ITEM NO. 9

STAFF REPORT

CITY OF OCEANSIDE

DATE: January 8, 2014

TO: Honorable Mayor and City Councilmembers

FROM: Water Utilities Department

SUBJECT: **APPROVAL OF A PROFESSIONAL SERVICES AGREEMENT WITH HDR OF SAN DIEGO FOR THE RESERVOIR REPAIRS PHASE 3 DESIGN**

SYNOPSIS

Staff recommends that the City Council approve a professional services agreement in an amount not to exceed $422,400 with HDR Engineering, Inc., of San Diego for the preparation of plans, specifications, and bid phase services for the Reservoir Repairs Phase 3 Project; and authorize the City Manager to execute the agreement.

BACKGROUND

There are 12 reservoirs in the City of Oceanside's potable water distribution system (Exhibit D). Together, they comprise 50.5 million gallons (MG) of potable water storage capacity located on nine sites. The reservoirs range in age from 16 to 55 years old and are constructed of either pre-stressed concrete structure with a gunite cover and a gunite dome roof, pre-stressed concrete with a flat roof, or a steel structure.

In October 2012, evaluations were conducted for all 12 reservoirs which included interior inspections as well as inspection of the surrounding reservoir sites. As part of the investigations, structural evaluations were performed on the reservoirs to ascertain their performance during a significant seismic event. The October 2012 investigation concluded that several of the reservoirs have seismic deficiencies in need of immediate attention as well as other issues including coating deterioration, evidence of gunite cover spalling, stressing wire corrosion, and surface cracking. Perimeter security at some sites is also in need of improvement. In order to ensure reliable service delivery and adequate fire protection, the water storage capacity should be contained at a maximum level and the site repairs of all reservoirs needs to be performed.

Phase 1 and 2 repairs, which include the Fire Mountain and Guajome No. 1 reservoirs, are currently being designed for seismic retrofits, structural improvements, and site repairs by Richard Brady and Associates of San Diego. Their Professional Services Agreement was approved on June 26, 2013, and a subsequent Notice-to-Proceed was

issued on July 30, 2013. To date, Brady has advanced the construction documents to a 90% complete level.

Phase 3 repairs include the following 10 reservoirs:

	Reservoir Name	Capacity and Construction Type	Deficiencies
1	Guajome No. 2	5 MG pre-stressed concrete reservoir, partially buried	Significant interior and exterior wall cracks; inlet and outlet valves have significant corrosion; minor site repairs
2	Henie Hills	3 MG pre-stressed concrete reservoir, above ground	Needs seismic retrofitting; significant interior and exterior roof and floor cracks; interior ladder, inlet and outlet valves have substantial corrosion; minor site repairs
3	John Paul Steiger	3 MG pre-stressed concrete reservoir, above ground	Needs significant roof structural repairs; inlet and outlet valves have significant corrosion; moderate site repairs needed
4	Morro Hills No. 1	5 MG pre-stressed concrete reservoir, above ground	Needs seismic retrofitting; significant interior and exterior roof and wall cracks; interior ladder, inlet and outlet valves have significant corrosion; minor site repairs needed
5	Morro Hills No. 2	5 MG steel reservoir, above ground	Interior and exterior needs recoating; minor site repairs needed
6	Pilgrim Peak	5 MG pre-stressed concrete reservoir, above ground	Significant interior and exterior roof and wall cracks; moderate site repairs
7	San Francisco Peak No. 1	1.5 MG pre-stressed concrete reservoir, above ground	Needs seismic retrofitting; substantial interior and exterior roof, floor and wall cracks; interior ladder, inlet and outlet valves have significant corrosion; moderate site repairs
8	San Francisco Peak No. 2	5 MG pre-stressed concrete reservoir, partially buried	Some interior and exterior wall and floor cracks; inlet and outlet valves and overflow system have significant corrosion; moderate site repairs

	Reservoir Name	Capacity and Construction Type	Deficiencies
9	Talone	5 MG pre-stressed concrete reservoir, partially buried	Some interior and exterior wall and floor cracks; inlet and outlet valves have significant corrosion; minor site repairs needed
10	Wire Mountain	5 MG pre-stressed concrete reservoir, partially buried	Minor interior and exterior wall and floor cracks; inlet and outlet valves have some corrosion; minor site repairs needed

ANALYSIS

On October 17, 2013, a Request for Proposals (RFP) for the preparation of plans and technical specifications for construction contract documents was sent to twelve qualified professional engineering design firms that were listed on the Water & Wastewater Consultant List which included all Oceanside firms (Exhibit B).

On November 12, 2013, the Water Utilities Department received proposals from four of the twelve design consulting firms. Staff performed a review of the proposals for accuracy and completeness and rated the consultants based on qualifications, performance of similar type work, ability to provide services, quality of proposal, and previous work performance for the City and cost (Exhibit C). Staff has determined that HDR's proposal includes the required items as outlined in the RFP.

FISCAL IMPACT

The Fiscal Year 2013-14 adopted budget for the Reservoir Structural Analysis & Rehab Project (908754600712) has an available balance of $503,255. The professional services agreement is in the amount of $422,400; therefore, adequate funds are available for the project.

COMMISSION OR COMMITTEE REPORT

The Utilities Commission received a project update at its regularly scheduled meeting on November 19, 2013.

CITY ATTORNEY'S ANALYSIS

The referenced documents have been reviewed by the City Attorney's office and approved as to form.

INSURANCE REQUIREMENTS

The City's standard insurance requirements will be met.

RECOMMENDATION

Staff recommends that the City Council approve a professional services agreement in an amount not to exceed $422,400 with HDR Engineering, Inc., of San Diego for the preparation of plans, specifications, and bid phase services for the Reservoir Repairs Phase 3 Project; and authorize the City Manager to execute the agreement.

PREPARED BY:

Jason Dafforn
Water Utilities Division Manager

SUBMITTED BY:

Steven R. Jepsen
City Manager

REVIEWED BY:

Michelle Skaggs Lawrence, Deputy City Manager

Cari Dale, Water Utilities Director

James R. Riley Financial Services Director

ATTACHMENTS

Exhibit A – PSA
Exhibit B – RFP Mailing List
Exhibit C – Consultant Rating Form
Exhibit D – Map of Water Reservoirs

CITY OF OCEANSIDE

PROFESSIONAL SERVICES AGREEMENT

PROJECT: RESERVOIR REPAIRS PHASE 3 – [908754600712]

THIS AGREEMENT, dated _____, 2013 for identification purposes, is made and entered into by and between the CITY OF OCEANSIDE, a municipal corporation, hereinafter designated as "CITY", and HDR INC., hereinafter designated as "CONSULTANT".

RECITALS

A. CITY desires to obtain professional engineering services from an independent contractor for the above named project.

B. CONSULTANT has submitted a proposal to provide engineering services for the CITY in accordance with the terms set forth in this Agreement.

C. CITY desires to contract with CONSULTANT as an independent contractor and CONSULTANT desires to provide services to CITY as an independent contractor.

