

## AGENDA

### IRVINE RANCH WATER DISTRICT BOARD OF DIRECTORS REGULAR MEETING

July 23, 2018

#### PLEDGE OF ALLEGIANCE

#### CALL TO ORDER

5:00 p.m., Board Room, District Office  
15600 Sand Canyon Avenue, Irvine, California

#### ROLL CALL

Directors LaMar, Matheis, Swan, Withers and President Reinhart

#### NOTICE

If you wish to address the Board on any item, including Consent Calendar items, please file your name with the Secretary. Forms are provided on the lobby table. Remarks are limited to three minutes per speaker on each subject. Consent Calendar items will be acted upon by one motion, without discussion, unless a request is made for specific items to be removed from the Calendar for separate action.

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#### COMMUNICATIONS TO THE BOARD

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1. A. Written:

B. Oral:

2. ITEMS RECEIVED TOO LATE TO BE AGENDIZED

Recommendation: Determine the need to discuss and/or take immediate action on item(s).

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#### PUBLIC HEARING

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3. SEWER TAXES IN THE NEWPORT NORTH SERVICE AREA

- a. Recommendation: Open the hearing.
- b. Inquire of the Secretary how the hearing was noticed.
- c. Receive and file the affidavit of posting and proof of publication.
- d. Request legal counsel to describe the nature of the proceedings.
- e. Inquire of the Secretary if there have been any written communications.
- f. Inquire whether there are any individuals who wish to speak regarding the proposed collection of sewer charges on the tax roll in the Newport North service area.
- g. Inquire of the Board if it has any comments or questions.
- h. Close the hearing, and
- i. Adopt a resolution by title.

Reso No. 2018-

**CONSENT CALENDAR**

**Resolution No. 2018-20**

**Items 4 through 14**

4. RATIFY/APPROVE BOARD OF DIRECTORS' ATTENDANCE AT MEETINGS AND EVENTS

Recommendation: That the Board ratify/approve the meetings and events for Mary Aileen Matheis, Steve LaMar, Peer Swan and John Withers, as described.

5. MINUTES OF REGULAR AND ADJOURNED REGULAR BOARD MEETINGS

Recommendation: That the minutes of the July 9, 2018 Regular Board Meeting and July 17, 2018 Adjourned Regular Board Meeting be approved as presented.

6. JUNE 2018 TREASURY REPORT

Recommendation: That the Board receive and file the Treasurer's Investment Summary Report, the summary of fixed and variable rate debt, the Monthly Interest Rate SWAP Summary for June 2018, and Disclosure Report of Reimbursements to Board members and staff; approve the June 2018 Summary of Payroll ACH payments in the total amount of \$1,875,683 and approve the June 2018 Accounts Payable Disbursement Summary of Warrants 388469 through 389484, Workers' Compensation distributions, wire transfers, payroll withholding distributions and voided checks in the total amount of \$22,296,536.

7. SETTING CONNECTION FEES AND PROPERTY TAXES FOR FISCAL YEAR 2018-19

Recommendation: That the Board adopt resolutions: 1) making changes to connection fees as set forth in the Schedule of Rates and Charges in Exhibit "B" to the Rules and Regulations of Irvine Ranch Water District for water, sewer, recycled water, and natural treatment system service; 2) establishing Ad Valorem tax revenues for Fiscal Year 2018/19; and 3) amending allocation of Ad Valorem property taxes to debt service subject to pledge.

Res. No. 2018-  
Res. No. 2018-  
Res. No. 2018-

8. IRVINE LAKE PIPELINE NORTH CONVERSION OFFSITE PIPELINES CONTRACT CHANGE ORDER

Recommendation: That the Board approve Contract Change Order No. 7 with CCL Contracting, Inc. in the amount of \$110,068.17 for additional construction work for the Irvine Lake Pipeline North Conversion Offsite Pipelines, Project 05823.

**CONSENT CALENDAR (CONTINUED)**

**Items 4 through 14**

9. IRVINE LAKE PIPELINE NORTH CONVERSION RESERVOIR VARIANCE

Recommendation: That the Board authorize the General Manager to execute Variance No. 3 in the amount of \$64,491 with Kleinfelder for additional engineering services during construction for the Irvine Lake Pipeline North Conversion Reservoir, Project 05407.

10. REHABILITATION OF DYER ROAD WELLFIELD WELLS 10 AND 16 CONSULTANT SELECTION

Recommendation: That the Board authorize the General Manager to execute a Professional Services Agreement with Richard C. Slade Associates LLC in the amount of \$249,391 for rehabilitation of Dyer Road Wellfield Wells 10 and 16, Projects 07087 and 07091, and two additional wells to be selected at a later date.

11. TURTLE RIDGE PIPELINES CATHODIC PROTECTION CONSULTANT SELECTION

Recommendation: That the Board authorize the General Manager to execute a Professional Services Agreement with V&A Engineering in the amount of \$138,909 for the Turtle Ridge Pipelines Cathodic Protection, Projects 07888 and 07889.

12. LAKE FOREST RECYCLED WATER SERVICES ON BAKE PARKWAY AND TOLEDO WAY CONSTRUCTION AWARD

Recommendation: That the Board authorize the General Manager to execute a construction contract with T. E. Roberts in the amount of \$183,700 for the Lake Forest Recycled Water Services on Bake Parkway and Toledo Way, Project 07159.

13. MICHELSON WATER RECYCLING PLANT MISCELLANEOUS REPAIRS – FINAL ACCEPTANCE

Recommendation: That the Board accept construction of Michelson Water Recycling Plant Miscellaneous Repairs, Project 04467; authorize the General Manager to file a Notice of Completion; and authorize the release of retention 35 days after filing of the Notice of Completion.

14. REIMBURSEMENT AGREEMENTS BETWEEN IRWD AND THE CITY OF IRVINE FOR THE ANNUAL SLURRY SEAL AND PAVEMENT REHABILITATION PROJECT AND THE CULVER DRIVE AND UNIVERSITY DRIVE INTERSECTION IMPROVEMENTS

Recommendation: That the Board authorize the General Manager to execute Reimbursement Agreements with the City of Irvine for the Annual Slurry Seal and Pavement Rehabilitation project and the Culver Drive and University Drive Intersection Improvements project subject to non-substantive changes.

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## **ACTION CALENDAR**

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15. **SEWAGE TREATMENT MASTER PLAN BUDGET INCREASE  
AND CONSULTANT SELECTION**

Recommendation: That the Board approve a budget increase in the amount of \$209,000, from \$921,300 to \$1,130,300, for Project 05427 and in the amount of \$104,500, from \$454,300 to \$558,800, for Project 07141; and authorize the General Manager to execute a Professional Services Agreement with HDR in the amount of \$1,070,600 for engineering services for the Sewage Treatment Master Plan, Projects 05427 and 07141.

16. **CULVER DRIVE RECYCLED WATER PIPELINE REPLACEMENT  
CONSTRUCTION AWARD**

Recommendation: That the Board authorize the General Manager to execute a construction contract with E. J. Meyer Company in the amount of \$707,777 for the Culver Drive Recycled Water Pipeline Replacement, Project 10588.

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## **OTHER BUSINESS**

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Pursuant to Government Code Section 54954.2, members of the Board of Directors or staff may ask questions for clarification, make brief announcements, and make brief reports on his/her own activities. The Board or a Board member may provide a reference to staff or other resources for factual information, request staff to report back at a subsequent meeting concerning any matter, or direct staff to place a matter of business on a future agenda. Such matters may be brought up under the General Manager's Report or Directors' Comments.

