



## AGENDA REPORT

**Meeting Date:** April 5, 2016

**Item Number:** D-11

**To:** Honorable Mayor & City Council

**From:** Trish Rhay, Assistant Director of Public Works Services  
Vince Damasse, Water Resources Manager

**Subject:** APPROVAL OF A PROFESSIONAL SERVICES AGREEMENT BETWEEN THE CITY OF BEVERLY HILLS AND MICHAEL BAKER INTERNATIONAL FOR PRELIMINARY DESIGN REPORT FOR THE WELL, WATER TREATMENT AND TRANSMISSION MAIN PROJECT; AND  
  
APPROVAL OF A PURCHASE ORDER TO MICHAEL BAKER INTERNATIONAL, INC. FOR A NOT-TO-EXCEED AMOUNT OF \$768,000

**Attachment:** MBI Professional Services Agreement

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### **RECOMMENDATION**

Staff recommends that the City Council move to approve the agreement between the City of Beverly Hills and Michael Baker International (MBI) to provide a Preliminary Design Report (PDR) for the La Brea Subarea Wells, Water Treatment and Transmission Main Project and approve a purchase order for a total not-to-exceed amount of \$768,000.

### **DISCUSSION**

In August 2015, the City adopted the Water Enterprise Plan (WEP) prepared by the City's consultant, Psomas. The WEP had identified among its recommendations to diversify the City's water portfolio to develop new groundwater supplies in the unadjudicated portion of the Central Basin (La Brea Subarea). The development of additional groundwater well supplies was intended to ensure the City's water supply reliability by reducing the City's reliance on costly Metropolitan Water District (MWD) imported water. The recommendation included the drilling, equipping and construction of up to three groundwater wells in the La Brea Subarea of the Central Basin.

In December 2015, the City issued Request for Proposals (RFPs) and solicited proposals from qualified engineering consulting firms to prepare a Preliminary Design Report (PDR) for the La Brea Subarea wells, water treatment and transmission main project. Five (5) proposals were received on January 13, 2016. On January 28 and February 1, 2016, staff conducted interviews with all five (5) firms. The top-ranked firm was evaluated on Qualifications Based Selection (QBS) criteria which included, among other factors, the firm's approach and project understanding, firm and team experience and scope of work.

The results of the proposals were as follows:

<b>Proposer</b>	<b>Total Cost</b>
1. Michael Baker International (MBI)	\$878,160
2. Black & Veatch	\$966,637
3. Psomas	\$1,328,741
4. Stantec	\$1,199,912
5. Tetra Tech	\$799,786

Although all firms were uniquely qualified, MBI's team and experience best met the City's needs. Their scope of work generally includes the determination of the California Environmental Quality Act environmental documentation requirements, evaluation of several potential well sites and pipeline alignments, feasibility analyses of several treatment options and the design of a pilot well.

For this RFP, costs were submitted in a separate sealed envelope. In a QBS process, costs are not considered initially in the ranking of the consultants. The consultants are selected and ranked based on their qualifications. Once MBI was selected as the highest rated consultant, their separate sealed cost proposal was opened and reviewed. Upon review of MBI's costs, staff was able to negotiate the final scope and MBI's costs down from an original fee of \$878,160 to \$667,800.

Staff is recommending that the City Council approve an Agreement with MBI for a not-to-exceed amount of \$768,000 (final negotiated fee of \$667,800 plus a 15% contingency). The PDR work is anticipated to be completed in approximately 10 months from the Notice-to-Proceed with an anticipated start date of April 2016.

### **FISCAL IMPACT**

This project is being funded by CIP Project No. 0916 – Well Rehab and Groundwater Development. The current balance in the CIP project fund is sufficient to fund the project.



George Chavez

Approved By

# **Attachment 1**

PROFESSIONAL SERVICES AGREEMENT BETWEEN THE  
CITY OF BEVERLY HILLS AND MICHAEL BAKER  
INTERNATIONAL FOR PRELIMINARY DESIGN REPORT  
FOR THE WELL, WATER TREATMENT AND  
TRANSMISSION MAIN PROJECT

NAME OF CONSULTANT: Michael Baker International, Inc.

RESPONSIBLE PRINCIPAL OF CONSULTANT: Cindy Miller, 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: Vincent Chee

COMMENCEMENT DATE: April 18, 2016

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

CONSIDERATION: Not to exceed \$768,000; and more  
particularly described in Exhibit B

PROFESSIONAL SERVICES AGREEMENT BETWEEN  
THE CITY OF BEVERLY HILLS AND MICHAEL BAKER  
INTERNATIONAL FOR PRELIMINARY DESIGN REPORT  
FOR THE WELL, WATER TREATMENT AND  
TRANSMISSION MAIN PROJECT

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.

The City Manager or his designee may extend the time of performance in writing for two additional one-year terms or such other term not to exceed two years from the date of termination pursuant to the same terms and conditions of this Agreement.

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. CITY shall pay CONSULTANT said Consideration in accordance with the schedule of payment set forth in Exhibit B.

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 (the "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 [check if applicable]

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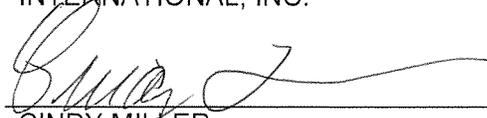
JOHN A. MIRISCH  
Mayor of the City of Beverly Hills, California

ATTEST:

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

[Signatures Continue]

CONSULTANT: MICHAEL BAKER  
INTERNATIONAL, INC.



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CINDY MILLER  
Vice President



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RICK RUBIN  
Assistant Secretary

[Signatures continue]

APPROVED AS TO FORM:

  
\_\_\_\_\_  
DAVID M. SNOW  
Interim City Attorney

APPROVED AS TO CONTENT:

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

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

  
\_\_\_\_\_  
KARL KIRKMAN  
Risk Manager

## EXHIBIT A

### SCOPE OF WORK

CONSULTANT shall perform the following services in connection with well, water treatment and transmission main project (or "Project"):

#### **TASK 1.0 - RESEARCH AND INVESTIGATION**

CONSULTANT shall collect, from CITY and other sources, pertinent information and data regarding this Project. CONSULTANT shall review the existing data, information, and standards relevant to the proposed work for the Project. CONSULTANT anticipates that the following documents will be furnished by CITY to CONSULTANT:

- Copy of CITY's 2015 Water Enterprise Plan (WEP)
- Copy of CITY's 2010 Water Master Plan
- Copy of CITY's 2010 Urban Water Management Plan
- Water System Mapping Information
- Water System Operational Information
- Water System Water Quality Data-Consumer Confidence Report
- CITY's Water Treatment Plant Studies by GHD and Hazen Sawyer

#### **TASK 2.0 - BASELINE STUDY**

Following the collection and review of available data in order to fully understand the Project delivery success factors, CONSULTANT shall prepare a baseline study, including Project Goal Setting. The study will be completed to define the Project delivery requirements (or "PDR") and include technical and financial feasibility evaluations.

The baseline study will be a single brief and concise technical memorandum. The technical memorandum will provide an overall feasibility summary for each respective focus topic. The study will not be a detailed analysis, but rather an overall assessment of the feasibility of implementing each specific aspect of the Project. The study will become the starting point for the detailed analysis to be conducted under subsequent tasks.