D. CONSULTANT has demonstrated its competence and professional qualifications necessary for the satisfactory performance of the services designated herein by virtue of its experience, training, education and expertise.

NOW, THEREFORE, THE PARTIES MUTUALLY AGREE AS FOLLOWS:

1.0 **SCOPE OF WORK.** The CONSULTANT desires to provide professional engineering services for providing detail drawings and technical specifications as is more particularly described in the CONSULTANT'S proposal dated November 12, 2013, and listed in the Scope of Services attached hereto and incorporated as Exhibit A.

1.1 **PROFESSIONAL SERVICES PROVIDED BY CONSULTANT.** The professional services to be performed by CONSULTANT shall consist of but not be limited to the following:

1.1.1 Work closely with the Water Utilities Director in performing work in accordance with this Agreement in order to receive clarification as to the result which the CITY expects to be accomplished by CONSULTANT. The Water Utilities Director, under the authority of the City Manager, shall be the CITY'S authorized representative in the interpretation and enforcement of all work performed in

connection with this Agreement. The Water Utilities Director may delegate authority in connection with this Agreement to the Water Utilities Director's designees. For the purposes of directing the CONSULTANT'S performance in accordance with this Agreement, the Water Utilities Director delegates authority to Greg Keppler, Water/Wastewater Project Manager.

1.1.2 In compliance with Government Code section 7550, the CONSULTANT shall include a separate section in the proposal prepared pursuant to this Agreement, which contains a list of all the subcontractors and dollar amounts of all contracts and subcontracts required for the preparation of work described in this Agreement.

1.1.3 Visit and carefully examine the location of the project as often as necessary to become acquainted with all conditions which are visible or could reasonably be discovered, and which might have an impact upon the outcome of the construction of the project.

1.1.4 Design, prepare, and submit to the Water Utilities Director, plan details and technical specifications for the construction of the project as described in the Scope of Work, and in the time and manner set forth in this Agreement.

1.1.5 Prepare and submit to the Water Utilities Director, concurrently with the design plans and technical specifications, the following:

a. A written estimate of probable construction costs in a detailed bid schedule for each reservoir tank.

b. A written list of submittals which the construction contractor will be required to provide during the construction phase of the project.

1.1.6 Provide office and field assistance to the City during the bidding period upon request by Water Utilities Director to include the services listed below:

a. Review and make recommendations to requests for clarification from bidding contractors.

b. Assist in preparing any required bid addendum.

c. Attend the pre-bid meeting.

d. Provide bid analysis including responsiveness of the bids received.

1.2 **SERVICES PROVIDED BY CITY.** The CITY shall perform the following services:

1.2.1 Provide access to all public improvement plans and records and furnish one copy of drawings and reports requested.

1.2.2 Obtain all necessary permits from other regulatory agencies and other Departments. CONSULTANT shall participate in the completion of such forms but CITY will submit these and pay for any applicable fees.

1.2.3 Provide sample of title block for the plans and standard form Public Works Construction Contract Documents to be used with the General Provisions (Technical Specifications).

1.2.4 Upon request, verify the location of existing CITY owned utilities.

1.2.5 Provide all legal advertising mailings and postings required.

1.2.6 Provide access around each reservoir.

1.2.7 Duplicate all final plans and specifications.

1.2.8 Provide all necessary surveying and testing required for design, including geotechnical engineering services if required during construction.

1.2.9 Provide overall project management.

1.2.10 Provide coordination of all inquiries from prospective bidders during the bidding period.

2.0 TIMING REQUIREMENTS

2.1 Time is of the essence in the performance of work under this Agreement and the following timing requirements shall be strictly adhered to unless otherwise modified in writing as set forth in Section 2.6. Failure by CONSULTANT to strictly adhere to these timing requirements may result in termination of this Agreement by the CITY and the assessment of damages against the CONSULTANT for delays.

2.2 Task I. CONSULTANT shall prepare and deliver six (6) copies of the Draft and Final Summary Report which shall include Field Investigation Notes, Results of Diver Inspections and Cleaning, Geotechnical Studies, Surveying, Structural Analysis, and Preliminary Reservoir Repairs Phase 3 Plans within 105 calendar days of the execution of this Agreement. The Preliminary Reservoir Repairs Phase 3 Plans will be advanced to approximately a 40% design level. No work

shall be performed by CONSULTANT beyond the Task I stage until the Water Utilities Director has given written approval of the Summary Report Final Draft and authorization to perform Task II.

2.3 Task II. CONSULTANT shall prepare and deliver six (6) copies of the 90% of the Reservoir Repairs Phase 3 detail drawings and technical specifications, engineer's estimate, and bid schedule within 45 calendar days of the Summary Report Final Draft written approval. No work shall be performed beyond the Task II stage until the Water Utilities Director has given written approval to perform Task III.

2.4 Task III. CONSULTANT shall prepare and deliver one (1) hard copy of the final Reservoir Repairs Phase 3 detail drawings, and six (6) hard copies and two (2) CD's of the final technical specifications, final engineer's estimate, and final bid schedule. Final drawings shall be submitted on mylars. The final submittal shall be made within 35 calendar days of the 90% submittal and the Water Utilities Directors' written request to submit the final documents and mylars.

2.5 Task IV CONSULTANT shall assist the City with the bid process

2.6 CONSULTANT shall submit all requests for extensions of time for performance in writing to the Water Utilities Director no later than ten (10) calendar days after the start of the condition which purportedly caused the delay, and not later than the date on which performance is due. The Water Utilities Director shall review all such requests and may grant reasonable time extensions for unforeseeable delays which are beyond CONSULTANT'S control.

2.7 For all time periods not specifically set forth herein, the CONSULTANT shall respond in the most expedient and appropriate manner under the circumstances, by either telephone, fax, hand delivery, mail, or email.

3.0 **DESIGN CRITERIA AND STANDARDS.** All work shall be performed in accordance with applicable CITY, state and federal codes and criteria. In the performance of its professional services, CONSULTANT shall use the degree of care and skill ordinarily exercised by consultants under similar conditions.

All plans shall be ink drawn on standard mylar sheets at the CONSULTANT's cost. Contract specifications shall conform to the CITY'S specification procedures and the format of the CITY'S standard form Contract Documents for Public Works Construction.

4.0 **INDEPENDENT CONTRACTOR.** CONSULTANT'S relationship to the CITY shall be that of an independent contractor. CONSULTANT shall have no authority, express or implied, to act on behalf of the CITY as an agent, or to bind

the CITY to any obligation whatsoever, unless specifically authorized in writing by the Water Utilities Director. The CONSULTANT shall not be authorized to communicate directly with, nor in any way direct the actions of, any bidder or the construction contractor for this project without the prior written authorization by the Water Utilities Director. CONSULTANT shall be sole responsible for the performance of any of its employees, agents or subcontractors under this agreement.