- 17. A. General Manager's Report
- B. Directors' Comments
- C. Adjourn

**Availability of agenda materials:** Agenda exhibits and other writings that are disclosable public records distributed to all or a majority of the members of the Irvine Ranch Water District Board of Directors in connection with a matter subject to discussion or consideration at an open meeting of the Board of Directors are available for public inspection in the District's office, 15600 Sand Canyon Avenue, Irvine, California ("District Office"). If such writings are distributed to members of the Board less than 72 hours prior to the meeting, they will be available from the District Secretary of the District Office at the same time as they are distributed to Board Members, except that if such writings are distributed one hour prior to, or during, the meeting, they will be available at the entrance to the Board of Directors Room of the District Office. The Irvine Ranch Water District Board Room is wheelchair accessible. If you require any special disability-related accommodations (e.g., access to an amplified sound system, etc.), please contact the District Secretary at (949) 453-5300 during business hours at least seventy-two (72) hours prior to the scheduled meeting. This agenda can be obtained in alternative format upon written request to the District Secretary at least seventy-two (72) hours prior to the scheduled meeting.

July 23, 2018

Prepared by: Cheryl Carter

Submitted by: Cheryl Clary

Approved by: Paul Cook



## PUBLIC HEARING

### SEWER TAXES IN THE NEWPORT NORTH SERVICE AREA

#### SUMMARY:

On June 18, 2018, the Board adopted Rates and Charges for Fiscal Year 2018-19, which included monthly sewer charges of \$25.75 for a residential single family home and \$19.30 per unit for multiple family dwelling units. The Newport North customers will have the same rate, but the method of collection differs in that they pay their sewer fees on an annual basis by means of the County tax rolls. The Orange County Special Assessment Report provides a listing of the parcels and the tax revenue generated and is included as Exhibit "A".

By adoption of Resolution No. 1987-45, the Board of Directors elected to have sewer charges for certain parcels of land located in the Newport North area collected on the tax roll together with the District's general taxes. That resolution directs the filing of a report containing a description of such parcels and the corresponding charges for each fiscal year. Pursuant to the requirements of the Health and Safety Code of the State of California, a public hearing on the report is required. The District Secretary has noticed a hearing for this meeting for objections or protests to the report, if any.

#### OUTLINE OF PROCEEDINGS

- President: Declare this to be the time and place for a hearing on the sewer taxes in the Newport North area, and declare the hearing open. Ask the Secretary how the hearing was noticed.
- Secretary: The report was filed with the Secretary on July 5, 2018 and notice of the filing of the report and the time and place of this hearing was published in the Newport Beach-Costa Mesa Daily Pilot on July 8 and July 15, 2018. A notice was also posted in the District office on July 5, 2018.
- Board: RECOMMENDED MOTION: "RECEIVE AND FILE THE AFFIDAVIT OF POSTING AND THE PROOF OF PUBLICATION PRESENTED BY THE SECRETARY."
- President: Request Legal Counsel to describe the nature of the proceedings.
- Legal Counsel: Describe the proceedings.
- President: Inquire of the Secretary whether there have been any written communications.

President: Inquire whether there is anyone present who wishes to address the Board regarding the proposed collection of sewer charges on the tax roll.

President: Inquire whether there are any comments or questions from members of the Board of Directors. State that the hearing will be closed.

Board: RECOMMENDED MOTION: THAT THE HEARING BE CLOSED AND THAT THE FOLLOWING RESOLUTION BE ADOPTED BY TITLE:

RESOLUTION NO. 2018 -

RESOLUTION OF THE BOARD OF DIRECTORS  
OF IRVINE RANCH WATER DISTRICT ADOPTING  
SEWER TAXES IN THE NEWPORT NORTH SERVICE AREA

FISCAL IMPACTS:

The sewer rates charged in Newport North are the same as any other area within the District, and therefore will be set at the equivalent of \$25.75 per month for residential single family home and \$19.30 per month for multiple family dwelling units for a total FY 2018-19 assessment of \$309.00 or \$231.60. Only the means of collection is different for the customers in Newport North.

ENVIRONMENTAL COMPLIANCE:

This item is not a project as defined in the California Environmental Quality Act Code of Regulations, Title 14, Chapter 3, Section 15378.

FISCAL IMPACTS:

None.

COMMITTEE STATUS:

THIS IS A ROUTINE ANNUAL ITEM FOR BOARD CONSIDERATION AND WAS NOT REVIEWED BY A COMMITTEE.

LIST OF EXHIBITS:

Exhibit "A" – Orange County Special Assessment Report  
Exhibit "B" – Resolution

**Irvine Ranch Water District  
Orange County Special Assessment Report  
Fiscal Year 2018/2019**

<u>Parcel #</u>	<u>Amount</u>										
42734202	309.00	44204208	132,012.00	44204210	309.00	44205210	463.20	44205401	309.00	44205402	309.00
44205403	309.00	44205404	309.00	44205405	309.00	44205406	309.00	44205407	309.00	44205408	309.00
44205409	309.00	44205410	309.00	44205411	309.00	44205412	309.00	44205413	309.00	44205414	309.00
44205415	309.00	44205416	309.00	44205417	309.00	44205418	309.00	44205419	309.00	44205420	309.00
44205421	309.00	44205422	309.00	44205423	309.00	44205424	309.00	44205425	309.00	44205426	309.00
44205427	309.00	44205428	309.00	44205429	309.00	44205430	309.00	44205431	309.00	44205432	309.00
44205433	309.00	44205434	309.00	44205435	309.00	44205436	309.00	44205437	309.00	44205438	309.00
44205439	309.00	44205440	309.00	44205441	309.00	44205442	309.00	44205443	309.00	44205444	309.00
44205445	309.00	44205446	309.00	44205447	309.00	44205448	309.00	44205449	309.00	44205450	309.00
44205451	309.00	44205452	309.00	44205453	309.00	44205454	309.00	44205455	309.00	44205456	309.00
44205457	309.00	44205458	309.00	44205459	309.00	44205460	309.00	44205461	309.00	44205501	309.00
44205502	309.00	44205503	309.00	44205504	309.00	44205505	309.00	44205506	309.00	44205507	309.00
44205508	309.00	44205509	309.00	44205510	309.00	44205511	309.00	44205512	309.00	44205513	309.00
44205514	309.00	44205515	309.00	44205516	309.00	44205517	309.00	44205518	309.00	44205519	309.00
44205520	309.00	44205521	309.00	44205522	309.00	44205523	309.00	44205524	309.00	44205525	309.00
44205526	309.00	44205527	309.00	44205528	309.00	44205529	309.00	44205530	309.00	44205531	309.00
44205532	309.00	44205533	309.00	44205534	309.00	44205535	309.00	44205536	309.00	44205537	309.00
44205538	309.00	44205539	309.00	44205540	309.00	44205541	309.00	44205542	309.00	44205543	309.00
44205544	309.00	44205545	309.00	44205546	309.00	44205547	309.00	44205548	309.00	44205549	309.00
44205550	309.00	44205551	309.00	44205552	309.00	44205553	309.00	44205554	309.00	44205555	309.00
44205556	309.00	44205557	309.00	44205601	309.00	44205602	309.00	44205603	309.00	44205604	309.00
44205605	309.00	44205606	309.00	44205607	309.00	44205608	309.00	44205609	309.00	44205610	309.00
44205611	309.00	44205612	309.00	44205613	309.00	44205614	309.00	44205615	309.00	44205616	309.00
44205617	309.00	44205618	309.00	44205619	309.00	44205620	309.00	44205621	309.00	44205622	309.00
44205623	309.00	44205624	309.00	44205625	309.00	44205626	309.00	44205627	309.00	44205628	309.00
44205629	309.00	44205630	309.00	44205631	309.00	44205632	309.00	44205633	309.00	44205634	309.00
44205635	309.00	44205636	309.00	44205637	309.00	44205638	309.00	44205639	309.00	44205640	309.00
44205641	309.00	44206115	69,480.00	44228201	309.00	44231169	309.00	93180614	309.00	93180615	309.00
93180616	309.00	93180617	309.00	93180618	309.00	93180619	309.00	93180620	309.00	93180621	309.00
93180622	309.00	93180623	309.00	93180624	309.00	93180625	309.00	93180626	309.00	93180627	309.00
93180628	309.00	93180629	309.00	93180630	309.00	93180631	309.00	93180632	309.00	93180633	309.00