The baseline study will include the following topics:

- Project Goal Setting
- Site Alternative Analysis
- Hydrogeological Analysis
- Water Treatment Analysis
- Water quality risks/impact analysis
- Transmission Main Alignment Analysis
- Treatment Process Performance Requirements Definition
- Funding Plans
- Permitting Requirements/Schedules
- Architectural or aesthetics requirements definition
- Projected Project Completion Schedule

CONSULTANT shall prepare a draft baseline study incorporating the topics listed above. The draft shall be submitted for CITY review and revised as required by CITY for a final baseline study. The results of the baseline study shall be used to define a scope of work to be included in the procurement documents for the design-bid or design-build Project.

### **TASK 3.0 - SITE LOCATION STUDY AND REPORT**

Following acceptance of Baseline Study by CITY, CONSULTANT shall investigate the suitability of up to six (6) alternative well sites in the unadjudicated La Brea Subarea of the Central Groundwater Basin in collaboration with CITY:

- Review available topographic, property, and utility maps within the study area to work with CITY to identify potential alternative sites.
- Review expansion possibilities and potential site alternatives with CITY management and staff and conduct a surface reconnaissance field trip to review potential sites within the study area and determine if there are additional considerations not apparent from the available records.
- Review extant hydrogeologic information, subsurface records and any geotechnical investigation reports for the possible construction areas.
- Review utility records for general location of utilities and service alternatives.
- Summarize advantages and disadvantages of each alternative site, considering geotechnical conditions, transmission and pumping requirements, access, utilities, environmental factors (i.e. proximity of hazardous materials sites), and overall cost effects.

It is assumed CONSULTANT will focus the site location study on technical aspects of the site only. Financial aspects such as cost of the property and CITY's funding means to purchase the site, and negotiations with the property owner, will be handled directly by CITY. It is anticipated that the six sites will include a combination of LADWP owned, and non-LADWP owned properties. The coordination with LADWP required to complete this task is encompassed within Task 13 of this Scope of Work, *Project Management and Progress Meetings*.

CONSULTANT shall prepare a draft well location recommendations technical memorandum for CITY review and revise as required for a final Technical Memorandum.

### **TASK 4.0 - WELL SITING ASSESSMENT**

Based upon the results of Task 3.0, a site assessment with respect to ground water production potential and water quality shall be conducted for the top three (3) ranked potential well sites located within the LaBrea Subarea of the Non-adjudicated Central Basin. The site assessment shall evaluate the suitability of the potential well locations, which will be established in collaboration with CITY. The potential hydrogeological suitability of the proposed well sites shall be investigated. CONSULTANT shall meet with CITY at an initial kickoff meeting to discuss the potential well site locations to be investigated. CONSULTANT shall prepare a brief Well Siting technical memorandum and develop conclusions based on its analysis, as well as other data available from CITY and CONSULTANT's previous experience.

The written memorandum shall include Preliminary Well Designs, based upon the findings of the site assessment, addressing critical components of the well drilling including but not limited to:

- Anticipated well yield (potential operational pumping rates).
- Anticipated groundwater quality.
- Potential mutual drawdown interference between the new well and known nearby active or former CITY wells (if applicable).
- Noise mitigation methods (e.g., sound attenuation) to be used during construction activities.
- Approximate pilot hole depth.
- Preferred method of drilling and the anticipated diameter(s) for the pilot hole and borehole ream(s).

- Testing methods and sample analyses to be performed downhole in the pilot hole (the key item here is to conduct isolated aquifer zone testing in the open pilot hole).
  - Diameter and type of well casing to be used.
  - Type of perforated well casing.
- 
- Anticipated gradation of the gravel pack.
  - Anticipated depths and footage lengths for the cement seal(s) and gravel pack.
  - Mechanical, chemical, and pumping development criteria.
  - Parameters for the final pumping tests, using transducers.
  - Final downwell testing (spinner and depth specific sampling).
  - Disposal and treatment options for fluids generated during well development and testing.

The memorandum shall include a Preliminary Well Site Configuration for each site indicating proposed location for the well house, discharge piping, pump to waste discharge piping, electrical service point, access drive, security fencing, lighting and site improvements. CONSULTANT shall prepare a draft memorandum for CITY review and revise as required to produce a final memorandum.

### **TASK 5.0 - PERFORM FIELDWORK**

CONSULTANT shall perform, at minimum, the following fieldwork to support the decision making process on the Project delivery method:

#### **TASK 5.1 WATER QUALITY INVESTIGATION**

CONSULTANT shall review existing water quality data for the Central Basin groundwater basin to determine the existing water quality. CONSULTANT's hydrogeologist has identified several known reports and studies to be reviewed. In addition, Golden State Water Company (GSWC) has water wells in the region that are not operational. CONSULTANT's hydrogeologist will obtain all available information from GSWC as part of this task.

#### **TASK 5.2 PILOT WELL**

All aspects of this task shall be performed by CONSULTANT's hydrogeologist. Their detailed scope of work for this task is described below:

- a. Preparation of Technical Specifications**
- b. Estimate of Probable Construction Costs**
- c. Pre-Bid Meeting and Bid Assistance**
- d. Project Management Services**
- e. Conductor Casing and Rig Mobilization**

During this task, CONSULTANT shall perform only telephone coordination with the driller. Earth materials (drill cuttings) shall be collected during drilling of the conductor casing borehole, and these will be geologically logged. Installation of the cement seal will be observed by a Los Angeles County Department of Environmental Health Services (LACDEHS) inspector, who will be notified by the drilling company prior to pumping the cement into place.

- f. Pilot Hole Logging**

It is anticipated that the drilling depth for the pilot hole for the initial "Pilot Well" could be as deep as 750 ft bgs, based on currently available data. Thus, CONSULTANT anticipates that the average drilling rate by the reverse circulation drilling method could be on the order of 8 feet per hour at the well site; thus, the contractor will require approximately 94 hours of drilling time (approximately 4 days; not counting breakdowns or other delays). During drilling Richard C. Slade & Associates (RCS) geologist shall be present on a part-time basis to geologically log the cuttings (formation samples) collected by the driller, because, in CONSULTANT's

opinion, there is sufficient control of the subsurface geologic data from nearby wells to warrant this part-time work at the site.

When onsite during pilot hole drilling, RCS geologists will also occasionally check the drilling fluid characteristics of viscosity, weight, and sand content to help assess contractor conformance with the specifications. Samples of representative formation materials will be collected by the contractor during drilling to provide grain size distribution curves of these materials. Grain size testing is needed to select the final slot size for the casing perforations and the gradation of the final gravel pack. Grain size distribution tests shall be performed on the selected representative formation samples. While onsite, RCS geologist will be available at CITY's request to discuss drilling conditions and the results of in-progress geologic logging with CITY personnel. Frequent e-mails will also be provided.

**g. Downhole Geophysical Survey Log Analysis**

RCS geologists shall observe and review the downhole geophysical surveys (i.e., electric logs) of the pilot hole at the well site. Review and compare data from geophysical logs and the geologic log to help select specific depth zones for placement of isolated aquifer zone tests.

Geophysical logging is conducted to accurately determine the depth(s) to, and the thickness and lateral continuity of possible water-bearing formations (aquifers) in the subsurface, based on their electronic signatures. Geologic logging is used as physical evidence to help support any interpretations made on the depth and nature of subsurface materials penetrated. These data are needed to provide a recommendation for the specific water-bearing zones for isolated aquifer zone testing and to eventually help select the final depths for placement of the required blank and perforated casing.