CONSULTANT shall report to the CITY any and all employees, agents and consultants performing work in connection with this project, and all shall be subject to the approval of the CITY.

5.0 **CITY BUSINESS LICENSE.** Prior to the commencement of any work under this agreement, the CONSULTANT shall obtain and present a copy of an Oceanside City Business License to the Water Utilities Director.

6.0 **WORKERS' COMPENSATION.** Pursuant to Labor Code section 1861, the CONSULTANT hereby certifies that the CONSULTANT is aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for Workers' Compensation or to undertake self-insurance in accordance with the provisions of that Code, and the CONSULTANT will comply with such provisions and provide certification of such compliance as a part of these Award Documents. The certification shall be in accordance with Subsections 7.3 through 7.8 of this Agreement.

7.0 **LIABILITY INSURANCE.**

7.1 CONSULTANT shall, throughout the duration of this Agreement, maintain comprehensive general liability and property damage insurance, or commercial general liability insurance, covering all operations of CONSULTANT, its agents and employees, performed in connection with this Agreement including, but not limited to, premises and automobile.

7.2 CONSULTANT shall maintain liability insurance in the following minimum limits:

Comprehensive General Liability Insurance
(bodily injury and property damage)

Combined Single Limit Per Occurrence	$ 1,000,000
General Aggregate	$ 2,000,000*

Commercial General Liability Insurance
(bodily injury and property damage)

General limit per occurrence	$ 1,000,000
General limit project specific	$ 2,000,000
Automobile Liability Insurance	$ 1,000,000

*General aggregate per year, or part thereof, with respect to losses or other acts or omissions of CONSULTANT under this Agreement.

7.3 If coverage is provided through a Commercial General Liability Insurance policy, a minimum of 50% of each of the aggregate limits shall remain available at all times. If over 50% of any aggregate limit has been paid or reserved, the CITY may require additional coverage to be purchases by the CONSULTANT to restore the required limits. The CONSULTANT shall also notify the CITY'S Project Manager promptly of all losses or claims over $25,000 resulting from work performed under this contract, or any loss or claim against the CONSULTANT resulting from any of the CONSULTANT'S work.

7.4 All insurance companies affording coverage to the CONSULTANT for the purposes of this Section shall add the City of Oceanside as "additional insured" under the designated insurance policy for all work performed under this Agreement. Insurance coverage provided to the CITY as an additional insured shall be primary insurance and other insurance maintained by the CITY, its officers, agents and employees shall be excess only and not contributing with insurance provided pursuant to this Section.

7.5 All insurance companies affording coverage to the CONSULTANT pursuant to this Agreement shall be insurance organizations authorized by the Insurance Commissioner of the State of California to transact business of insurance in the state or be rated as A-X or higher by A.M. Best.

7.6 CONSULTANT shall provide thirty (30) days written notice to the CITY should any insurance policy required by this Agreement be cancelled before the expiration date. For the purposes of this notice requirement, any material change in the policy prior to the expiration shall be considered a cancellation.

7.7 CONSULTANT shall provide evidence of compliance with the insurance requirements listed above by providing, at minimum, a Certificate of Insurance and applicable endorsements, in a form satisfactory to the City Attorney, concurrently with the submittal of this Agreement.

7.8 CONSULTANT shall provide a substitute Certificate of Insurance no later than thirty (30) days prior to the policy expiration date. Failure by the CONSULTANT

to provide such a substitution and extend the policy expiration date shall be considered a default by CONSULTANT and may subject the CONSULTANT to a suspension or termination of work under the Agreement.

7.9 Maintenance of insurance by the CONSULTANT as specified in this Agreement shall in no way be interpreted as relieving the CONSULTANT of any responsibility whatsoever and the CONSULTANT may carry, at its own expense, such additional insurance as it deems necessary.

8.0 **PROFESSIONAL ERRORS AND OMISSIONS INSURANCE.** Throughout the duration of this agreement and four (4) years thereafter, the CONSULTANT shall maintain professional errors and omissions insurance for work performed in connection with this Agreement in the minimum amount of One Million dollars ($1,000,000).

CONSULTANT shall provide evidence of compliance with these insurance requirements by providing a Certificate of Insurance.

9.0 **CONSULTANT'S INDEMNIFICATION OF CITY.** To the greatest extent allowed by law, CONSULTANT shall indemnify and hold harmless the CITY and its officers, agents and employees against all claims for damages to persons or property arising out of CONSULTANT'S work, including the negligent acts, errors or omissions or wrongful acts or conduct of the CONSULTANT, or its employees, agents, subcontractors, or others in connection with the execution of the work covered by this Agreement, except for those claims arising from the willful misconduct, sole negligence or active negligence of the CITY, its officers, agents, or employees. CONSULTANT'S indemnification shall include any and all costs, expenses, attorneys' fees, expert fees and liability assessed against or incurred by the CITY, its officers, agents, or employees in defending against such claims or lawsuits, whether the same proceed to judgment or not. Further, CONSULTANT at its own expense shall, upon written request by the CITY, defend any such suit or action brought against the CITY, its officers, agents, or employees founded upon, resulting

or arising from the conduct, tortious acts or omissions of the CONSULTANT.

CONSULTANT'S indemnification of CITY shall not be limited by any prior or subsequent declaration by the CONSULTANT.

10.0 **ERRORS AND OMISSIONS.** In the event that the Water Utilities Director determines that the CONSULTANT'S negligence, misconduct, errors or omissions in the performance of work under this Agreement has resulted in expense to CITY greater than would have resulted if there were no such negligence, errors or omissions in the plans or contract specifications,

CONSULTANT shall reimburse CITY for the additional expenses incurred by the CITY, including engineering, construction and/or restoration expense. Nothing herein is intended to limit CITY'S rights under Sections 7, 8 or 9.

11.0 **NO CONFLICT OF INTEREST.** The CONSULTANT shall not be financially interested in any other CITY contract for this project. For the limited purposes of interpreting this section, the CONSULTANT shall be deemed a "City officer or employee", and this Section shall be interpreted in accordance with Government Code section 1090. In the event that the CONSULTANT becomes financially interested in any other CITY contract for this project, that other contract shall be void. The CONSULTANT shall indemnify and hold harmless the CITY, under Section 9 above, for any claims for damages resulting from the CONSULTANT'S violation of this Section.

12.0 **OWNERSHIP OF DOCUMENTS.** All plans and specifications, including details, computations and other documents, prepared or provided by the CONSULTANT under this Agreement shall be the property of the CITY. The CITY agrees to hold the CONSULTANT free and harmless from any claim arising from any use, other than the purpose intended, of the plans and specifications and all preliminary sketches, schematics, preliminary plans, architectural perspective renderings, working drawings, including details, computation and other documents, prepared or provided by the CONSULTANT. CONSULTANT may retain a copy of all material produced under this Agreement for the purpose of documenting their participation in this project.