93180634	309.00	93180635	309.00	93180636	309.00	93180637	309.00	93180638	309.00	93180639	309.00
93180640	309.00	93180641	309.00	93180642	309.00	93180643	309.00	93180644	309.00	93180645	309.00
93180646	309.00	93180647	309.00	93180648	309.00	93180649	309.00	93180650	309.00	93180651	309.00
93180652	309.00	93180653	309.00	93180654	309.00	93180655	309.00	93180656	309.00	93180657	309.00
93180658	309.00	93180659	309.00	93180660	309.00	93180661	309.00	93180662	309.00	93180663	309.00
93180664	309.00	93180665	309.00	93180666	309.00	93180667	309.00	93180668	309.00	93180669	309.00
93180670	309.00	93180671	309.00	93180672	309.00	93180673	309.00	93180674	309.00	93180675	309.00
93180676	309.00	93180677	309.00	93180678	309.00	93180679	309.00	93180680	309.00	93180681	309.00
93180682	309.00	93180683	309.00	93180684	309.00	93180685	309.00	93180686	309.00	93180687	309.00
93180688	309.00	93180689	309.00	93180690	309.00	93180691	309.00	93180692	309.00	93180693	309.00
93180694	309.00	93180695	309.00	93180696	309.00	93180697	309.00	93180698	309.00	93180699	309.00
93180700	309.00	93180701	309.00	93180702	309.00	93180703	309.00	93180704	309.00	93180705	309.00
93180706	309.00	93180707	309.00	93180708	309.00	93180709	309.00	93180710	309.00	93180711	309.00
93180712	309.00	93180713	309.00	93180714	309.00	93180715	309.00	93180716	309.00	93180717	309.00
93180718	309.00	93180719	309.00	93180720	309.00	93180721	309.00	93180722	309.00	93180723	309.00
93180724	309.00	93180725	309.00	93180726	309.00	93180727	309.00	93180728	309.00	93180729	309.00
93180730	309.00	93180731	309.00	93180732	309.00	93180733	309.00				

Total Parcels: 286

Total Assessment Amount: 289,402.20

## Exhibit "B"

### RESOLUTION NO. 2018-

#### RESOLUTION OF THE BOARD OF DIRECTORS OF IRVINE RANCH WATER DISTRICT ADOPTING REPORT OF SEWER CHARGES TO BE COLLECTED ON TAX ROLL

By Resolution No. 1987-45 adopted August 10, 1987, the Board of Directors of Irvine Ranch Water District ("IRWD") elected to have sewer charges for certain parcels collected on the tax roll each year in the same manner, by the same persons, and at the same time as, together with and not separately from, its general taxes, pursuant to Section 5473 et seq. of the California Health and Safety Code.

Pursuant to that resolution, a report has been filed with the Secretary containing a description of such parcels and the corresponding charges for fiscal year 2018-19 and notice was given as required by law of a hearing on the report to be held on Monday, the 23th day of July, 2018, at the hour of 5:00 p.m. of said day (or as soon thereafter as is reasonably practicable) in the Board of Directors meeting room of IRWD, 15600 Sand Canyon Avenue, Irvine, California.

At the time set, the duly noticed public hearing was held and all persons interested were given an opportunity to be heard concerning the report and to submit any objections or protests to the report.

The Board of Directors of therefore resolves as follows:

Section 1. The Board of Directors hereby determines that protests to the report were not made by the owners of a majority of separate parcels of property described in the report.

Section 2. The Board of Directors hereby adopts the report containing a description of the parcels for which charges for sewer service shall be collected on the tax roll and containing the amount of the charges for each parcel for the fiscal year 2018-19, computed in conformity with the schedule of rates and charges adopted by Resolution No. \_\_\_\_\_. The report is attached as Exhibit "A" and incorporated herein by this reference. Each charge set forth in Exhibit "A" is hereby determined to be adopted.

Section 3. The Secretary is hereby authorized and directed to endorse on the report a statement that the report was adopted by this Board on July 23, 2018, and to take whatever other action is required by the Auditor of the County of Orange in regard thereto.

Section 4. The Secretary is hereby authorized and directed to file a copy of such report with the Auditor of the County of Orange.

APPROVED, SIGNED and ADOPTED on July 23, 2018.

\_\_\_\_\_  
President, IRVINE RANCH WATER DISTRICT  
and of the Board of Directors thereof

\_\_\_\_\_  
Secretary, IRVINE RANCH WATER DISTRICT  
and of the Board of Directors thereof

APPROVED AS TO FORM;  
Lewis Brisbois Bisgaard & Smith, LLP

By \_\_\_\_\_  
District Counsel

July 23, 2018  
Prepared and  
Submitted by: K. Swan *KS*  
Approved by: Paul A. Cook *P. Cook*

CONSENT CALENDAR

RATIFY/APPROVE BOARD OF DIRECTORS’  
ATTENDANCE AT MEETINGS AND EVENTS

SUMMARY:

Pursuant to Resolution 2006-29 adopted on August 28, 2006, approval of attendance of the following events and meetings are required by the Board of Directors.

Events/Meetings

Steven LaMar

July 20 Riverside County Water Task Force Speaker Series  
July 31 OCBC Changing Regulatory Landscape Seminar, Costa Mesa  
August 9 OC Forum 2019 Housing Outlook, Newport Beach

Mary Aileen Matheis

August 2 Congresswoman Mimi Walters’ CA-45 Elected Officials Breakfast  
August 9 OC Forum 2019 Housing Outlook, Newport Beach  
September 20 Water Education Foundation 35<sup>th</sup> Annual Water Summit, Sacramento

Peer Swan

July 12 Association of California Cities Orange County Summer Event  
July 25 Southern California Water Dialogue, Los Angeles

John Withers

August 9 OC Forum 2019 Housing Outlook, Newport Beach

RECOMMENDATION:

THAT THE BOARD RATIFY/APPROVE THE MEETINGS AND EVENTS FOR STEVEN LAMAR, MARY AILEEN MATHEIS, PEER SWAN, AND JOHN WITHERS AS DESCRIBED HEREIN.

LIST OF EXHIBITS:

None.

July 23, 2018

Prepared and

Submitted by: L. Bonkowski

Approved by: P. Cook



CONSENT CALENDAR

MINUTES OF BOARD MEETINGS

SUMMARY:

Provided are the minutes of the July 9, 2018 Regular Board meeting and the July 17, 2018 Adjourned Regular Board meeting for approval.

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS:

Not applicable.

RECOMMENDATION:

THAT THE MINUTES OF THE JUNE 25, 2018 REGULAR BOARD MEETING AND THE JULY 17, 2018 ADJOURNED REGULAR BOARD MEETING BE APPROVED AS PRESENTED.

LIST OF EXHIBITS:

Exhibit "A" – July 9, 2018 Minutes of Regular Board Meeting

## EXHIBIT "A"

### MINUTES OF REGULAR MEETING – JULY 9, 2018

The regular meeting of the Board of Directors of the Irvine Ranch Water District (IRWD) was called to order at 5:00 p.m. by President Reinhart on July 9, 2018 in the District office, 15600 Sand Canyon Avenue, Irvine, California.

Directors Present: Reinhart, Withers (arrived at 5:12 p.m.), Matheis, Swan, and LaMar.

Also Present: General Manager Cook, Executive Director of Engineering and Water Quality Burton, Executive Director of Water Policy Weghorst, Executive Director of Finance and Administration Clary, Director of Water Recycling Operations Zepeda, Director of Maintenance Drake, Director of Water Operations Roberts, Director of Water Resources Sanchez, Director of Human Resources Roney, Director of Treasury and Risk Management Jacobson, Government Relations Officer Compton, Director of Public Affairs Beeman, Legal Counsel Collins, Legal Counsel Casey, Secretary Bonkowski, Public Affairs Manager Fabris, Principal Engineer Cortez, Principal Engineer Akiyoshi, Mr. Andrew Pollard, Mr. Mike Suple, and Ms. Brittany O'Donnell.