**h. Isolated Aquifer Zone Testing**

RCS geologists shall observe downhole isolated aquifer zone testing of groundwater in selected aquifers in the pilot hole at the well site. RCS shall select specific depth zones on the basis of our review and analysis of drill cuttings, the new E-log, and CONSULTANT recommends at this time that a maximum of four (4) zones be selected for the isolated aquifer zone testing in the open pilot borehole for the "Pilot Well." Such down-hole testing in the open pilot borehole is important to help identify the possible presence of certain groundwater analyses and/or contaminants that may currently be present near the borehole.

RCS geologists shall be present during the latter stages of zone development during temporary pumping with a submersible pump to collect samples for water quality testing. During pumping, CONSULTANT's field geologist will observe/monitor the following field parameters in each test zone: Temperature; pH; Electrical conductivity (EC); Turbidity; Static water levels; Pumping water levels; Pumping rates; and Calculations of possible specific capacity values. Monitoring of these parameters is necessary to help determine whether or not formation water is being produced and to help identify the rates of possible groundwater production from each tested zone. Further, the collected samples will need to be of sufficient clarity to obtain representative groundwater samples for water quality analysis. Monitoring of pumping water levels, static water levels, and specific capacities of each zone will also provide preliminary data on the relative production capabilities of each zone.

It must be noted that costs for transport and analysis of the collected samples will be borne by the contractor. This will be duly noted in CONSULTANT's Technical Specifications.

**i. Final Well Design Memorandum, Monitor Borehole Ream(s) and Caliper Survey**

RCS shall communicate in-progress findings to CONSULTANT and CITY and prepare a Draft of the Final Construction Design Memorandum for the initial "Pilot Well." A Draft of this Final Well Design Memorandum shall be submitted to CITY for its review. Following receipt of any CITY Staff comments, RCS shall prepare the Final Design Memorandum and submit it to CONSULTANT, CITY, and the driller. This Final Well Design Memorandum will provide the Final recommendations for the following elements:

- Casing lengths and diameters.
- Type and depths of the perforations.

- Perforation sizes (slot sizes).
- The type and gradation of the gravel pack, based on testing of actual samples of selected drill cuttings.
- Depth of the cement seal(s) and bottom-hole seal (if needed).
- Recommended depth of the test pump intake for development and testing.

Also during this Subtask, RCS shall provide telephone communication with the driller during the final reaming of the borehole at the well site and will make one site visit to check on reaming operations. When reaming operations have been completed, the RCS field geologist shall review the results of the caliper survey of the final reamed borehole at the well site to help verify the appropriate depths and diameters for the ream have been attained.

**j. Casing, Gravel Pack and Cement Seal Installation**

The installation of the casing, gravel pack and the cement seal is considered to be a vital subtask in the construction of the new well, because deviation from the recommended design could impact the production capacity of the well. RCS geologists shall be present on a full-time basis to monitor, record and check for Contractor compliance with the Final well design during the installation of the recommended well blank and perforated casing, gravel pack, and cement seal for the initial well. Thus, such monitoring shall be conducted to help permit conformance with the appropriate methods and materials in the specifications and/or recommendations based on downhole conditions.

During casing installation, RCS geologists shall observe and record the lengths of the blank and perforated casing installed, spot check the slot width of the casing perforations, and observe and record the type and amount of gravel pack and cement emplaced downhole.

**k. Well Development (Mechanical and Chemical Methods)**

Provide a RCS geologist on a part-time basis to monitor well development by mechanical and chemical methods for the new well. When onsite, the RCS geologist shall spot check contractor compliance with NPDES discharge requirements.

**l. Well Development (Pumping Methods)**

A RCS geologist shall be present on a part-time basis to monitor well development by pumping methods. The geologist shall also be present during start-up of pumping development and at other occasional time intervals to spot-check the progress of this pumping development. Contractor compliance with NPDES discharge requirements shall also be spot checked.

**m. Step Drawdown Testing**

RCS will provide a geologist to install a pressure transducer, and to also monitor step drawdown testing at the new well site, on a part-time basis. It is anticipated that three to four pumping rates will be recommended for this test. During testing, water levels in the new well shall be recorded automatically with the use of an RCS pressure transducer, which will also be used to monitor and record water levels during the subsequent constant rate pumping test.

**n. Constant Rate Pumping Test**

Provide an RCS geologist, on a part-time basis, in order to monitor water level drawdown and recovery after the final constant rate pumping test (aquifer test). Critical times will be those during the first few hours of drawdown and recovery measurements. The contractor's pump crew will also be used to conduct occasional water level measurements (using their electric tape sounder) to maintain the monitoring schedule recommended by RCS geologists. It is anticipated, at this time, that the constant rate discharge test will be 24 to 48 hours in duration. The RCS pressure transducer used during the step test shall also be used during the constant rate pumping test to automatically record changes in water levels.

Similar to isolated aquifer zone testing above, field water quality values of pH, EC, T and turbidity of the well discharge shall be obtained by the RCS field geologist during the test. Water samples of the final wellblend from the new well will be collected for quality testing and delivered to a CITY-approved laboratory for analysis. Costs for the laboratory testing is not included in this Scope of Work.

At the end of aquifer testing, the Contractor shall be required in the RCS-updated Technical Specifications to perform a flow meter (spinner) survey of the well to help identify the present flow regime of the various perforated zones in the initial "Pilot Well." The Technical Specifications shall provide for appropriately-sized camera ports/sounding tubes to permit this survey. In addition, RCS geologists shall be present to collect depth-specific samples and a complete suite of Title 22 analytes and the drilling Contractor shall transport and have the samples analyzed at a State-Certified testing laboratory (which shall be required by our Technical Specifications).

**o. Casing Alignment Testing, Video Survey, Static Spinner Survey, and Well Disinfection**

An RCS geologist shall be present to observe a gyroscopic survey for the alignment/plumbness testing of the well, a video survey and a static spinner survey. Further, for the video survey, it is important to check that the survey log is of sufficient quality to reliably document as-built well conditions. Finally, a static spinner survey shall be performed to document the downwell flow regime under non-pumping conditions. Following these surveys, the Contractor will need to chlorinate the new well for final well disinfection.

**p. Recommended Pumping Rate and Pump Depth Setting Memorandum**

Based on the step drawdown and constant rate pumping test data, RCS shall provide a written Memorandum to discuss static and pumping water levels, and the specific capacity for the new well. This Memorandum will also provide our recommendations to CITY for the final operational pumping rate and pump depth setting for the permanent pump; these parameters shall include factors for anticipated declines in specific capacity over time, and anticipated seasonal variations in water levels.

Because of CONSULTANT'S working knowledge of the changes in pumping rates, specific capacity, well efficiency and annual volumes of groundwater produced by former/existing CITY wells, RCS recognizes that the original post-construction pumping rates from each new well during the final pumping tests will be greater than those that will eventually be available from each new well, over the long term. RCS will endeavor to account for the anticipated changes in pumping rates and volumes in each well over time by being conservative in its selection of a recommended pumping rate for the new permanent pump in each well. Regardless, the total desired production capacity of  $\pm 1700$  AF/yr from all future wells in the La Brea Subarea appears to be feasible and attainable. It is clear that VFD pumps will be needed to help account for such changes over time.