13.0 **COMPENSATION.**

13.1 For work performed by CONSULTANT in accordance with this Agreement, CITY shall pay CONSULTANT in accordance with the schedule of billing rates set forth in Exhibit "A", attached hereto and incorporated herein by reference. No rate changes shall be made during the term of this Agreement without prior written approval of the Water Utilities Director. CONSULTANT'S compensation for all work performed in accordance with this Agreement shall not exceed the total contract price of $422,400.

No work shall be performed by CONSULTANT in excess of the total contract price without prior written approval of the Water Utilities Director.

CONSULTANT shall obtain approval by the Water Utilities Director prior to performing any work which results in incidental expenses to CITY as set forth in Section 13.2.2.

13.2 CONSULTANT shall maintain accounting records including the following information:

13.2.1 Names and titles of employees or agents, types of work performed and times and dates of all work performed in connection with this Agreement which is billed on an hourly basis.

13.2.2 All incidental expenses including reproductions, computer printing, postage, mileage and subsistence.

13.3 CONSULTANT'S accounting records shall be made available to the Water Utilities Director for verification of billings, within a reasonable time of the Water Utilities Director's request for inspection.

13.4 CONSULTANT shall submit monthly invoices to CITY. CITY shall make partial payments to CONSULTANT not to exceed the total contract price within thirty (30) days of receipt of invoice, subject to the approval of the Water Utilities Director, and based upon the following partial payment schedule:

13.4.1 Prior to submittal and CITY approval of the Summary Report Final Draft including Meetings, Project Management, and Quality Control Reviews, cumulative payments shall not exceed: $222,000.

13.4.2 Prior to submittal and CITY approval of the 90% of the Reservoir Repairs Phase 3 detail drawings and technical specifications, engineer's estimate, and bid schedule, including Meetings, Project Management, and Quality Control Reviews, cumulative payments shall not exceed: $365,000.

13.4.3 Prior to submittal and CITY approval of the Final Reservoir Repairs Phase 3 detail drawings final technical specifications, final engineer's estimate, final bid schedule, and drawing mylars, including Meetings, Project Management, and Quality Control Reviews, cumulative payments shall not exceed: $408,500.

13.4.4 Cumulative Payments of $422,400 shall be made to CONSULTANT after the bid process is complete.

14.0 **TERMINATION OF AGREEMENT.** Either party may terminate this Agreement by providing thirty (30) days written notice to the other party.

If any portion of the work is terminated or abandoned by the CITY, then the CITY shall pay CONSULTANT for any work completed up to and including the date of termination or abandonment of this Agreement, in accordance with Section 13.

The CITY shall be required to compensate CONSULTANT only for work performed in accordance with the Agreement up to and including the date of termination.

15.0 **ASSIGNMENT AND DELEGATION.** This Agreement and any portion thereof shall not be assigned or transferred, nor shall any of the CONSULTANT'S duties be delegated, without the express written consent of the CITY. Any attempt to assign or delegate this Agreement without the express written consent of the CITY shall be void and of no force or effect. Consent by the CITY to one assignment shall not be deemed to be a consent to any subsequent assignment.

This Agreement shall inure to the benefit of and be binding upon the parties hereto and their respective successors and assigns.

16.0 **ENTIRE AGREEMENT.** This Agreement comprises the entire integrated understanding between CITY and CONSULTANT concerning the work to be performed for this project and supersedes all prior negotiations, representations or agreements.

17.0 **INTERPRETATION OF THE AGREEMENT.** The interpretation, validity and enforcement of the Agreement shall be governed by and construed under the laws of the State of California. The Agreement does not limit any other rights or remedies available to CITY.

The CONSULTANT shall be responsible for complying with all local, state and federal laws whether or not said laws are expressly stated or referred to herein.

Should any provision herein be found or deemed to be invalid, the Agreement shall be construed as not containing such provision and all other provisions, which are otherwise lawful, shall remain in full force and effect, and to this end the provisions of this Agreement are severable.

18.0 **AGREEMENT MODIFICATION.** This Agreement may not be modified orally or in any manner other than by an Agreement in writing, signed by the parties hereto.

19.0 **DISPUTE RESOLUTION.**

a. Any controversy or claim arising out of or relating to this Agreement, or concerning the breach or interpretation thereof, shall be first submitted to mediation, the cost of which shall be borne equally by the parties.

b. No suit shall be brought on this contract unless all statutory claims filing requirements have been met.

20.0 **NOTICES.** All notices, demands, requests, consents or other communications which this Agreement contemplates or authorizes, or requires or permits either party to give to the other, shall be in writing and shall be personally delivered or mailed to the respective party as follows:

TO CITY:	**TO CONSULTANT:**
City of Oceanside Water Utilities Director 300 North Coast Highway Oceanside, CA 92054	HDR, Inc. Matt Thomas 8690 Balboa Avenue, Suite 200 San Diego, CA 92123-1502

Either party may change its address by notice to the other party as provided herein.

Communications shall be deemed to have been given and received on the first to occur:

a. Actual receipt at the offices of the party to whom the communication is to be sent, as designated above, or

b. Three (3) working days following the deposit in the United States mail of registered or certified mail, postage prepaid, return receipt requested, addressed to the offices of the party to whom the communication is to be sent, as designated above.

21.0 **SIGNATURES.** The individuals executing this Agreement represent and warrant that they have the right, power, legal capacity and authority to enter into and to execute this Agreement on behalf of the respective legal entities of the CONSULTANT and the CITY.

IN WITNESS WHEREOF, the parties hereto for themselves, their heirs, executors, administrators, successors and assigns do hereby agree to the full performance of the covenants herein contained and have caused this Professional Services Agreement to be executed by setting hereunto their signatures on the dates indicated below:

HDR, INC.	CITY OF OCEANSIDE
By: _____	By: _____
Name/Title DAVID A. LUDWIG, SR VICE PRESIDENT	Steven R. Jepsen, City Manager
Date: 12/4/13	Date: _____

By: _____
Name/Title
KIP D FIELD, VICE PRESIDENT

Date: 12-4-13

APPROVED AS TO FORM:

_____
City Attorney

47-0680568
Employer ID No.

NOTARY ACKNOWLEDGMENTS OF CONSULTANT MUST BE ATTACHED.