WRITTEN AND ORAL COMMUNICATIONS: None.

ITEMS TOO LATE TO BE AGENDIZED: None.

### CONSENT CALENDAR

Following a request from Director Swan to vote separately on Item No. 8, on MOTION BY Matheis, seconded by LaMar and carried (LaMar, Reinhart, Matheis, and Swan voting aye and Withers absent (4-1), CONSENT CALENDAR ITEMS NOS. 3 THROUGH 7 AND 9 WERE APPROVED. On MOTION by Matheis, seconded by LaMar and carried (LaMar, Matheis, and Reinhart voting aye, Withers absent and Swan voting no (3-1-1), CONSENT CALENDAR ITEM NO. 8 WAS APPROVED.

3. RATIFY/APPROVE BOARD OF DIRECTORS' ATTENDANCE AT MEETINGS AND EVENTS

Recommendation: That the Board ratify/approve the meetings and events for Mary Aileen Matheis, Doug Reinhart, Steve LaMar, Peer Swan and John Withers, as described.

4. MINUTES OF REGULAR BOARD MEETING

Recommendation: That the minutes of the June 25, 2018 Regular Board Meetings be approved as presented.

5. 2018 LEGISLATIVE AND REGULATORY UPDATE

Recommendation: Receive and file.

CONSENT CALENDAR (CONTINUED)

6. LUMP SUM PAYMENT OPTION FOR EMPLOYER CONTRIBUTIONS FOR FY 2018-19 TO THE CALIFORNIA PUBLIC EMPLOYEES RETIREMENT SYSTEM

Recommendation: That the Board approve the lump sum payment for employer contributions to the California Public Employees Retirement System by making a one-time contribution of \$4,520,803 for the District's FY 2018-19 employer contribution.

7. MICHELSON WATER RECYCLING PLANT FILTER PUMP STATION NO. 2 DISCHARGE HEADER REPLACEMENT FINAL ACCEPTANCE

Recommendation: That the Board accept construction of the Michelson Water Recycling Plant Filter Pump Station No. 2 Discharge Header Replacement, project 07009, authorize the General Manager to file a Notice of Completion, and authorize the payment of the retention 35 days after the date of recording the notice of completion.

8. RESOLUTION FOR TITLE XVI GRANT FUNDING FOR THE SYPHON RESERVOIR IMPROVEMENT PROJECT

Recommendation: That the Board adopt the following resolution by title authorizing staff to apply for a Bureau of Reclamation WaterSMART: Title XVI Water Reclamation and Reuse Program grant for up to 25% of the total project costs for the Syphon Reservoir Improvement Project that will be completed before September 30, 2020, and authorizing the General Manager to execute a related agreement to receive grant funding.

RESOLUTION NO. 2018 – 19

RESOLUTION OF THE BOARD OF DIRECTORS OF  
IRVINE RANCH WATER DISTRICT AUTHORIZING SUBMISSION OF  
A GRANT APPLICATION FOR THE WATERSMART TITLE XVI  
WATER RECLAMATION AND REUSE PROGRAM TO THE  
DEPARTMENT OF THE INTERIOR, BUREAU OF RECLAMATION,  
POLICY AND ADMINISTRATION

9. NEWPORT BAY WATERSHED COOPERATIVE AGREEMENT

Recommendation: That the Board authorize the General Manager to execute a Cooperative Agreement to fund total maximum daily load programs and related activities in the Newport Bay Watershed (No. MA-080-18011416), and approve related Newport Bay nutrient, fecal coliform and toxics TMDLs work plans and budgets.

## ACTION CALENDAR

### 2018 WATER USE EFFICIENCY OUTREACH CAMPAIGN

Director of Public Affairs Beeman reported that last year a new creative water use efficiency outreach campaign was launched which focused on reducing outdoor watering among customer groups that have traditionally been difficult to reach. Ms. Beeman said that based on the success of the 2017 fall water use efficiency campaign and the recent customer survey findings that indicate customers are willing to do more to save water, staff recommends the implementation of a 2018 fall water use efficiency campaign that will continue to focus on outdoor water use.

Using a PowerPoint presentation, Mr. Mike Sukle of Sukle Advertising provided the Board with an update on the media impressions delivered to individuals during the 2017 campaign noting nearly 10 million digital advertising impressions, television advertising across 25 networks, cinema programs in 11 theaters, bus and bus shelter advertising, and its campaign in newspapers. Director Withers arrived at 5:12 p.m.

Mr. Sukle said that pre-campaign and post-campaign surveys targeting single-family homes were conducted by FM3 and noted that: 1) 48% of the customer surveyed said they saw at least one of the IRWD advertisements suggesting the campaign reached a strong share of the audience; 2) television, bus/bus shelter advertisements and communications from IRWD were cited as the most seen mediums; 3) one-third of post-survey respondents recalled “The days are shorter, water less” call-to-action and 29% said this encouraged them to make changes to their sprinkler timers; 4) both pre and post-campaign surveys indicated that 86% of IRWD’s customers continue to consider outdoor water use efficiency important; and 5) three of four customers agreed they could do more to waste less water.

Mr. Sukle said that staff conducted an evaluation of over-allocation customers targeted in the 2017 fall campaign with the goal of determining if there were data to support changes in water use behavior by these customers after the campaign ended. He said the evaluation concluded that no significant water savings or differences were identifiable due to: 1) pre-campaign water use data was affected by the severe statewide drought and drought messaging in 2016-17; 2) an extremely wet 2016-17 and a dry 2017-18; and 3) non-drought pre-campaign water use and allocation data were affected by significant changes to customer allocations during and after the drought.

Mr. Sukle said that in May 2018, FM3 conducted a customer survey of 800 IRWD customers and that a portion of the survey was dedicated to water conservation awareness and behavior among the survey group. Key findings include: 1) nearly 23% of respondents self-reported that they are using less water than one year ago; 66% are using about the same and 10% are using more; 2) just over half said they are likely to take additional steps to conserve water, however the additional steps mentioned most were indoor as opposed to outdoor; and 3) customers continue to focus more on indoor water use than on outdoor water use.

Mr. Sukle said that their firm proposes to expand and reuse the “See it from Your Lawn’s Perspective” campaign for the next fiscal year and include two of the individuals from last year’s campaign.

Following discussion, Director Matheis said that this item was reviewed by the Water Resources Policy and Communications Committee on July 5, 2018. On MOTION by Matheis, seconded and unanimously carried, THE BOARD AUTHORIZED THE GENERAL MANAGER TO EXECUTE

A PROFESSIONAL SERVICES AGREEMENT WITH SUKLE ADVERTISING & DESIGN IN THE AMOUNT OF \$790,330 FOR IMPLEMENTATION OF THE 2018 WATER USE EFFICIENCY CAMPAIGN.

DOMESTIC WATER PIPELINE REPLACEMENT TO THE MICHELSON WATER RECYCLING PLANT CONSTRUCTION AWARD

General Manager Cook reported that the Michelson Water Recycling Plant (MWRP) currently receives domestic water from a six-inch asbestos cement pipeline located within the landscaped slope of Riparian View. Mr. Cook said that this pipeline has experienced multiple leaks since 2011 and needs to be replaced.

