed in 2007, and to gain a better understanding of what the sustainable flow rate production may be. This sustained flow rate will be used to determine the capacity of the treatment facilities evaluated under sub-task 2.B.4. This task is limited to a table top study and excludes modeling of the watershed.

3. Water Quality Testing: CONSULTANT shall provide a recommendation for CITY to collect and test water by a certified laboratory. Test results will be evaluated and a recommendation will be provided for design to meet regulatory standards for intended use. As part of this task, the team will develop and implement a monitoring plan to collect water quality samples and deliver them to a certified laboratory, who will be selected in collaboration with CITY. CONSULTANT's budget assumes the cost of analytical testing will be paid for by CITY separately. Once results are received, the team will review the raw water quality analytical results. Study of the existing raw water quality data will enable the team to determine if any specific pollutants of concern need to be addressed in the treatment evaluation. The outcome of this sub-task would be to establish finished water quality goals to be achieved by the proposed design of the treatment process in light of applicable regulations and CITY's goal to meet Title 22 requirements for non-potable water uses or meet drinking water quality requirements for potable water uses.
4. Treatment Alternatives: CONSULTANT shall evaluate options to meet or exceed Title 22 water quality requirements (for non-potable system) or State of California drinking water quality requirements (for potable system). As part of this task, the team will develop conceptual treatment alternatives to achieve the finished water quality goals. It is anticipated that in order to comply with drinking water regulations, treatment requirements will need to meet State of California Long-Term 2 Surface Water Treatment Rule, most likely require pre-treatment plus micro-filtration or ultra-filtration, followed by disinfection. CONSULTANT will develop process flow diagrams and preliminary layouts for up to two (2) alternatives. It is assumed that the treatment facilities will be located at the Cabrillo reservoir site.
5. Water Supply and Treatment Cost Analysis: CONSULTANT shall develop capital and operation and maintenance costs for the various treatment alternatives developed under Task 2B.
6. Water Supply Design Technical Memorandum: Results of the hydrogeologic evaluation, flow monitoring, water quality testing, and treatment alternatives will be summarized in a technical memorandum that identifies the recommended project for either a potable or non-potable system. CONSULTANT shall provide an electronic copy in PDF format, plus three (3) hard-bound copies of the draft and final technical memo to CITY.

- C. **Water Conveyance Design Technical Memoranda**: The goal of this task is to identify what demands can be served by the available water supply from the COLDWATER CANYON SUMP, and what non-potable conveyance facilities are required to deliver this flow to CITY-identified service points. Based upon the foregoing understanding, the following sub-tasks are required to accomplish this task:
1. **Identify and Quantify Demands**: CITY has previously identified the most likely non-potable users in its Request for Proposal. These users are Coldwater Canyon Park, Will Rogers Memorial Park, Hawthorne School, Sunset Blvd. Median Landscaping, and Santa Monica Blvd./ Beverly Gardens Landscaping. CONSULTANT shall determine demands for each of these potential users, based upon CITY's most recent metered irrigation demand data. CONSULTANT assumes CITY will also provide pertinent operational data necessary for CONSULTANT to calculate instantaneous demand flowrates, as well as to validate peaking factors.
  2. **Alternate Conveyance Options**: The demands for each of the potential users identified in sub-task 2.C.1. will be compared against the updated supply source flowrate estimated in sub-task 2.B.2 to determine how much of the demands can be serviced by the new supply source. From this supply/demand comparison, CONSULTANT shall develop a map indicating the most likely users and the conveyance system required to serve those users. CONSULTANT shall identify the new water pipeline conveyance system required to serve non-potable water from the Cabrillo reservoir.
  3. **Conveyance Options Cost Analysis**: CONSULTANT shall develop capital costs for the proposed new non-potable conveyance system. If required, CONSULTANT shall also prepare capital costs for any improvements needed to CITY's existing potable water distribution in order to deliver this water to the identified customers.
  4. **Conveyance Design Technical Memo**: Results of the demands analysis, alternative conveyance options, and cost analysis will be summarized in a technical memorandum that identifies the recommended project for either a potable or non-potable system. CONSULTANT shall provide an electronic copy in PDF format, plus three (3) hard-bound copies of the draft and final technical memo to CITY.
- D. **Performance Schedule**: CONSULTANT anticipates the first phase of work to be completed within four months from CITY's notice-to-proceed. For the scope of work identified above, CONSULTANT's not-to-exceed time and materials budget is \$209,640. The hours and budget by task is identified on the attached Exhibit "B", Revised Person Hours and Fee Table. CONSULTANT understands that time is of the essence to CITY on this Project. To that end, the CONSULTANT team is available to begin work immediately upon authorization to proceed from CITY.