**q. Preparation of Summary of Well Construction Operations Report**

A Summary of Well Construction Operations Report for this initial well shall then be prepared to help document the drilling, construction, testing activities, and the materials used during its construction. This report will include the following items:

- A basic chronology of well construction and testing.
- Description of earth materials encountered, including a copy of our geologic log.
- Copies of all geophysical logs, including caliper and spinner surveys.
- Results of sieve analysis, including plots of grain size curves.
- Table of well construction materials and depths.
- As-built well design drawings.
- Isolated aquifer zone test data and resulting water quality.
- Field water quality results, water levels and discharge rates during zone testing and constant rate discharge tests.
- Analytical reports showing water quality results for isolated aquifer zone testing and the final wellblend sample.
- Well development logs from the drilling contractor.
- Pumping test data for the step drawdown test, constant rate test and water level recovery measurements.

- Analysis of pumping test data, including well performance and plots of drawdown relationships as a function of flow rate and time.
- Evaluation of the spinner log data and depth specific water quality sampling under pumping conditions.
- Plumbness and alignment data.
- Other pertinent data relating to materials used.
- Conclusions and recommendations for basic operational use.

Provide CITY and CONSULTANT with a Draft Well Construction Operations Report for review (without all supporting appendices) and then a Final Summary of Well Construction Operations report. The report, including all drawings, tables, and appendices, shall also be provided to CITY and your firm in both paper and Adobe Portable Document Format (PDF). A total of three (3) hard copies of the report will be provided. All electronic files shall be placed on a CD and will be included with the paper copy of the report.

### **TASK 5.3 WATER TREATMENT EVALUATION**

CONSULTANT shall conduct a thorough review of the Pilot Well's water quality data along with other groundwater quality information available and prepare preliminary recommendations on water treatment system. The evaluation shall include water treatment system at CITY's water treatment plant and/or building a new local water treatment plant near the proposed wells or at the individual well sites. The results of the Water Treatment Evaluation shall be summarized along with treatment recommendations in a Technical Memorandum. Carollo Engineers shall prepare a draft water treatment Technical Memorandum for CITY review, and revise as required for a final Technical Memorandum.

### **TASK 5.4 PIPELINE CONDITION ASSESSMENT**

The former transmission pipeline infrastructure that was used to convey well water to CITY's former treatment facility on La Cienega Boulevard has not been looked at in several years. The objective of this task is for CONSULTANT to perform the necessary field investigations to ascertain the condition of the pipe and determine the feasibility of rehabilitation needed to improve the condition of the pipe for use as a part of this Project's delivery system.

CONSULTANT shall utilize a long distance closed circuit television (CCTV) robotic tractor to determine the general condition of the pipeline. This approach will allow CONSULTANT to view the interior of the pipeline, determine if the pipeline appears generally suitable for rehabilitation, possibly locate sites where the pipeline has been cut into or otherwise damaged, and determine the best value rehabilitation method.

The work shall be phased to facilitate the decision process. After investigating the location of the pipeline from CITY provided record drawings, the first phase will be to choose a known location along the alignment with the assistance of CITY staff input. It is anticipated this location will be within the La Cienega sidewalk portion of the street right-of-way. Once the location has been determined, CONSULTANT shall prepare and submit an encroachment permit application on CITY's behalf to CITY of Los Angeles. CONSULTANT's Scope of Work does not envision plans and specifications, and traffic control plans, will be required to obtain the encroachment permit. Once the encroachment permit has been obtained, the identified location will be excavated, a section of the pipe will be removed, and the CCTV camera will be inserted into the pipeline. A locating device attached to the camera will provide the alignment of pipeline as tracked by field personnel walking above and tracking the signal. The pipeline will be inspected in both directions until the camera reaches its limit or is obstructed. For this task, CONSULTANT has assumed that excavation of the pipeline shall be performed by CITY, as well as restoration of the area after the CCTV investigation is completed. After completion of pipe investigation in the first area, CONSULTANT shall meet with CITY to discuss the results and determine if the pipe condition warrants continued investigation of the pipe condition in other areas. Note that for this task, CONSULTANT has budgeted investigation of the pipeline in up to three discrete locations.

## **TASK 5.5 UTILITY RESEARCH**

A utility investigation for alternative routes for the Transmission Main shall be performed utilizing DigAlert and public agency online databases to identify existing utilities within the vicinity of each alternative alignment and request current utility maps. In addition, it assumed two (2) days of on-site utility research at various utility agencies will be required to complete this task. A utility request log shall be maintained. It is assumed no potholing will be conducted as part of the PDR Project. It would be appropriate to conduct potholing during final design once the final alignment is confirmed.

## **TASK 6.0 - HYDRAULIC EVALUATION TO IDENTIFY MODIFICATIONS NEEDED TO EXISTING INFRASTRUCTURE**

CONSULTANT shall use the existing hydraulic model for CITY's water distribution system as a baseline to evaluate the necessary system configuration changes to accommodate the desired facilities.

It is understood the existing model was developed in 2002 and is in H2ONET by Innovyze (formerly MWH Soft). The existing hydraulic model will be converted to industry standard software InfoWater by Innovyze. Although the exact condition of the model is not known, CONSULTANT has allocated a total of **52 hours** to convert and update the model to current CITY operations to a level sufficient for hydraulic modeling for this Project. Should additional effort be required to convert and update CITY's model, CONSULTANT shall identify the anticipated additional level of effort to CITY for approval.

The hydraulic model shall be used to evaluate the hydraulics of the system with the proposed infrastructure at up to three (3) delivery points to CITY's system, up to five (5) transmission mains alignments, with the three (3) well sites. This includes evaluating the impacts of operational changes needed to operate the system efficiently and effectively and incorporate the new water into CITY's system.

This analysis also includes evaluation of LADWP's system to determine the feasibility of wheeling water through LADWP's system and delivering to CITY. The LADWP analysis would include receiving LADWP's hydraulic model (we assume no updating is required and it will be ready for analysis), and running their model to confirm the feasibility of the wheeling water option.

The findings and recommendations from this task shall be incorporated into the PDR.

## **TASK 7.0 - PIPELINE ALIGNMENT CORRIDOR STUDY**

For each of the potential well sites, CONSULTANT shall identify preliminary alignments for transmission mains to connect these wells to CITY's water system. The potential to connect to a Los Angeles Department of Water & Power (LADWP) transmission main system shall also be investigated to potentially allow for wheeling of water through the LADWP system to CITY's transmission and distribution systems.

### **TASK 7.1 EVALUATE ALTERNATIVE ALIGNMENTS**

- a. CONSULTANT shall evaluate three (3) alternative alignments. Each alternative will either connect to CITY's existing distribution system (if treatment occurs at the well site), or connect to CITY's water treatment plant (if no treatment is provided at the well site).
  - An aerial photo of the area encompassing all potential alignments shall be obtained.
  - Determine alternative routes.
  - Review available urban planning reports; road, railroad, and utility planning reports; topographic maps; aerial photographs; GPS system information; geologic and geotechnical information; property maps; and utility maps within the corridor to determine potential alternative alignments. CONSULTANT shall determine if the available information from USGS and State Geological Survey is adequate. If the information is not sufficient, estimate reliable budget level costs and some subsurface exploration may be required.

- Conduct a surface reconnaissance field trip with CITY to review the potential alignment alternatives within the corridor to determine if there are additional alternatives not apparent from the available records.
  - Summarize advantages and disadvantages of each alternative alignment, considering geotechnical conditions, urban development conditions, service requirements, construction difficulties, environmental factors, and overall costs.
- b. Please note, if wheeling water through LADWP's system is determined to be feasible (in Task 6), CONSULTANT shall add this as a fourth alternative to be compared with the three (3) pipeline alignment alternatives.
  - c. Prepare a Technical Memorandum reviewing alternatives and recommending the optimal transmission pipeline route.
  - d. Review draft with CITY and revise as required for a final Technical Memorandum.