CALIFORNIA ALL-PURPOSE CERTIFICATE OF ACKNOWLEDGMENT

State of California

County of Orange

On Dec. 4, 2013 before me, Michelle A. White, Notary Public
(Here insert name and title of the officer)

personally appeared David A. Ludwin and Kip D. Field

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) ~~is~~/are subscribed to the within instrument and acknowledged to me that ~~he~~/she/they executed the same in ~~his~~/her/their authorized capacity(ies), and that by ~~his~~/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature of Notary Public

(Notary Seal)

MICHELLE A. WHITE
Commission # 1929509
Notary Public - California
Orange County
My Comm. Expires Apr 17, 2015

ADDITIONAL OPTIONAL INFORMATION

DESCRIPTION OF THE ATTACHED DOCUMENT

City of Oceanside - Professional Services Agreement.
(Title or description of attached document)

(Title or description of attached document continued)

Number of Pages _____ Document Date _____

(Additional information)

CAPACITY CLAIMED BY THE SIGNER

- ☐ Individual (s)
- ☐ Corporate Officer

(Title)

- ☐ Partner(s)
- ☐ Attorney-in-Fact
- ☐ Trustee(s)
- ☐ Other _____

INSTRUCTIONS FOR COMPLETING THIS FORM

Any acknowledgment completed in California must contain verbiage exactly as appears above in the notary section or a separate acknowledgment form must be properly completed and attached to that document. The only exception is if a document is to be recorded outside of California. In such instances, any alternative acknowledgment verbiage as may be printed on such a document so long as the verbiage does not require the notary to do something that is illegal for a notary in California (i.e. certifying the authorized capacity of the signer). Please check the document carefully for proper notarial wording and attach this form if required.

- State and County information must be the State and County where the document signer(s) personally appeared before the notary public for acknowledgment.
- Date of notarization must be the date that the signer(s) personally appeared which must also be the same date the acknowledgment is completed.
- The notary public must print his or her name as it appears within his or her commission followed by a comma and then your title (notary public).
- Print the name(s) of document signer(s) who personally appear at the time of notarization.
- Indicate the correct singular or plural forms by crossing off incorrect forms (i.e. ~~he~~/she/~~they,~~ is /~~are~~) or circling the correct forms. Failure to correctly indicate this information may lead to rejection of document recording.
- The notary seal impression must be clear and photographically reproducible. Impression must not cover text or lines. If seal impression smudges, re-seal if a sufficient area permits, otherwise complete a different acknowledgment form.
- Signature of the notary public must match the signature on file with the office of the county clerk.
  - ❖ Additional information is not required but could help to ensure this acknowledgment is not misused or attached to a different document.
  - ❖ Indicate title or type of attached document, number of pages and date.
  - ❖ Indicate the capacity claimed by the signer. If the claimed capacity is a corporate officer, indicate the title (i.e. CEO, CFO, Secretary).
- Securely attach this document to the signed document

SCOPE OF SERVICES

OVERVIEW

The City of Oceanside Water Utilities Department is enacting repairs and upgrades to its 12 potable water storage reservoirs. The project is being completed in three phases.

- **Phase 1** included a planning level condition assessment and structural evaluation of the 12 reservoirs.
- **Phase 2** is currently underway and is comprised of planning, design, and construction of improvements to two of the City's reservoirs: Fire Mountain Reservoir and Guajome No.1 Reservoir.
- **Phase 3** in general includes planning, design, and construction of improvements for the remaining 10 reservoirs. In general, Phase 3 addresses the deficiencies identified in the Phase 1 condition assessment, as summarized on the following page.

RESERVOIRS	CAPACITY (MG)	TYPE	ABOVE GROUND/PARTIALLY BURIED	HWL	STRUCTURAL/SEISMIC UPGRADES	CLEANING/FLOOR INSPECTION	CRACK REPAIRS (INTERIOR)	MISC. RECOATING OF APPURTENANCES AND PIPING	STRUCTURAL DEFECT REPAIRS	MISC. SITE IMPROVEMENTS	MISC. REPAIRS OR REPLACEMENT OF APPURTENANCES	ELASTOMERIC LINER	EXTERIOR CRACK REPAIR	INLET/OUTLET REPLACEMENT
1. Guajome No. 2	5	P	PB	511		✓	✓	✓	✓					
2. Henie Hills	3	P	AG	409	✓		✓	✓			✓	✓		
3. John Paul Steiger	3	P	AG	320		✓		✓	✓	✓			✓	
4. Morro Hills No. 1	5	P	AG	738	✓	✓	✓	✓		✓	✓		✓	✓
5. Morro Hills No. 2	5	S	AG	738		✓								
6. Pilgrim Peak	5	P	AG	321		✓		✓		✓	✓			✓
7. San Francisco Peak No. 1	1.5	P	AG	569	✓		✓	✓		✓	✓			
8. San Francisco Peak No. 2	5	P	PB	511		✓	✓	✓			✓			
9. Talone	5	P	PB	320		✓		✓		✓	✓			
10. Wire Mountain	5	P	PB	320				✓		✓	✓			

The Scope of Services described herein provides engineering consulting services for Phase 3. In general, this includes:

- Cleaning, draining, and floor inspection of 7 of the reservoirs as noted in the table above.
- Condition assessment services for all 10 reservoirs to define additional detail of the needs for each tank, augmenting the results of the Phase 1 study.
- Geotechnical engineering and site surveying to support the analyses and project construction.
- Structural engineering analyses for all 10 reservoirs to define additional detail of the needs for each tank, apply site specific soil parameters from the geotechnical investigations, and develop design alternatives and final detailed design for structural repairs and upgrades.

- Development of a detailed project schedule, including input from operations staff to provide construction contractor requirements for construction phasing parameters.
- Preparation of construction documents (plans and specifications) for construction of the Phase 3 project.
- Bid phase services to support bidding of the project by the City.

Based on our understanding of the project, HDR will provide the following scope of services:

A. INVESTIGATIONS

1. **Collect and Review Pertinent Record Information.** Obtain, compile, and review available information that may be pertinent to the Project. This includes citywide mapping, record drawings for the 10 reservoirs, prior geotechnical investigations, and prior studies and investigations including the Phase 1 Condition Assessment report.

2. **Geotechnical.** Provide a geotechnical engineering investigation, including the following services:
    a. Review readily available geologic maps, literature and previous geotechnical reports (to be provided by the City of Oceanside) pertaining to the reservoir sites with regard to geotechnical and geologic conditions and hazards.

    b. Perform a field investigation to include excavation of one exploratory boring at each of the reservoir sites to minimum depths of approximately 50 feet below ground surface at each site to examine and sample soil and geologic conditions. It is anticipated that the borings will be drilled using a hollow stem auger at most of the facilities, but hard rock conditions are expected at the Pilgrim Creek and San Francisco Peak sites and possibly at the Morro Hills site, requiring use of air percussion or wireline coring rig. Exploration fees include preparation of a boring permit waiver application and fees to be submitted by TGI to the San Diego County DEH and assume a boring permit and related fees will not be required at any of the reservoirs sites.

    c. Perform geotechnical laboratory tests on selected soil/rock samples to evaluate shear strength, unconfined compression strength, compressibility, expansion characteristics, moisture-density relationships, corrosion parameters and other tests as warranted based on observed conditions.

    d. Perform geotechnical analysis for each reservoir site to address site-specific design and construction considerations including:
        - Geotechnical, geologic and seismic hazards
        - Allowable bearing capacity
        - Compressability/settlement
        - Seismic design parameters

        Borings, laboratory tests, and geotechnical analyses will be conducted for the three reservoirs already identified for seismic rehabilitation, and for those sites where new piping is planned to be installed, all as identified in the Phase 1 analyses. Borings, laboratory tests, and geotechnical analyses for the remaining reservoirs is identified as optional services, pending review of the condition of the floors and internal structure of those tanks. Additional geotechnical analyses to determine underlying cause of cracks or structural distress would only be provided where warranted and with approval of City.

    e. Prepare separate geotechnical reports for each reservoir site presenting the data, findings and conclusions of our investigations regarding geologic and geotechnical conditions and providing our professional opinions and recommendations regarding

the geotechnical design parameters to be used in the analysis of the reservoirs and design of any required repairs. The reports will also provide geotechnical recommendations for earthwork that may be required for construction of repairs.