## EXHIBIT B

### PROJECT BUDGET AND SUMMARY

EXHIBIT A  
 REVISED TOTAL HOURS AND FEE  
 Non Potable Water Distribution System  
 City of Beverly Hills

Task Description	Approximate Person Hours											Sub Hours	Sub Costs	Direct Costs	Total Fee	Total Hours	
	Michael Baker Team																
	Project Principal	Project Manager	Project Engineer	Design Engineer	CAD Designer	Structural Manager	Structural Engineer	Survey Manager	Survey Calcs	Survey Crew	Support Staff						
	\$ 200	\$ 190	\$ 170	\$ 115	\$ 120	\$ 180	\$ 160	\$ 185	\$ 150	\$ 260	\$ 120	\$ -	1.0	1.0			
<b>1. Project Management, Communications and Mtgs</b>																	
A Project Management			8													\$ 1,520	8
B Project Kick-off Meeting and Review	6	8				8					2	12	\$ 2,400	\$ 200	\$ 7,000	36	
C Weekly Conference Calls and Coordination Meetings	8	28	28									16	\$ 3,200	\$ 200	\$ 15,080	80	
<b>SUBTOTAL TASK 1:</b>	<b>14</b>	<b>44</b>	<b>28</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>28</b>	<b>\$ 5,600</b>	<b>\$ 400</b>	<b>\$ 23,600</b>	<b>124</b>	
<b>2. Design Technical Memos</b>																	
A Reservoir Design Technical Memo																	
1 Site Visit / Reservoir Inspection/Inspection Report		8															
2 Reservoir Structural Assessment						16	16							\$ 200	\$ 7,160	40	
a Stage 1		4				40	60								\$ 17,560	104	
b Stage 2		4				40	78								\$ 20,440	122	
c Stage 3		4				40	86								\$ 21,720	130	
3 Reservoir Cost Analysis		4				12	16								\$ 5,480	32	
4 Reservoir Design Technical Memo	2	4				8	14							\$ 100	\$ 4,940	28	
<b>Subtotal Task 2A:</b>	<b>2</b>	<b>28</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>156</b>	<b>270</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>			<b>\$ 300</b>	<b>\$ 77,300</b>	<b>456</b>	
B Water Supply and Treatment Design Technical Memo (Quantity and Quality)																	
1 Flow Monitoring Plan		4	16												\$ 3,480	20	
2 Hydrogeologic Evaluation		8	4									124	\$ 23,000		\$ 25,200	136	
3 Water Quality Testing			4									62	\$ 12,800		\$ 13,480	66	
4 Treatment Alternatives (Potable and Non-Potable)		4	8									178	\$ 36,300		\$ 38,420	190	
5 Water Supply and Treatment Cost Analysis		2	4									20	\$ 4,000		\$ 5,060	26	
6 Water Supply Design Technical Memo	2	4	4								4	24	\$ 4,800	\$ 100	\$ 7,220	38	
<b>Subtotal Task 2B:</b>	<b>2</b>	<b>22</b>	<b>40</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>408</b>	<b>\$ 80,900</b>	<b>\$ 100</b>	<b>\$ 92,860</b>	<b>476</b>	
C Water Conveyance Design Technical Memo																	
1 Identify and Quantify Demands		2	8	16											\$ 3,580	26	
2 Conveyance Options		2	8	12											\$ 3,120	22	
3 Conveyance Options Cost Analysis		4	8	8											\$ 3,040	20	
4 Conveyance Design Technical Memo	2	8	16	8							4			\$ 100	\$ 6,140	38	
<b>Subtotal Task 2C:</b>	<b>2</b>	<b>8</b>	<b>40</b>	<b>44</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>\$ -</b>	<b>\$ 100</b>	<b>\$ 15,880</b>	<b>98</b>	
<b>SUBTOTAL TASK 2:</b>	<b>6</b>	<b>58</b>	<b>80</b>	<b>44</b>	<b>0</b>	<b>156</b>	<b>270</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>408</b>	<b>\$ 80,900</b>	<b>\$ 500</b>	<b>\$ 186,040</b>	<b>1030</b>	
<b>TOTAL ESTIMATED HOURS AND BUDGET:</b>	<b>20</b>	<b>102</b>	<b>108</b>	<b>44</b>	<b>0</b>	<b>164</b>	<b>270</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>436</b>	<b>\$ 86,500</b>	<b>\$ 900</b>	<b>\$ 209,640</b>	<b>1,154</b>	