## **TASK 7.2 ESTABLISH DESIGN PARAMETERS**

After CITY has selected the transmission system recommendations, CONSULTANT shall establish pipeline design criteria in a Technical Memorandum including the following information:

- Establish pipeline sizes, appurtenances and materials.
- Prepare a preliminary hydraulic profile.
- Establish valve types and preliminary locations
- Prepare draft pipeline design criteria Technical Memorandum.
- Review draft with CITY and revise as required for final Technical Memorandum.

## **TASK 8 - WELL SYSTEM CONCEPTUAL DESIGN**

After CITY's acceptance of the three (3) recommended well site locations, CONSULTANT shall prepare conceptual design sketches and review them with CITY to gain concurrence for public information, CITY review, and review by affected agencies. For each of the three (3) well sites:

- Develop a preliminary site plan for each well site.
- Develop preliminary hydraulic profile for delivery of water to the transmission main.
- Develop up to two alternative architectural elevation sketches for a typical wellhead building.
- Prepare a facilities site description including:
  - Site conditions, including preliminary drainage
  - Flow scheme and major process components
  - SCADA and computerized control systems
  - Architectural concepts
  - Chemical feed and storage facilities for onsite treatment
  - Heating, ventilating, and air conditioning systems
  - Security systems
  - Develop basic utilities services concepts, including standby power
  - Evaluate and establish preliminary monitoring and control system criteria for each of the well site facilities

After CITY review, CONSULTANT shall review conceptual alternatives and associated costs with CITY staff in a Preliminary Design Workshop and revise infrastructure concepts based on recommendations from the workshop.

## **TASK 9 - CEQA ENVIRONMENTAL DOCUMENTATION & PERMITTING**

### **TASK 9.1 CEQA ENVIRONMENTAL DOCUMENTATION**

CONSULTANT shall prepare an Environmental Checklist modeled after the CEQA Guidelines. The Environmental Checklist shall include detailed explanations of all checklist determinations and discussions of

potential environmental impacts. Although not intended to be a formal CEQA document, the analysis shall generally follow the requirements of Public Resources Code Section 21080 (c) and CEQA Guidelines Section 15070. The Environmental Checklist shall be presented as follows:

**a. Introduction**

This section shall cite the environmental review requirements of the Project. The Introduction shall include the Project location, environmental setting, existing uses on- and off-site, the Project description, Project phasing, and relevant background/history information.

**b. Environmental Summary**

This section shall include a summary page of Project information followed by an explanation of factors considered for potential impacts. The Environmental Checklist shall be presented in a four column layout, identifying: (1) potentially significant impacts, (2) potentially significant impacts unless mitigated, (3) less than significant impacts, and (4) issues resulting in no impacts.

**c. Environmental Analysis**

The Environmental Analysis sections shall provide vital supporting information for the conclusions rendered for the Environmental Checklist. Following Appendix G of the CEQA Guidelines, this section shall include a qualitative review of the following issues:

- Aesthetics, Light, and Glare
- Agricultural and Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Greenhouse Gases
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Relevant Planning
- Mineral Resources
- Noise
- Population
- Public Services
- Recreation
- Traffic and Circulation
- Utilities
- Mandatory Findings of Significance

Each topical impact area shall be analyzed in detail based upon existing information related to the proposed Project and site. The existing environmental setting related to each impact topic shall be provided, and a summary of the Project's potential impacts will be discussed. Given the preliminary nature of this analysis, this task assumes that all documentation will be qualitative in nature, and that no quantitative modeling or analysis (e.g., air quality or traffic modeling) will be performed.

**d. Environmental Checklist Determination**

The determination page shall include the anticipated appropriate formal CEQA action based upon the environmental evaluation.

**e. Graphic Exhibits**

The Environmental Checklist shall include a maximum of four (4) exhibits to enhance the written text and clarify the Project and potential environmental impacts. These exhibits are expected to include a regional vicinity map, site vicinity map, aerial photo, and/or conceptual site plans for the proposed Project.

**f. Environmental Checklist**

CONSULTANT shall submit three (3) hard copies and one PDF file of the Administrative Draft Environmental Checklist for review and comment by CITY. This scope of work assumes two rounds of review by CITY staff.

Correspondingly, this scope is limited to one round of revisions by CONSULTANT in response to CITY comments.

## **TECHNICAL MEMORANDUM SUMMARIZING CEQA AND PERMITTING REQUIREMENTS**

Based on the results of the Environmental Checklist, CONSULTANT shall prepare a brief memorandum summarizing the impact findings and indicating the appropriate form of formal CEQA documentation required as part of the next phase of the Project. The technical memorandum shall also identify any applicable environmental resource agency permits that may be required for Project facilities (e.g., Army Corps 404 Permit, RWQCB 401 Certification, and/or CDFW 1602 Agreement). The Memorandum shall also document any key environmental constraints applicable to the Project, and any risks that they may pose to the Project schedule during future phases of the Project. This scope of work assumes one round of review by CITY staff. Correspondingly, this scope is limited to one round of revisions by CONSULTANT in response to CITY comments.

### **TASK 9.2 PERMITTING**

CONSULTANT shall analyze and prepare a list of the number and types of permits and approvals necessary for the construction of this Project. Upon request from CITY, meet with representatives of affected agencies, such as State and County regulatory agencies, utilities, cities, school districts, railroad companies, pipeline companies, and other stakeholders as appropriate to discuss the potential impact of the Project on their facilities. Provide the estimated number of meetings required. Any additional efforts requested by CITY will be addressed and negotiated as supplemental services. It is assumed a total of **three (3)** meetings will be required with agencies for this purpose.

It is also important to maintain good relationships with the public during the construction phase. CONSULTANT recommends CITY include under a separate contract the services of a public outreach firm to notify the public of this Project.

### **TASK 10 - PREPARE PRELIMINARY ESTIMATE OF PROBABLE CONSTRUCTION COST**

CONSULTANT shall prepare a Preliminary Estimate of Probable Construction Cost (PEPCC) for each of the potential alternative wells, water treatment and transmission main projects. The PEPCC shall also include the costs for any Land Acquisition, Easements, Permits, and Regulatory Compliance which may be required to site the wells, provide water treatment and construct the transmission main.

Prepare comparative opinions of costs for each of the alternatives which will also include costs for such items as:

- Administration
- Design
- Construction Management
- Operation
- Maintenance

The estimate of probable construction cost will be a Class 4 estimate as defined by AACE International.

### **TASK 11 - PREPARE PRELIMINARY PROJECT SCHEDULE**

CONSULTANT shall prepare a Preliminary Project Schedule for completing the CEQA process, design and construction of the wells encompassing their drilling, development, testing, equipping, water treatment facilities and connections to CITY's water system through a transmission main to CITY's service area. The schedule shall be prepared utilizing Microsoft Project software, version 2013.