Executive Director Engineering and Water Quality Burton that that the project was advertised for construction bidding to a select list of nine pipeline contractors. Mr. Burton said that three contractors attended the pre-bid meeting and the bid opening was held on June 28, 2018. He said that GCI Construction is the apparent low bidder with a bid of \$322,355. The engineer's estimate is \$250,000. He said that the cost difference between the engineer's estimate and the bids received can be predominantly attributed to the higher-than-expected costs to install the new pipeline and to restore the pavement. The bid prices for pipe installation ranged from \$245 to \$440 per linear foot; the engineer's estimate was \$212 per linear foot. Since the two low bids received are within 9%, staff believes the low bid represents the true cost of the project. He further said that although GCI Construction's bid included a cost for mobilization and demobilization that exceeded the District's maximum requirement of 5% of the total bid, legal counsel advised that the requirement may be waived since there would not be a competitive disadvantage for the other bidders. On MOTION by Matheis, seconded and unanimously carried, **THE BOARD WAIVED THE REQUIREMENT THAT A COST FOR MOBILIZATION AND DEMOBILIZATION NOT EXCEED A MAXIMUM OF 5% OF THE TOTAL BID AND AUTHORIZED THE GENERAL MANAGER TO EXECUTE A CONSTRUCTION CONTRACT WITH GCI CONSTRUCTION, INC. IN THE AMOUNT OF \$322,335 FOR THE DOMESTIC WATER PIPELINE REPLACEMENT TO THE MICHELSON WATER RECYCLING PLANT, PROJECT 07149.**

GENERAL MANAGER'S REPORT

General Manager Cook said that a flier had been placed before each Board member noticing LAFCO's farewell celebration on August 8 for Commissioner John Withers for his 24 years of service.

Mr. Cook said that he received notice from the Southwest Membrane Operators' Association that the District received a first place award for best-tasting water from the Irvine Desalter Project and a second place award for the Baker Water Treatment Plant.

DIRECTORS' COMMENTS

Director Matheis reported on her attendance at the South Orange County State of the County luncheon meeting featuring Supervisor Lisa Bartlett, an ISDOC Quarterly meeting, a WACO monthly meeting, and that on Tuesday she will be attending an ISDOC Executive Committee meeting.

Director Swan reported on his attendance at an ISDOC quarterly meeting, a WACO Planning meeting, Newport Beach Chamber of Commerce meetings, a California Water Dialogue meeting which

celebrated its 20 anniversary, a WACO monthly meeting, and a MWDOC Workshop with MWD Directors.

Director LaMar reported on his attendance at a MWDOC workshop with MWD Directors, and a WACO monthly meeting relative to water bonds.

Director Reinhart reported on his attendance at a MWDOC workshop with MWD Directors, a WACO monthly meeting, and a MWDOC Planning and Operations Committee meeting.

CLOSED SESSION

President Reinhart said that a Closed Session would be held as follows:  
Conference with Legal Counsel relative to existing litigation – Government Code Section 54956.9(d)(1) IRWD v. OCWD Case No. 30-2016-00858584.

OPEN SESSION

Following the Closed Session, the meeting was reconvened with five Directors present. President Reinhart said no action was reported in Closed Session.

ADJOURNMENT

President Reinhart adjourned the meeting at 7:32 p.m.

APPROVED and SIGNED this 23rd day of July, 2018.

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President, IRVINE RANCH WATER DISTRICT

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Secretary IRVINE RANCH WATER DISTRICT

APPROVED AS TO FORM:

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Claire Hervey Collins, Legal Counsel – Lewis Brisbois

EXHIBIT "B"

MINUTES OF ADJOURNED REGULAR MEETING – JULY 17, 2018

The adjourned regular meeting of the Board of Directors of the Irvine Ranch Water District (IRWD) was called to order at 8:15 a.m. by President Reinhart on July 17, 2018 at the Operations Center, 3512 Michelson, Irvine, California.

Directors Present: Matheis, Reinhart, Withers, LaMar and Swan.

Directors Absent: None.

Also Present: General Manager Cook, Executive Director of Engineering and Water Quality Burton, Director of Recycling Operations Zepeda, Legal Counsel Collins, Principal Engineer Malloy, and Mr. Gaspar Garza.

Written and Oral Communications: None.

Items too later to be agendized: None.

PRESENTATION

TOUR OF IRWD'S MICHELSON WATER RECYCLING PLANT BIOSOLIDS AND ENERGY RECOVERY FACILITIES

The Board of Directors and staff toured IRWD's Michelson Water Recycling Plant Biosolids and energy recovery facilities.

ADJOURNMENT

President Reinhart adjourned the meeting at 10:15 a.m.

APPROVED and SIGNED this 23rd day of July, 2018.

\_\_\_\_\_  
President, IRVINE RANCH WATER DISTRICT

\_\_\_\_\_  
Secretary IRVINE RANCH WATER DISTRICT

APPROVED AS TO FORM:

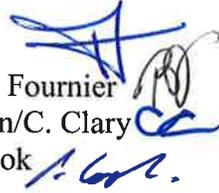
\_\_\_\_\_  
Claire Hervey Collins, Legal Counsel  
– Lewis Brisbois

July 23, 2018

Prepared by: J. Davis/T. Fournier

Submitted by: R. Jacobson/C. Clary

Approved by: Paul A. Cook



## CONSENT CALENDAR

### JUNE 2018 TREASURY REPORTS

#### SUMMARY:

The following is submitted for the Board's information and approval:

- A. The Investment Summary Report for June 2018. This Investment Summary Report is in conformity with the 2018 Investment Policy and provides sufficient liquidity to meet estimated expenditures during the next six months, as outlined in Exhibit "A".
- B. The Summary of Fixed and Variable Debt as of June 30, 2018, as outlined in Exhibit "B".
- C. The Monthly Interest Rate Swap Summary as of June 30, 2018, as outlined in Exhibit "C".
- D. The June 30, 2018 Disbursement Summary of warrants 388469 through 389484, wire transfers, Workers' Compensation distributions, payroll withholding distributions, and voided checks in the total amount of \$22,296,536 as outlined in Exhibit "D".
- E. The Summary of Payroll ACH payments in the total amount of \$1,875,683, as outlined in Exhibit "E".
- F. The Disclosure Report of Reimbursements to Board Members and Staff for June 2018, detailing payments or reimbursements for individual charges of \$100.00 or more per transaction, as outlined in Exhibit "F".

#### FISCAL IMPACTS:

As of June 30, 2018, the book value of the investment portfolio was \$379,728,081, with a 1.41% rate of return and a market value of \$376,650,458. Based on the District's June 30, 2018 quarterly real estate investment rate of return of 8.89%, the weighted average return for the fixed income and real estate investments was 3.57%.

As of June 30, 2018, the outstanding principal amount of fixed and variable rate debt was \$681,520,000. The monthly weighted average all-in variable rate was 1.43%. Including the District's weighted average fixed rate bond issues of 3.70% and the previous month's negative cash accruals from fixed payer interest rate swaps, which hedge a portion of the District's variable rate debt, the total average debt rate was 3.56%.

As of June 30, 2018, the total notional amount of the interest rate swap portfolio was \$130 million of fixed payer swaps. Cash accrual in June from all swaps was negative \$392,194.

Payroll ACH payments totaled \$1,875,683, and wire transfers, all other ACH payments, and checks issued for debt service, accounts payable, payroll, and water purchases for June totaled \$22,296,536.

ENVIRONMENTAL COMPLIANCE:

This item is not a project as defined in the California Environmental Quality Act Code of Regulations, Title 14, Chapter 3, Section 15378.

COMMITTEE STATUS:

This item was not submitted to a Committee; however, the investment and interest rate swap reports are submitted to the Finance and Personnel Committee on a monthly basis.