3. **Surveying.** Provide surveying to establish permanent horizontal and vertical control and develop base maps to locate key reservoir facility and site features, including the following services:
    a. Set durable permanent monuments at each project site. Monuments will be brass caps set in existing concrete or 2" iron pipes. A minimum of two monuments will be set at each site, and be inter-visible.
    b. Establish NAD83 (1991.35 epoch) horizontal and NGVD vertical control on each permanent monument set utilizing RTK or rapid static GPS from a minimum of 4 published first-order control points and City or County benchmarks.
    c. Collect locations around each tank to determine the center point and ring wall elevation. Collect outlet location, overflow elevation, valve vaults, site structures and additional facilities appurtenant to each reservoir. Additional topography at 4 of the tank sites providing detailed topography of area surrounding tank, extending 20' outside of the existing tank or up to the perimeter fencing.
    d. Prepare base map in AutoCAD containing the location, description and coordinates of the permanent control points, existing tank, outlet location, overflow elevation, valve vaults, site structures and any additional facilities appurtenant to the reservoir. A DTM and contours will be provided for the20' area of detailed topography surrounding the 4 tanks identified for additional topography.

4. **Cleaning and Dive Inspections.** Clean and provide dive inspections for the 7 reservoirs identified in the table above, including the following services:
    a. Remove accumulated silt from reservoir floor using vacuum system with the tanks in service.
    b. Discharge water from the cleaning process to the storm drain. Remove silt from water prior to discharge using filter bags. Three bags are assumed per reservoir. Comply with CRWQCB Order No. R9-2010-0003
    c. Perform inspection of reservoirs while in service. Disinfect personnel and equipment prior to entry per AWWA standards.
    d. Perform dye tests of reservoir floor to determine if observed cracks represent active leaks.
    e. Prepare summary report of findings, including documentation by video and still photography.

5. **Dry-State Inspections**
    a. Perform inspection of interiors of all 10 reservoirs, with the reservoirs out of service.
    b. Perform inspection of exteriors of all 10 reservoirs to reconfirm findings from Phase 1 and develop maps and drawings to depict requirements and establish locations and quantities for construction.
    c. Perform steel tank wall thickness measurement at Morro Hills 2 reservoir.
    d. Document findings of inspections through still photography and marking of record drawings or other representative mapping to identify locations and define extent of structural defects, cracking, or other repairs or upgrades.
    e. Provide summary report of findings for each site.

6. **Structural Analysis**
    a. Using updated structural design coefficients to reflect current code requirements and geotechnical conditions, prepare structural calculations to assess the seismic resistance and code compliance of the reservoirs structures.
    b. For those structures that appear to warrant seismic retrofit to extend their useful life, perform simple finite element analyses to optimize the structural design.
    c. Provide a summary report of the findings for the tanks.

7. **Summary Report.** Provide a summary report, presenting the results of the technical analyses and preliminary studies, including the following:
    a. Field investigation notes
    b. Results of diver inspections
    c. Preliminary plans showing:
        i. Record drawings annotated with locations and extents of cracks and other structural repairs.
        ii. Site plans defining various improvements envisioned for each location.
        iii. Preliminary details for new piping, repairs to appurtenances, and replacement of same where needed.
    d. Revised structural analyses and alternatives for seismic and structural retrofit requirements.
    e. Proposed requirements for coatings and cathodic protection systems.
    f. Recommendations for bidding structure and other strategies from constructability review input.
    g. Updated project schedule, including construction phasing and durations.
    h. Engineer's Opinion of Probable Construction Costs

    Provide six hard copies of draft report for City review. It is assumed City will compile its comments into a single set with any conflicting comments resolved. HDR will compile comments into a tabular form and provide written responses to comments. Provide six hard copies and a PDF digital copy for the final report.

B. DETAILED DESIGN

1. **Plans.** Prepare construction drawings for the proposed reservoir repairs. The design will include civil, mechanical, and structural drawings. Record drawings and photographs of existing facilities will be used where practical to define construction requirements. Annotated record drawings from the site assessments will be formalized to provide definition of types and extents of structural and crack repairs and other repair or installation work. Subconsultants will be retained for the structural, architectural, and electrical and instrumentation design. Separate plan sets will be developed for each reservoir, but will be developed to facilitate combining reservoirs with like features into packages. Plans will be prepared using AutoCAD and will conform to the City of Oceanside's formatting and drafting standards.

    The following is the list of drawings anticipated for the project:

Drawing No.	Title
	Common Sheets, Customize for Each Set
T-1	Title Sheet
G-1	City of Oceanside Reservoir Locations Overall Map
G-2	Legends, Design Criteria, Abbreviations, General and City of Oceanside Construction Notes

S-1	Typical Crack Repair Details
	Guajome No. 2
C-1	Site Plan and Repair Orientation Plan
M-2	Coating Repairs (photos)
S-2	Structural Repairs (photos and details)
	Henie Hills
C-1	Site Plan and Repair Orientation Plan
M-2	Coating Repairs (photos)
M-3	Appurtenance Repairs/Replacement (photos/details)
S-2	Structural/Seismic Upgrade Plan and Details
S-3	Structural/Seismic Upgrade Details
S-4	Structural/Seismic Upgrade Details 2
	John Paul Steiger
C-1	Site Plan and Repair Orientation Plan
C-2	Site Improvements Details
M-2	Coating Repairs (photos)
S-2	Structural Repairs (photos and details)
	Morro Hills No. 1
C-1	Site Plan and Repair Orientation Plan
C-2	Piping and Site Improvements Details
M-2	Coating Repairs (photos)
M-3	Appurtenance Repairs/Replacement (photos/details)
S-2	Structural Repairs (photos and details)
S-3	Structural/Seismic Upgrade Plan and Details
S-4	Structural/Seismic Upgrade Details
S-5	Structural/Seismic Upgrade Details 2
	Morro Hills No. 2
C-1	Site Plan and Repair Orientation Plan
	Pilgrim Peak
C-1	Site Plan and Repair Orientation Plan
C-2	Piping and Site Improvements Details
M-2	Coating Repairs (photos)
M-3	Appurtenance Repairs/Replacement (photos/details)
	San Francisco Peak No. 1
C-1	Site Plan and Repair Orientation Plan
C-2	Piping and Site Improvements Details
M-2	Coating Repairs (photos)
M-3	Appurtenance Repairs/Replacement (photos/details)
S-2	Structural Repairs (photos and details)
S-3	Structural/Seismic Upgrade Plan and Details
S-4	Structural/Seismic Upgrade Details
S-5	Structural/Seismic Upgrade Details 2
	San Francisco Peak No. 2
C-1	Site Plan and Repair Orientation Plan
M-2	Coating Repairs (photos)
M-3	Appurtenance Repairs/Replacement (photos/details)
	Talone
C-1	Site Plan and Repair Orientation Plan

C-2	Piping and Site Improvements Details
M-2	Coating Repairs (photos)
M-3	Appurtenance Repairs/Replacement (photos/details)
	Wire Mountain
C-1	Site Plan and Repair Orientation Plan
C-2	Piping and Site Improvements Details
M-2	Coating Repairs (photos)
M-3	Appurtenance Repairs/Replacement (photos/details)

2. **Technical Specifications.** Prepare technical specifications for the construction of the proposed reservoir improvements. Specifications will be prepared in CSI format. Incorporate City of Oceanside standards as applicable.