## TASK 12 - PDR REPORT

Following completion of the Tasks 1 through 11, CONSULTANT shall assist CITY in developing a Project Development Strategy leading to the preparation of a Draft and Final PDR Reports. The components of the PDR will be the following:

- Executive Summary
  - This section shall serve as a compiled summary of all major Project components including conceptual well designs at each site, the recommended pipeline alignment, the treatment recommendation, and the connection point to CITY's system.
- Project Development Strategy Tech Memorandum, including discussion on the following components:
  - Introduction
  - Construction packaging and Project segmentation
  - Cost and financial issues
  - Project implementation Schedule
  - Allocation and assignment of performance risk
  - Level of control desired by CITY during Project delivery for Phase II Design, Phase III Construction, and Commissioning Phases
  - Recommended level of involvement of CITY's operations personnel during Project development and after Project commissioning
  - Summary of legal constraints as provided by CITY
  - Regulatory setting and key compliance criteria.
  - Potential schedule constraints
  - Potential Project risk concerns
  - External stakeholder requirement
  - CEQA Compliance Overview
  - Regulatory Compliance Summary
- The previously completed tech memorandums and reports as part of Tasks 1 through 11

The PDR shall include the final tech memorandums and reports prepared as part of Tasks 1 through 11. Each of the previously finalized technical memorandums shall be a chapter within the PDR. The Executive Summary as described previously shall serve as the overall Project summary.

Ten (10) copies of the PDR shall be provided for CITY's review, comment and approval at the 90% stage and 100% stages of completion. Ten (10) hardbound copies of the final PDR along with electronic copies, in PDF format, shall be provided.

## TASK 13 - PROJECT MANAGEMENT AND PROGRESS MEETINGS

This task involves overall Project management including Project planning, coordination, reporting and communications. This task also includes preparation of monthly progress reports, weekly phone calls with CITY to discuss progress, tracking of budgets and schedules against plan, and taking corrective measures. Quality assurance shall include an independent review of all deliverables prior to submittal to CITY. The following shall be addressed as part of this scope:

- **Kickoff Meeting:** CONSULTANT shall hold a kick-off meeting with CITY and other interested stakeholders to discuss the Project details and other pertinent issues regarding Project delivery. The kickoff meeting shall discuss the approach CONSULTANT would employ in executing the Project and for collecting other pertinent data from CITY and other interested stakeholders. The objective of this meeting is also to ensure that CITY's vision, goals and objectives are clearly understood by the CONSULTANT's team, and responsibilities of each team member are clearly identified.
- **Progress Meetings:** CONSULTANT shall hold face-to-face meetings with CITY and other interested stakeholders to review progress and coordinate resolution of issues. CONSULTANT shall prepare

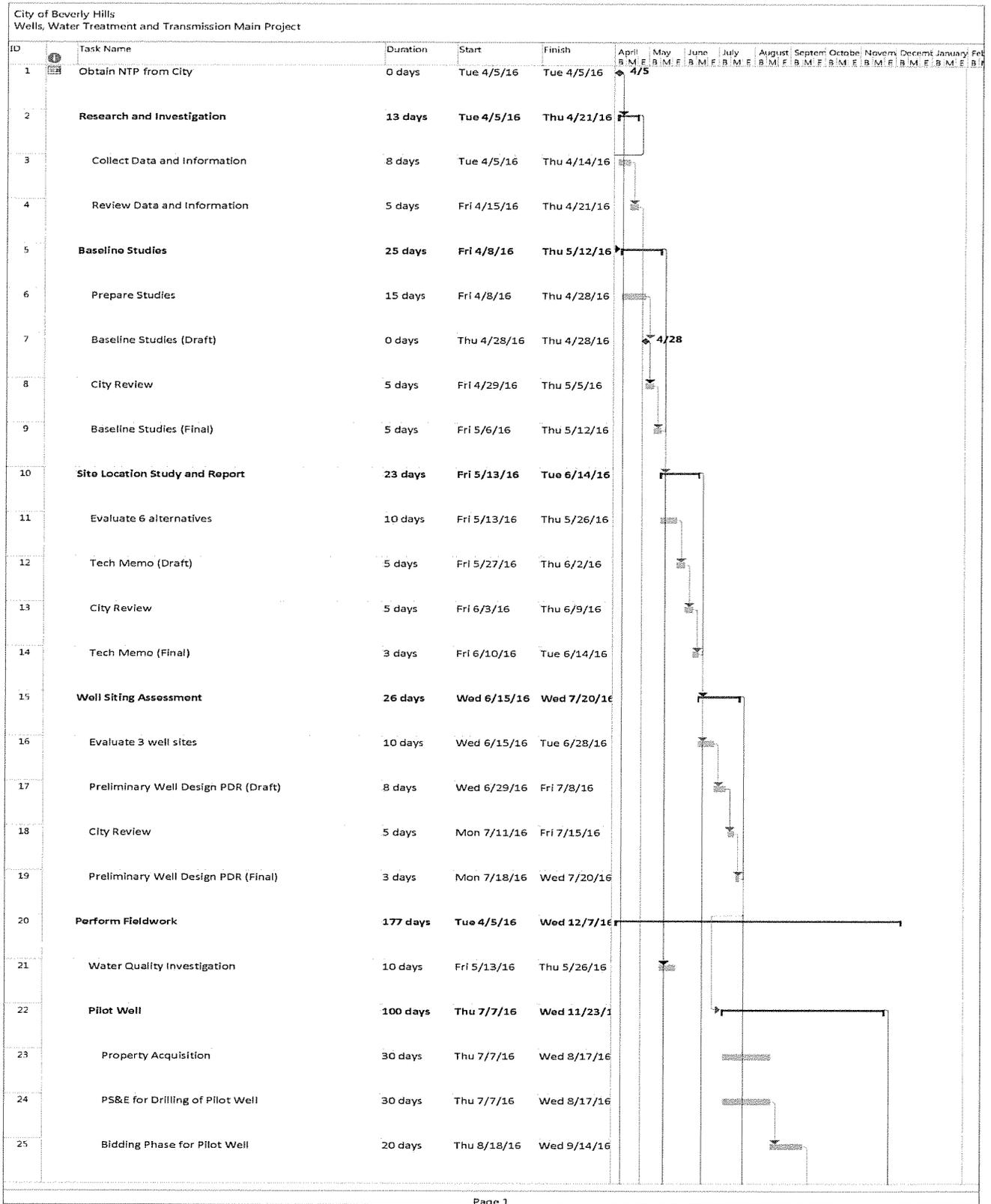
meeting minutes to document decisions and outstanding issues. It is assumed nine (9) progress meetings will be required for this Project.

- **Conduct Workshops:** CONSULTANT shall organize workshops at key stages of the Project to keep CITY staff informed about the key issues on the Project. The workshops can be scheduled to coincide with regular Project meetings. CONSULTANT proposes four (4) workshops:
  - **Workshop #1** - Selecting the final three (3) well sites,
  - **Workshop #2** - Finalizing the transmission main alignment and delivery point
  - **Workshop #3** - Determining the recommended treatment strategy
  - **Workshop #4** – Presentation of the Draft PDR.
- **Invoicing:** CONSULTANT shall prepare monthly invoices and schedule updates to keep CITY up to date on Project budget and schedule updates. CONSULTANT shall manage the Project team and staff workload to ensure that the Project is executed within budget and schedule.
- **Quality Assurance and Quality Control:** CONSULTANT shall perform internal quality assurance reviews at key Project completion milestones to assess overall Project implementation. CONSULTANT shall implement our internal Quality Assurance program on this Project.

### **PERFORMANCE SCHEDULE**

CONSULTANT shall comply with the performance schedule attached as Attachment 1 to Exhibit A, including required deliverables.