RECOMMENDATION:

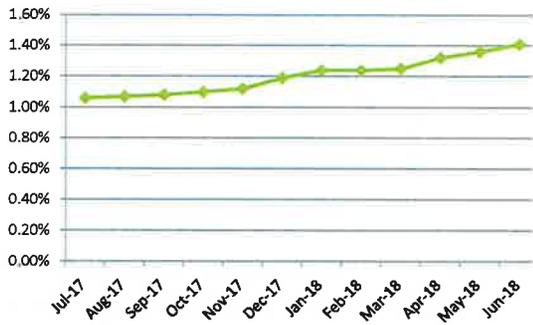
THAT THE BOARD RECEIVE AND FILE THE TREASURER'S INVESTMENT SUMMARY REPORT, THE SUMMARY OF FIXED AND VARIABLE RATE DEBT, THE MONTHLY INTEREST RATE SWAP SUMMARY FOR JUNE 2018, AND DISCLOSURE REPORT OF REIMBURSEMENTS TO BOARD MEMBERS AND STAFF; APPROVE THE JUNE 2018 SUMMARY OF PAYROLL ACH PAYMENTS IN THE TOTAL AMOUNT OF \$1,875,683 AND APPROVE THE JUNE 2018 ACCOUNTS PAYABLE DISBURSEMENT SUMMARY OF WARRANTS 388469 THROUGH 389484 WORKERS' COMPENSATION DISTRIBUTIONS, WIRE TRANSFERS, PAYROLL WITHHOLDING DISTRIBUTIONS AND VOIDED CHECKS IN THE TOTAL AMOUNT OF \$22,296,536.

LIST OF EXHIBITS:

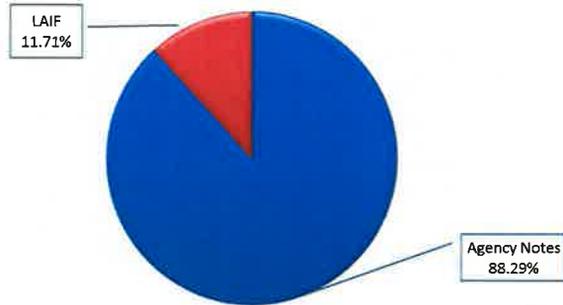
- Exhibit "A" – Investment Summary Report
- Exhibit "B" – Summary of Fixed and Variable Debt
- Exhibit "C" – Monthly Interest Rate Swap Summary
- Exhibit "D" – Monthly Summary of District Disbursements
- Exhibit "E" – Monthly Payroll ACH Summary
- Exhibit "F" – Disclosure of Reimbursements to Board Members and Staff

**EXHIBIT "A"**  
**Irvine Ranch Water District**  
**Investment Portfolio Summary**  
**June 2018**

**Monthly Fixed Income Yield**



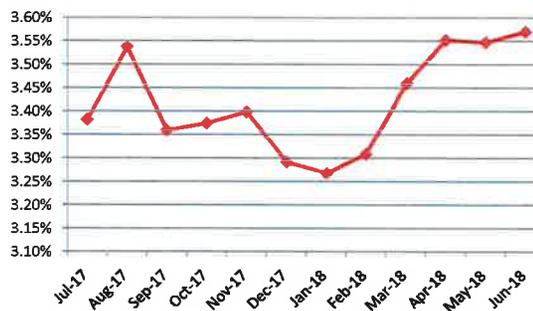
**Portfolio Distribution**



**Investment Summary**

Type	PAR	Book Value	Market Value
Agency Notes	335,550,000	335,228,081	332,233,813
LAIF	44,500,000	44,500,000	44,416,646
<b>Grand Total</b>	<b>380,050,000</b>	<b>379,728,081</b>	<b>376,650,458</b>

**Weighted Average Return Including Real Estate Portfolio**



**Maturity Distribution**



**Top Issuers**

Issuer	PAR	% Portfolio
Fed Home Loan Bank	105,000,000	27.63%
Fed Natl Mortgage Assoc	85,550,000	22.51%
Fed Home Loan Mortgage Corp	75,000,000	19.73%
Fed Farm Credit Bank	70,000,000	18.42%
State of California Treasury - LAIF	44,500,000	11.71%
<b>Grand Total</b>	<b>380,050,000</b>	<b>100%</b>

IRVINE RANCH WATER DISTRICT  
INVESTMENT SUMMARY REPORT

06/30/18

SETTLMT	Call Schedule	Initial Call	Maturity Date	Rating	INVESTMENT TYPE	INSTITUTION / ISSUER	PAR Amount	COUPON DISCOUNT	YIELD	ORIGINAL COST	CARRY VALUE	MARKET VALUE <sup>(1)</sup> 6/30/2018	UNREALIZED <sup>(2)</sup> GAIN/(LOSS)
08/23/17			07/01/18		LAIF	State of California Tsy.	\$44,500,000		1.760%	\$44,500,000.00	\$44,500,000.00	44,416,645.67	(83,354.33)
09/01/16	N/A	N/A	07/27/18	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	0.750%	0.928%	4,983,250.00	4,999,372.48	4,995,850.00	(3,522.48)
12/21/16	N/A	N/A	08/15/18	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	1.000%	1.245%	4,980,000.00	4,998,504.98	4,994,100.00	(4,404.98)
09/01/16	N/A	N/A	08/28/18	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	1.000%	1.000%	5,000,000.00	5,000,000.00	4,991,900.00	(8,100.00)
09/01/16	NA	NA	09/14/18	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	1.125%	0.916%	5,021,000.00	5,002,119.78	4,990,450.00	(11,669.78)
12/28/16	NA	NA	09/14/18	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	1.125%	1.225%	4,991,500.00	4,998,980.00	4,990,450.00	(8,530.00)
10/12/16	N/A	N/A	09/27/18	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	10,000,000	0.900%	0.952%	9,990,000.00	9,998,489.51	9,973,300.00	(25,189.51)
10/12/16	N/A	N/A	09/28/18	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	0.880%	0.942%	4,994,000.00	4,999,086.59	4,986,300.00	(12,786.59)
09/01/16	NA	NA	10/01/18	Aaa/AA+/NR	FFCB - Note	Fed Farm Credit Bank	5,000,000	1.030%	0.925%	5,010,750.00	5,001,301.32	4,987,900.00	(13,401.32)
10/12/16	N/A	N/A	10/12/18	Aaa/NR/NR	FFCB - Note	Fed Farm Credit Bank	10,000,000	1.000%	1.041%	9,992,000.00	9,998,652.05	9,973,000.00	(25,652.05)
10/12/16	N/A	N/A	11/27/18	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	10,000,000	1.625%	0.956%	10,140,360.00	10,030,568.09	9,980,300.00	(50,268.09)
12/21/16	N/A	N/A	12/05/18	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	1.100%	1.319%	4,978,900.00	5,018,172.42	4,976,650.00	(41,522.42)
09/01/16	NA	NA	12/14/18	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	1.750%	0.941%	5,091,300.00	5,009,616.47	4,989,800.00	(19,816.47)
12/27/16	NA	NA	12/14/18	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	1.750%	1.320%	5,041,536.20	4,995,360.36	4,989,800.00	(5,560.36)
09/01/16	One Time	07/30/18	01/30/19	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	0.950%	1.009%	4,993,000.00	4,998,307.60	4,962,500.00	(35,807.60)
10/26/16	One Time	07/30/18	01/30/19	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	0.950%	1.035%	4,990,500.00	4,997,481.23	4,962,500.00	(34,981.23)
10/26/16	One Time	07/30/18	01/30/19	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	0.950%	1.040%	4,990,000.00	4,997,348.67	4,962,500.00	(34,848.67)
10/12/16	Continuous after	02/12/18	02/12/19	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	10,000,000	1.050%	1.093%	9,990,000.00	9,997,116.06	9,927,800.00	(69,316.06)
09/01/16	NA	NA	03/08/19	Aaa/AA+/AAA	FHLB - Note	Fed Home Loan Bank	5,000,000	1.500%	0.964%	5,066,500.00	5,018,110.02	4,974,750.00	(43,360.02)
03/21/18	NA	NA	03/21/19	Aaa/NA/NR	FHLB - Note	Fed Home Loan Bank	10,000,000	2.125%	2.125%	10,000,000.00	10,000,000.00	9,989,100.00	(10,900.00)
10/12/16	N/A	N/A	03/29/19	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	1.050%	1.050%	4,999,950.00	4,999,983.80	4,955,400.00	(44,583.80)
10/12/16	N/A	N/A	04/15/19	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	10,000,000	1.125%	0.992%	10,032,800.00	10,011,040.87	9,907,800.00	(103,240.87)
10/31/16	N/A	N/A	04/26/19	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	1.050%	1.060%	4,998,750.00	4,999,586.55	4,948,350.00	(51,236.55)
09/01/16	N/A	N/A	05/28/19	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	1.030%	1.048%	4,997,550.00	4,999,188.24	4,943,900.00	(55,288.24)
04/19/18	N/A	N/A	05/30/19	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	1.750%	2.252%	4,972,500.00	4,977,444.58	4,972,150.00	(5,294.58)
09/01/16	NA	NA	06/14/19	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	1.625%	0.987%	5,087,400.00	5,029,936.22	4,963,700.00	(66,236.22)
10/12/16	NA	NA	06/14/19	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	1.625%	1.103%	5,068,515.88	5,025,860.35	4,963,700.00	(62,160.35)
10/12/16	NA	NA	07/19/19	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	0.875%	1.098%	4,969,652.90	4,987,891.21	4,921,000.00	(66,891.21)
09/01/16	NA	NA	07/26/19	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.150%	1.180%	4,995,700.00	4,998,414.93	4,929,000.00	(69,414.93)
09/01/16	N/A	N/A	08/28/19	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.150%	1.160%	4,998,500.00	4,999,418.42	4,927,050.00	(72,368.42)
09/01/16	NA	NA	08/28/19	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.125%	1.132%	4,999,000.00	4,999,612.28	4,925,650.00	(73,962.28)
09/28/16	Quarterly	03/09/17	09/09/19	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.125%	1.142%	4,997,500.00	4,998,985.17	4,925,000.00	(73,985.17)
04/10/18	NA	NA	09/13/19	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	2.375%	2.288%	5,006,000.00	5,005,055.66	4,997,700.00	(7,355.66)
09/28/16	Continuous after	12/27/16	09/27/19	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	1.250%	1.189%	5,001,500.00	5,000,621.12	4,928,200.00	(72,421.12)
10/12/16	Continuous after	10/03/17	10/03/19	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	10,000,000	1.125%	1.160%	9,989,780.00	9,995,492.28	9,838,300.00	(157,192.28)
10/12/16	Continuous after	10/11/17	10/11/19	Aaa/AA+/NR	FFCB - Note	Fed Farm Credit Bank	10,000,000	1.120%	1.205%	9,975,000.00	9,988,871.12	9,820,500.00	(168,371.12)