3. **Final Cost Opinion.** Prepare final detailed opinion of probable construction cost for the project. Any Opinion of the Construction Cost prepared by HDR represents its judgment as a design professional and is supplied for the general guidance of City. Since HDR has no control over the cost of labor and material, or over competitive bidding or market conditions, HDR does not guarantee the accuracy of such opinions as compared to contractor bids or actual cost to City.

4. **Design Review Submittals.** Provide submittals to the City for review and comment at the 90% level of completion (information developed during the assessments and technical studies will constitute between a 30% and 50% submittal. Provide 6 hard copies of draft plans and specifications for City review. It is assumed City will compile its comments into a single set with any conflicting comments resolved. HDR will compile comments into a tabular form and provide written responses to comments.

5. **Final Submittal.** After incorporation of the City review comments, prepare one (1) set of final stamped and signed originals of the construction documents (mylar drawings, Xerox reproducible specifications) for printing.

C. BID PHASE SERVICES

It is assumed for budgeting purposes that bidding will be conducted in no more than 2 phases. During the bidding phase, HDR will provide the following services:

1. Attend pre-bid conference for each phase and follow up with written clarification of issues raised at the conference.
2. Respond to contractor's questions during the advertising period.
3. Prepare up to one (1) technical addendum per phase and answer technical questions during the bidding process.
4. Review bids and information submitted with the bids for compliance with bid requirements. Contact references and conduct associated reviews of the performance record and submitted materials for the low bidder.
5. Prepare a bid evaluation table. Make a recommendation to the Client on the award of the contract.

D. MEETINGS, PROJECT MANAGEMENT AND COORDINATION

1. **Project Kickoff Meeting.** Prepare for and attend an internal kickoff meeting to outline the design, establish general project procedures and establish early action items needed to effectively and efficiently start the Project's design.

2. **Weekly PM Coordination Meetings.** Prepare for and attend weekly teleconference to advise City's Project Manager about status and findings of the investigations and design tasks.

3. **Workshops.** Conduct workshop style meetings with City staff at City offices as follows:
    a. Inspection Planning Workshop to finalize schedule and contingency plans for tank cleaning, dive inspection, and dry-state inspection activities.
    b. Post Assessment Workshop to discuss findings of field investigations and analyses and gain City direction final project elements and alternatives.

4. **Design Review Meeting with District.** Attend design review meetings following progress submittals (90%) to discuss review comments and to provide on-going communication and coordination of the work effort. Minutes summarizing the meetings will be prepared and distributed by HDR. Provide on-going coordination in the form of phone conversations and other correspondence to provide a coordinated design effort.

5. **Quality Assurance/Quality Control Plan Review.** The quality of design drawings can minimize Contractor claims. HDR will perform internal review of plans and specifications in accordance with our Quality Control program. Review is provided to clarify plans, identify discrepancies, and identify ways to reduce construction costs.

II. ADDITIONAL ENGINEERING SERVICES

If requested by the City, HDR will provide the following Additional Services, beyond the services included in Section I, Scope of Services:

A. Attendance to additional meetings beyond those specifically identified in Section I.

B. Environmental services, including environmental reviews, analysis or studies, permit preparation and processing, attendance to public hearings, etc.

C. Assistance with public participation and communications, including planning and participation in public outreach programs, attendance to public meetings and workshops, etc.

D. Planning, analysis or design of additional or alternative facilities.

E. Construction phase services including such services as shop drawing review, office and field engineering support, field observation, construction contract administration, change order review and processing, preparation of Record Drawings, etc.

F. Any additional project related services not specifically included in Section I, Scope of Services.

III. CLIENT FURNISHED SERVICES

The following services or information will be provided by the City or its consultants:

A. Copies of all relevant reports, studies, drawings, correspondence, and other relevant project information or data.

B. Assign one person to serve as the City's project manager who has authority to represent the Client and will serve as the point of interface for all project issues and communications.

C. Application and processing of all required permits including complete environmental compliance.

D. Coordination and processing with all utility companies.

E. A complete written description of all pertinent project information and issues, including all unusual or critical requirements of the City.

RESERVOIR REPAIRS PHASE 3 - 908754600712

RFP MAILING LIST

Company	Address	City	State	Zip	First Name	Last Name	Phone
Infratructure Engineering Corporation	301 Mission Avenue, Suite 202	Oceanside	CA	92054	Preston	Lewis	760-526-0795
Cornerstone Engineering, Inc.	717 Pier View way	Oceanside	CA	92054-280	Mike	Boraks	760-722-3495
Carollo Engineers	615 South Tremont Street	Oceanside	CA	92054	Jeff	Thornbury	760-637-2700
Tetra Tech	P.O. Box 5088	Oceanside	CA	92052	Howard	Arnold	760-754-0550
NV5	1029 Gallery Drive	Oceanside	CA	92057	Julian	Palacios	760-476-9193
RMC Water and Environment	603 Seagaze Drive, #125	Oceanside	CA	92054	Scott	Goldman, P.E., BCEE	949-420-5314
HDR engineering, Inc.	8690 Balboa Ave., Suite 200	San Diego	CA	92123	Susan	Buell	858-712-8400
Richard Brady & Associates	3710 Ruddin Road	San Diego	CA	92123	Richard	Brady	858-496-0500
Dudek & Associates, Inc.	605 Thirs Street	Encinitas	CA	92024	Patty	Post	760-942-5147
Brown and Caldwell	9665 Chesapeake Drive, Suite 201	San Diego	CA	92123	Nancy E.	Gardiner	858-514-8822
Malcom Pirnie, Inc.	1525 Faraday Avenue, Suite 290	Carlsbad	CA	92008	Paul F.	Wilson	760-602-3800
Atkins	3570 Carmel Mountain Road, Suite 300	San Diego	CA	92130	Mark	Elliott	858-514-1042