# ATTACHMENT 1 TO EXHIBIT A



City of Beverly Hills  
Wells, Water Treatment and Transmission Main Project

ID	Task Name	Duration	Start	Finish	April	May	June	July	August	September	October	November	December	January	February
					B	M	T	W	T	F	S	S	S	S	S
26	Construction of Pilot Well	50 days	Thu 9/15/16	Wed 11/23/16											
27	Water Treatment Evaluation	10 days	Thu 11/24/16	Wed 12/7/16											
28	Pipeline Condition Assessment	85 days	Tue 4/5/16	Mon 8/1/16											
29	Confirm Approach with City	10 days	Tue 4/5/16	Mon 4/18/16											
30	Acquire Permits and Approvals, Traffic Control	30 days	Tue 4/19/16	Mon 5/30/16											
31	Conduct Field Work	30 days	Tue 5/31/16	Mon 7/11/16											
32	Summarize findings and recommendations	15 days	Tue 7/12/16	Mon 8/1/16											
33	Utility Research	6 wks	Fri 5/13/16	Thu 6/23/16											
34	Hydraulic Evaluation	29 days	Wed 6/15/16	Mon 7/25/16											
35	Convert/Update City Model	12 days	Wed 6/15/16	Thu 6/30/16											
36	Run Analysis	7 days	Fri 7/1/16	Mon 7/11/16											
37	Obtain LADWP Model	5 days	Tue 7/12/16	Mon 7/18/16											
38	Run LADWP Analysis	5 days	Tue 7/19/16	Mon 7/25/16											
39	Pipeline Alignment Corridor Study	56 days	Wed 4/20/16	Wed 7/6/16											
40	Evaluate Alternatives Alignments	45 days	Wed 4/20/16	Tue 6/21/16											
41	Evaluate 3 alternative alignments	20 days	Wed 4/20/16	Tue 5/17/16											
42	Evaluate LADWP Wheeling Option	5 days	Wed 5/18/16	Tue 5/24/16											
43	Tech Memo (Draft)	10 days	Wed 5/25/16	Tue 6/7/16											
44	City Review	5 days	Wed 6/8/16	Tue 6/14/16											
45	Tech Memo (Final)	5 days	Wed 6/15/16	Tue 6/21/16											
46	Establish Design Parameters	11 days	Wed 6/22/16	Wed 7/6/16											
47	Tech Memo (Draft)	5 days	Wed 6/22/16	Tue 6/28/16											
48	City Review	3 days	Wed 6/29/16	Fri 7/1/16											
49	Tech Memo (Final)	3 days	Mon 7/4/16	Wed 7/6/16											
50	Well System Conceptual Design	30 days	Thu 7/21/16	Wed 8/31/16											

City of Beverly Hills  
Wells, Water Treatment and Transmission Main Project

ID	Task Name	Duration	Start	Finish	April	May	June	July	August	September	October	November	December	January	Feb	
					B	M	F	B	M	F	B	M	F	B	M	F
51	Develop Well System Conceptual Design	25 days	Thu 7/21/16	Wed 8/24/16												
52	Site and Utility Plan	25 days	Thu 7/21/16	Wed 8/24/16												
53	Hydraulic Profile	25 days	Thu 7/21/16	Wed 8/24/16												
54	Structural Floor Plan	25 days	Thu 7/21/16	Wed 8/24/16												
55	Architectural Sketches	25 days	Thu 7/21/16	Wed 8/24/16												
56	P&IDs	25 days	Thu 7/21/16	Wed 8/24/16												
57	Mechanical Systems	25 days	Thu 7/21/16	Wed 8/24/16												
58	Electrical Systems	25 days	Thu 7/21/16	Wed 8/24/16												
59	Conceptual Design Workshop	5 days	Thu 8/25/16	Wed 8/31/16												
60	Prepare for Workshop	5 days	Thu 8/25/16	Wed 8/31/16												
61	Conduct Workshop	0 days	Wed 8/31/16	Wed 8/31/16												
62	CEQA Environmental Documentation and Permitting	30 days	Thu 9/1/16	Wed 10/12/16												
63	CEQA	30 days	Thu 9/1/16	Wed 10/12/16												
64	Environmental Checklist	20 days	Thu 9/1/16	Wed 9/28/16												
65	CEQA Document Recommendation	10 days	Thu 9/29/16	Wed 10/12/16												
66	Permitting	25 days	Thu 9/1/16	Wed 10/5/16												
67	Prepare list of permits	10 days	Thu 9/1/16	Wed 9/14/16												
68	Permitting Agency Meetings	15 days	Thu 9/15/16	Wed 10/5/16												
69	Preliminary Estimate of Probable Construction Cost	15 days	Thu 9/1/16	Wed 9/21/16												
70	Prepare Preliminary Project Schedule	10 days	Thu 9/1/16	Wed 9/14/16												
71	PDR Report	38 days	Thu 12/8/16	Mon 1/30/17												
72	PDR (Draft)	20 days	Thu 12/8/16	Wed 1/4/17												
73	City Review	10 days	Thu 1/5/17	Wed 1/18/17												
74	PDR (Final)	8 days	Thu 1/19/17	Mon 1/30/17												

EXHIBIT B

PROJECT BUDGET AND SUMMARY/SCHEDULE

CITY shall compensate CONSULTANT for the satisfactory performance of the work described in this Agreement in an amount not to exceed Seven Hundred Sixty-Eight Thousand Dollars (\$768,000), including reimbursable expenses as described in this Exhibit. Reimbursable expenses may include travel and other direct costs reasonably incurred in the performance of the Agreement.