EXHIBIT "A-2"

IRVINE RANCH WATER DISTRICT  
INVESTMENT SUMMARY REPORT

06/30/18

SETTLMT	Call Schedule	Initial Call	Maturity Date	Rating	INVESTMENT TYPE	INSTITUTION / ISSUER	PAR Amount	COUPON DISCOUNT	YIELD	ORIGINAL COST	CARRY VALUE	MARKET VALUE <sup>(1)</sup> 6/30/2018	UNREALIZED <sup>(2)</sup> GAIN/(LOSS)
11/08/16	Quarterly	05/08/17	11/08/19	Aaa/AA+/NR	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.250%	1.245%	5,000,750.00	5,000,339.04	4,919,150.00	(81,189.04)
11/28/16	NA	NA	11/15/19	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	1.375%	1.440%	4,990,550.00	4,995,615.62	4,925,600.00	(70,015.62)
11/28/16	Quarterly	05/25/17	11/25/19	Aaa/AA+/NR	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.400%	1.503%	4,985,000.00	4,992,967.03	4,918,550.00	(74,417.03)
12/12/16	NA	NA	12/12/19	Aaa/AA+/NR	FFCB - Note	Fed Farm Credit Bank	5,000,000	1.450%	1.440%	5,001,450.00	5,000,699.82	4,925,300.00	(75,399.82)
12/21/16	NA	NA	12/19/19	Aaa/AA+/NR	FFCB - Note	Fed Farm Credit Bank	5,000,000	1.500%	1.621%	4,982,350.00	4,991,344.56	4,927,700.00	(63,644.56)
12/20/17	NA	NA	01/17/20	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	1.500%	1.932%	4,956,250.00	4,961,502.31	4,921,450.00	(40,052.31)
10/16/17	NA	NA	02/28/20	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.500%	1.612%	4,987,025.00	4,990,895.00	4,915,500.00	(75,395.00)
12/20/17	NA	NA	03/13/20	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	4.125%	1.940%	5,237,200.00	5,210,682.56	5,129,300.00	(81,382.56)
10/03/17	NA	NA	04/20/20	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	1.375%	1.630%	4,968,350.00	4,977,572.74	4,896,100.00	(81,472.74)
06/29/18	NA	NA	04/23/20	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	2.500%	2.544%	4,996,000.00	4,996,012.42	4,991,250.00	(4,762.42)
06/29/18	NA	NA	05/15/20	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	2.550%	2.566%	4,998,450.00	4,998,454.52	4,994,800.00	(3,654.52)
11/21/17	Continuous after	02/20/18	05/20/20	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	1.830%	1.930%	4,987,500.00	4,975,438.74	4,916,650.00	(58,788.74)
06/11/18	NA	NA	06/11/20	Aaa/NR/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	2.500%	2.570%	4,997,100.00	4,996,150.00	4,996,150.00	(1,029.34)
11/10/17	NA	NA	06/22/20	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.500%	1.750%	4,968,000.00	4,990,697.04	4,898,650.00	(92,047.04)
04/19/18	NA	NA	07/30/20	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.500%	2.535%	4,886,000.00	4,895,990.40	4,886,400.00	(9,590.40)
06/08/18	NA	NA	07/30/20	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.500%	2.559%	4,890,100.00	4,893,328.22	4,886,400.00	(6,928.22)
12/20/17	Quarterly	11/10/16	08/10/20	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	1.450%	2.052%	4,923,000.00	4,930,268.67	4,870,000.00	(60,268.67)
05/21/18	Continuous after	12/01/17	09/01/20	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	1.680%	2.735%	4,884,250.00	4,889,940.35	4,892,850.00	2,909.65
12/12/17	One Time	09/28/18	09/28/20	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	2.000%	2.000%	5,000,000.00	5,000,000.00	4,927,250.00	(72,750.00)
10/31/17	One Time	10/30/18	10/30/20	Aaa/NR/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,550,000	1.850%	1.850%	5,550,000.00	5,550,000.00	5,437,612.50	(112,387.50)
12/13/17	Continuous after	08/23/17	11/23/20	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	1.770%	2.060%	4,958,750.00	4,962,238.62	4,885,750.00	(76,488.62)
12/13/17	Quarterly	05/24/18	11/24/20	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.900%	2.023%	4,982,500.00	4,983,978.64	4,891,350.00	(92,628.64)
11/30/17	NA	NA	11/24/20	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	1.850%	1.964%	4,983,550.00	4,986,764.54	4,906,000.00	(80,764.54)
12/20/17	NA	NA	12/28/20	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.875%	2.023%	4,978,400.00	4,980,180.43	4,907,700.00	(72,480.43)

**TOTAL INVESTMENTS**

\$380,050.00

\$379,927,219.98

\$379,728,081.08

\$376,650,458.17

Petty Cash  
Ck Balance

Bank of America

3,400.00

1,849,167.99

\$381,779,787.97

<sup>(1)</sup> LAIF market value is as of the most recent quarter-end as reported by LAIF.

Security market values are determined using Bank of New York ("Trading Prices"), Bloomberg and/or broker dealer pricing.