EXHIBIT B

CONSULTANT PROPOSAL - RATING FORM

NAME OF FIRM: A) Dudek; B) BRADY; C) Kleinfelder SWE; D) HDR

DATE: 11/21/2013

PROJECT: Reservoir Repairs Phase 3

PROJECT NO.: 908754600712

ITEM	POINTS	CONSULTANT'S RATING A	B	C	D
I. QUALIFICATIONS OF FIRM AND MEMBERS:					
A. Specialized expertise of members	15	13	15	14	14
B. Adequacy of staff and resources.	15	15	10	13	15
II. PERFORMANCE OF WORK SIMILAR IN CHARACTER:					
A. Comparable work (local area preferred).	10	9	10	9	8
B. Proposal submitted by Oceanside firm.	6	0	0	0	0
C. Proposal included an Oceanside firm as part of a consulting team.	4	2	0	4	4
D. Additional points based on abilities, qualifications, and commitment of Oceanside firm.	5	2	0	2	2
III. ABILITY TO PROVIDE SERVICES:					
A. Ability to complete job on time.	10	9	9	9	9
IV. QUALITY OF PROPOSAL:					
A. Satisfactorily address all objectives.	10	9	8	6	10
B. Provide additional amplifying information.	5	4	4	1	5
C. Presentation, clarity, neatness.	5	4	5	5	5
V. WORK PERFORMANCE FOR THE CITY:					
A. No work in past 12 months.	10	0	0	10	0
B. Work in past 12 months - deductions based on Contract amount.		8	8	0	9
VI. PRICE:		$472,000	$1,177,000	$643,000	$422,000
A. Overall cost.	10	8	3	6	9
TOTALS:	105	83	72	79	90

RANKING:

1 HDR

2 Dudek

3 Kleinfelder SWE

4 BRADY

5

6

RATED BY:

Name/Title: Jason Dafforn - Water Utilities Division Manager

Name/Title: Greg Keppler - Water/Wastewater Project Manager

Name/Title: Gary Bodman - Water/Wastewater Project Manager

Name/Title: Robert Gutierrez - Water Distribution Supervisor

Date: 11/21/2013

EXHIBIT C

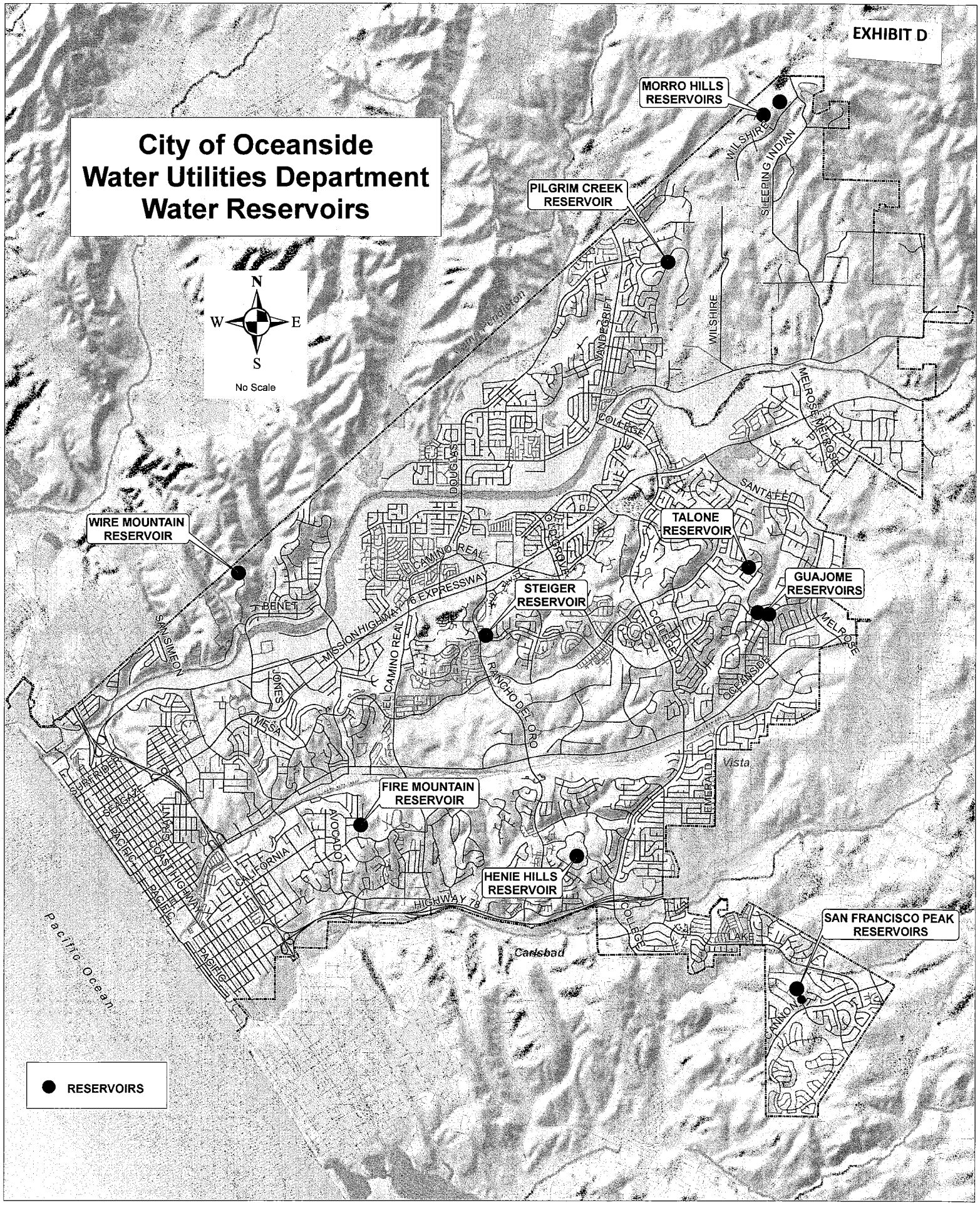
EXHIBIT D
City of Oceanside
Water Utilities Department
Water Reservoirs
N
W
E
S
No Scale
MORRO HILLS RESERVOIRS
PILGRIM CREEK RESERVOIR
WIRE MOUNTAIN RESERVOIR
TALONE RESERVOIR
GUAJOME RESERVOIRS
STEIGER RESERVOIR
FIRE MOUNTAIN RESERVOIR
HENIE HILLS RESERVOIR
SAN FRANCISCO PEAK RESERVOIRS
RESERVOIRS
WILSHIRE
SLEEPING INDIAN
VANDEGRIFT
COLLEGE
MELROSE
SANTA FE
DOUGLAS
CAMINO REAL
MISSION
HIGHWAY 76 EXPRESSWA
BENET
SAN SIMEON
JONES
MESA
RANCHO DEL ORO
OCEANSIDE
EMERALD
Vista
SURFRIDER
SEASAPE
PACIFIC
COAST HIGHWAY
CALIFORNIA
AVOCADO
HIGHWAY 78
LAKE
CANNON
Carlsbad
Pacific Ocean