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## CERTIFICATE OF INSURANCE

This is to certify that the following endorsement is part of the policy(ies) described below:

**NAMED INSURED**

**COMPANIES AFFORDING COVERAGE**

A.  
B.  
C.

**ADDRESS**

COMPANY (A. B. C.)	COVERAGE	POLICY NUMBER	EXPIRATION DATE	B.I.	LIMITS P.D.	AGGREGATE
	<input type="checkbox"/> AUTOMOBILE LIABILITY <input type="checkbox"/> GENERAL LIABILITY <input type="checkbox"/> PRODUCTS/COMPLETED OPERATIONS <input type="checkbox"/> BLANKET CONTRACTUAL <input type="checkbox"/> CONTRACTOR'S PROTECTIVE <input type="checkbox"/> PERSONAL INJURY <input type="checkbox"/> EXCESS LIABILITY <input type="checkbox"/> WORKERS' COMPENSATION <input type="checkbox"/>					

It is hereby understood and agreed that the **City of Beverly Hills**, its City Council and each member thereof and every officer and employee of the City shall be named as joint and several assureds with respect to claims arising out of the following project or agreement:

It is further agreed that the following indemnity agreement between the **City of Beverly Hills** and the named insured is covered under the policy: Contractor agrees to indemnify, hold harmless and defend City, its City Council and each member thereof and every officer and employee of City from any and all liability or financial loss resulting from any suits, claims, losses or actions brought against and from all costs and expenses of litigation brought against City, its City Council and each member thereof and any officer or employee of City which results directly or indirectly from the wrongful or negligent actions of contractor's officers, employees, agents or others employed by Contractor while engaged by Contractor in the (performance of this agreement) construction of this project.

It is further agreed that the inclusion of more than one assured shall not operate to increase the limit of the company's liability and that insurer waives any right of contribution with insurance which may be available to the **City of Beverly Hills**.

In the event of cancellation or material change in the above coverage, the company will give **30 days** written notice of cancellation or material change to the certificate holder.

Except to certify that the policy(ies) described above have the above endorsement attached, this certificate or verification of insurance is not an insurance policy and does not amend, extend or alter the coverage afforded by the policies listed herein. Notwithstanding any requirement, term, or condition of any contract or other document with respect to which this certificate or verification of insurance may be issued or may pertain, the insurance afforded by the policies described herein is subject to all the terms, exclusions and conditions of such policies.

DATE: \_\_\_\_\_

BY: \_\_\_\_\_  
Authorized Insurance Representative

AGENCY: \_\_\_\_\_  
\_\_\_\_\_

TITLE: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
\_\_\_\_\_

RM02.DOC REVISED 10/14/96.