Task Description	Approximate Person Hours															Sub Costs	Direct Costs	Total Fee			
	Michael Baker Team																				
	Pjt Prncpl	P.M.	QC	L.A. Coord.	Pjt Engr	Design Engr	CAD Design	Elect. Mgr	Elect. Engr	Struc. Mgr	Struc. Engr	CEQA Mgr	Permit Staff	Support Staff							
	\$ 200	\$ 190	\$ 190	\$ 200	\$ 170	\$ 115	\$ 120	\$ 180	\$ 155	\$ 180	\$ 160	\$ 170	\$ 120	\$ 120							
<b>1. Research and Investigation</b>																					
A Research and Investigation		16			20	16											\$ -	\$ 500	\$ 8,780		
<b>SUBTOTAL TASK 1:</b>	<b>0</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>20</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>\$ -</b>	<b>\$ 500</b>	<b>\$ 8,780</b>		
<b>2. Baseline Studies</b>																					
A Baseline Studies (Draft)	4	40			128	60								16			\$ 9,500	\$ 500	\$ 48,980		
B Baseline Studies (Final)		20			60	40								8				\$ 500	\$ 20,060		
<b>SUBTOTAL TASK 2:</b>	<b>4</b>	<b>60</b>	<b>0</b>	<b>0</b>	<b>188</b>	<b>100</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>24</b>	<b>0</b>	<b>0</b>	<b>\$ 9,500</b>	<b>\$ 1,000</b>	<b>\$ 69,040</b>		
<b>3. Site Location Study and Report</b>																					
A Tech Memo (Draft)	2	16			40	32	40							16			\$ 40,000	\$ 300	\$ 60,940		
B Tech Memo (Final)		8			8	12	16							8				\$ 300	\$ 7,440		
<b>SUBTOTAL TASK 3:</b>	<b>2</b>	<b>24</b>	<b>0</b>	<b>0</b>	<b>48</b>	<b>44</b>	<b>56</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>24</b>	<b>0</b>	<b>0</b>	<b>\$ 40,000</b>	<b>\$ 600</b>	<b>\$ 68,380</b>		
<b>4. Well Siting Assessment</b>																					
A Preliminary Well Design PDR (Draft)	2	16			40	32	12							8			\$ 15,600	\$ 300	\$ 32,220		
B Preliminary Well Design PDR (Final)		8			8	12	4							4				\$ 300	\$ 5,520		
<b>SUBTOTAL TASK 4:</b>	<b>2</b>	<b>24</b>	<b>0</b>	<b>0</b>	<b>48</b>	<b>44</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>\$ 15,600</b>	<b>\$ 600</b>	<b>\$ 37,740</b>		
<b>5. Perform Fieldwork</b>																					
A Water Quality Investigation		4			20	12													\$ 5,540		
B Pilot Well		8	8		24	24													\$ 72,160		
C Water Treatment Evaluation			8		24														\$ 15,600		
D Pipeline Condition Assessment			12		24									80			\$ 20,000	\$ 500	\$ 36,460		
E Utility Research		4			8	32													\$ 8,800		
<b>SUBTOTAL TASK 5:</b>	<b>8</b>	<b>36</b>	<b>0</b>	<b>0</b>	<b>100</b>	<b>68</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>80</b>	<b>0</b>	<b>0</b>	<b>\$ 92,200</b>	<b>\$ 3,500</b>	<b>\$ 138,560</b>		
<b>6. Hydraulic Evaluation</b>																					
A City of Beverly Hills Hydraulic Evaluation	2	8			24	100													\$ 17,500		
B LADWP Hydraulic Evaluation	2	8		4	16	40													\$ 10,040		
<b>SUBTOTAL TASK 6:</b>	<b>4</b>	<b>16</b>	<b>0</b>	<b>4</b>	<b>40</b>	<b>140</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 27,540</b>		
<b>7. Pipeline Alignment Corridor Study</b>																					
A Alternative Alignment Tech Memo (Draft)	4	20			40	40	16												\$ 18,420		
B Alternative Alignment Tech Memo (Final)		16			24	24	8												\$ 11,340		
C Design Parameters Tech Memo (Draft)	4	12			24	16													\$ 9,500		
D Design Parameters Tech Memo (Final)		8			12	8													\$ 4,980		
<b>SUBTOTAL TASK 7:</b>	<b>8</b>	<b>56</b>	<b>0</b>	<b>0</b>	<b>100</b>	<b>88</b>	<b>24</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>\$ -</b>	<b>\$ 2,000</b>	<b>\$ 44,240</b>		
<b>8. Well System Conceptual Design</b>																					
A Site and Utility Plan	2	8			24	40	40	16	24	12	16								\$ 26,720		
B Hydraulic Profile		8			16	32	20												\$ 10,320		
D Architectural Sketches		2								2							\$ 10,000		\$ 10,740		
F Mechanical Systems	2	8			24	40	40												\$ 15,400		
G Electrical Systems		2						30	50										\$ 13,530		
H Conceptual Design Workshop	2				16	16	8												\$ 5,920		
<b>SUBTOTAL TASK 8:</b>	<b>6</b>	<b>28</b>	<b>0</b>	<b>0</b>	<b>80</b>	<b>128</b>	<b>108</b>	<b>46</b>	<b>74</b>	<b>14</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>\$ 10,000</b>	<b>\$ -</b>	<b>\$ 82,630</b>		
<b>9. CEQA Environmental Documentation &amp; Permitting</b>																					
A CEQA Environmental Documentation						8											80		\$ 500	\$ 15,020	
B Permitting			20											40				\$ 10,000	\$ 500	\$ 19,100	
<b>SUBTOTAL TASK 9:</b>	<b>0</b>	<b>20</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>80</b>	<b>40</b>	<b>0</b>	<b>0</b>	<b>\$ 10,000</b>	<b>\$ 1,000</b>	<b>\$ 34,120</b>		
<b>10. Preliminary Estimate of Probable Construction Cost</b>																					
A Preliminary Project Cost		12			12	24												\$ 2,500	\$ 9,580		
<b>SUBTOTAL TASK 10:</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>24</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>\$ 2,500</b>	<b>\$ -</b>	<b>\$ 9,580</b>		
<b>11. Preliminary Project Schedule</b>																					
A Preliminary Project Schedule		12			12														\$ 4,320		
<b>SUBTOTAL TASK 11:</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 4,320</b>		
<b>12. PDR Report</b>																					
A PDR (Draft)	4	40	16		80	60												\$ 2,100	\$ 1,000	\$ 35,040	
B PDR (Final)		20			40	30													\$ 1,000	\$ 15,050	
<b>SUBTOTAL TASK 12:</b>	<b>4</b>	<b>60</b>	<b>16</b>	<b>0</b>	<b>120</b>	<b>90</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>\$ 2,100</b>	<b>\$ 2,000</b>	<b>\$ 50,090</b>		
<b>13. Project Management and Progress Meetings</b>																					
A Project Management		80																	\$ 1,000	\$ 16,200	
B Kickoff Meeting	4	8		8															\$ 500	\$ 4,420	
C Progress Meetings		54		60	54	24													\$ 16,000	\$ 2,000	\$ 52,200
D Workshops	8	32		20	32	16													\$ 1,000	\$ 19,960	
<b>SUBTOTAL TASK 13:</b>	<b>12</b>	<b>174</b>	<b>0</b>	<b>88</b>	<b>86</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>0</b>	<b>0</b>	<b>0</b>	<b>\$ 16,000</b>	<b>\$ 4,500</b>	<b>\$ 92,780</b>		
<b>TOTAL ESTIMATED HOURS AND BUDGET:</b>	<b>50</b>	<b>538</b>	<b>16</b>	<b>92</b>	<b>854</b>	<b>790</b>	<b>204</b>	<b>46</b>	<b>74</b>	<b>14</b>	<b>16</b>	<b>80</b>	<b>40</b>	<b>140</b>	<b>\$ 197,900</b>	<b>\$ 15,700</b>	<b>\$ 667,800</b>				

CONSULTANT shall submit an itemized statement to CITY on a CITY approved form for its services performed, which shall include documentation setting forth in detail a description of the services rendered, and the hours of service, if appropriate. CITY shall pay CONSULTANT the amount of such billing within thirty (30) days of receipt of same.



EXHIBIT C
CERTIFICATE OF INSURANCE



CERTIFICATE OF LIABILITY INSURANCE

DATE(MM/DD/YYYY)
09/28/2015

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER: Aon Risk Services Central, Inc.
INSURED: Michael Baker International, Inc.
CONTACT NAME, PHONE, FAX, ADDRESS, INSURER(S) AFFORDING COVERAGE, NAIC #

COVERAGES CERTIFICATE NUMBER: 570059596852 REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE 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. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

Table with columns: INSR LTR, TYPE OF INSURANCE, ADJ SUBR INCL WVD, POLICY NUMBER, POLICY EFF (MM/DD/YYYY), POLICY EXP (MM/DD/YYYY), LIMITS. Rows include Commercial General Liability, Automobile Liability, Umbrella Liability, Workers Compensation and Employers Liability, and E&O-PL-Primary.

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
Re: All Jobs Performed by the Named Insured for the City of Beverly Hills. City of Beverly Hills is Additional Insured as respects to General Liability and Auto Liability. Primary and Non-Contributing coverage applies to GL. (GL-AI/AU-AI/PR/X)

CERTIFICATE HOLDER: City of Beverly Hills
CANCELLATION: SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
AUTHORIZED REPRESENTATIVE: Aon Risk Services Central Inc

Holder Identifier: ABCDEFCH

Certificate No.: 570059596852