<sup>(2)</sup> Gain (loss) calculated against carry value using the trading value provided by Bank of New York/or Brokers

<sup>(3)</sup> Real estate rate of return is based on most recent quarter end return

Outstanding Variable Rate Debt	\$282,600,000
Net Outstanding Variable Rate Debt (Less \$130 million fixed-payer swaps)	\$152,600,000
Investment Balance:	\$381,779,788
Investment to Variable Rate Debt Ratio:	250%
Portfolio - Average Number of Days To Maturity <sup>(4)</sup>	365

	Investment Portfolio	Real Estate <sup>(3)</sup> Portfolio	Weighted Avg. Return
June	1.41%	8.89%	3.57%
May	1.36%	8.91%	3.55%
Change	0.05%		0.02%

This Investment Summary Report is in conformity with the 2018 Investment Policy and provides sufficient liquidity to meet the next six months estimated expenditures.

\*S - Step up

IRVINE RANCH WATER DISTRICT  
SUMMARY OF MATURITIES

06/30/18

DATE	TOTAL	%	LAIF	Agency Notes	Agency Discount Notes	Collateral Deposit	US Treasury
06/18	\$44,500,000	11.71%	\$44,500,000				
07/18	5,000,000	1.32%		5,000,000			
08/18	10,000,000	2.63%		10,000,000			
09/18	25,000,000	6.58%		25,000,000		-	
10/18	15,000,000	3.95%		15,000,000			
11/18	10,000,000	2.63%		10,000,000			
12/18	15,000,000	3.95%		15,000,000			
01/19	15,000,000	3.95%		15,000,000			
02/19	10,000,000	2.63%		10,000,000			
03/19	20,000,000	5.26%		20,000,000			
04/19	15,000,000	3.95%		15,000,000			
05/19	10,000,000	2.63%		10,000,000			
<b>SUB-TOTAL</b>	<b>\$194,500,000</b>	<b>51.18%</b>	<b>\$44,500,000</b>	<b>\$150,000,000</b>			
<b>13 Months - 3 YEARS</b>							
6/01/19 - 8/31/2019	30,000,000	7.89%		30,000,000			
9/01/2019 - 11/30/19	50,000,000	13.16%		50,000,000			
12/01/19 - 2/28/2020	20,000,000	5.26%		20,000,000			
3/01/2020 - 5/31/2020	30,000,000	7.89%		30,000,000			
6/01/2020 - 8/31/2020	20,000,000	5.26%		20,000,000			
9/01/2020 -12/31/2020	35,550,000	9.35%		35,550,000			
1/01/2021 -2/28/2021	-						
	-						
	-						
<b>TOTALS</b>	<b>\$380,050,000</b>	<b>100.00%</b>	<b>\$44,500,000</b>	<b>\$335,550,000</b>			

% OF PORTFOLIO

11.71%

88.29%

**EXHIBIT "A-4"**

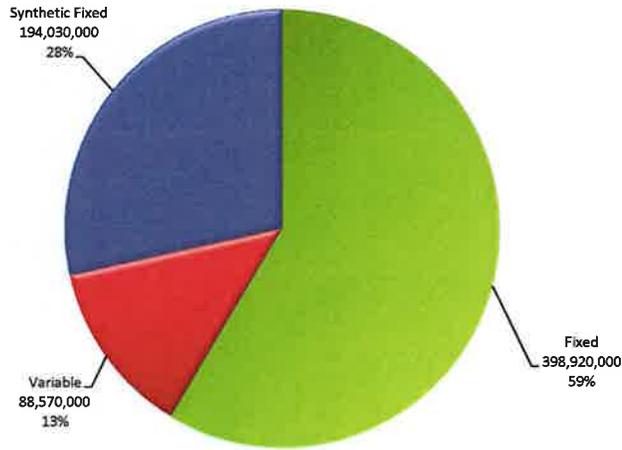
Irvine Ranch Water District  
 Summary of Real Estate - Income Producing Investments  
 6/30/2018

	ACQUISITION DATE	PROPERTY TYPE	OWNERSHIP INTEREST	ORIGINAL COST	ESTIMATED MARKET VALUE 6/30/2018	ANNUALIZED RATE OF RETURN QUARTER ENDED 6/30/2018
Sycamore Canyon	Dec-92	Apartments	Fee Simple	\$ 43,550,810	\$ 147,507,750	18.74%
Wood Canyon Villas	Jun-91	Apartments	Limited Partner	\$ 6,000,000	\$ 28,934,076	8.55%
ITC (230 Commerce)	Jul-03	Office Building	Fee Simple	\$ 5,739,845	\$ 9,571,680	9.42%
Waterworks Business Pk.	Nov-08	Research & Dev.	Fee Simple	\$ 8,630,577	\$ 7,803,000	5.33%
Sand Canyon Professional Center	Jul-12	Medical Office	Fee Simple	\$ 8,648,594	\$ 10,820,160	8.85%
<b>Total - Income Properties</b>				<b>\$ 72,569,826</b>	<b>\$ 204,636,666</b>	<b>14.39%</b>
<b>OTHER REAL ESTATE</b>						
<b>DESCRIPTION</b>						
Serrano Summit - Promissory Note	Sep-17	NA	NA	\$ 81,600,000	\$ 81,600,000	4.00%
<b>Total - Income Producing Real Estate Investments</b>				<b>\$ 154,169,826</b>	<b>\$ 286,236,666</b>	<b>8.89%</b>

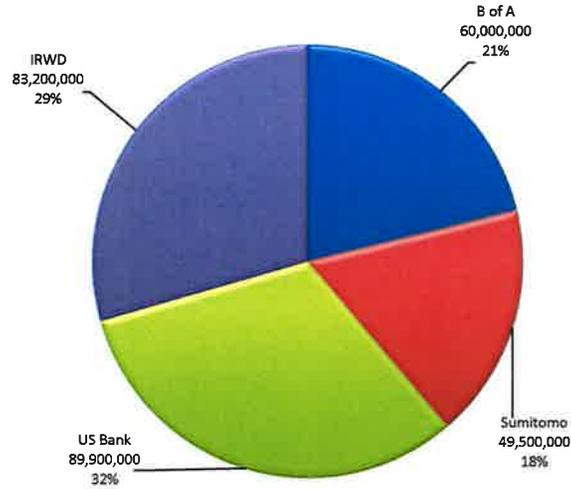
EXHIBIT "B"

Irvine Ranch Water District  
 Summary of Fixed and Variable Rate Debt  
 June 2018

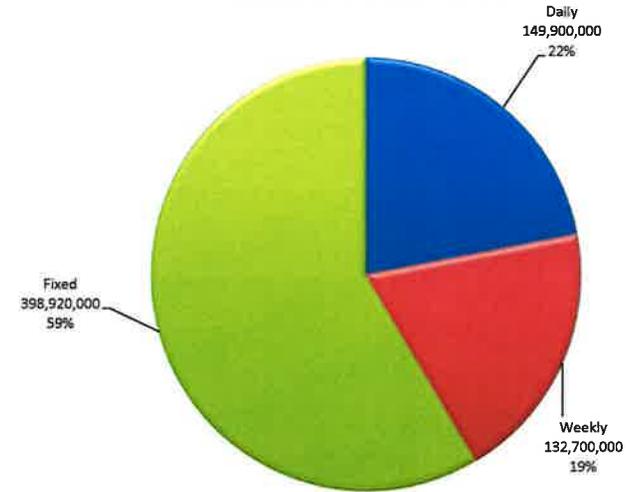
Current Debt Mix By Type



Letters of Credit / Support



Current Debt Rate Reset



Outstanding Par by Series

Series	Issue Date	Maturity Date	Remaining		Letter of Credit	Rmkt Agent	Mode	Reset
			Principal	Percent				
Series 1993	05/19/93	04/01/33	\$29,900,000	4.39%	US Bank	BAML	Variable	Daily
Series 2008-A Refunding	04/24/08	07/01/35	\$49,500,000	7.26%	Sumitomo	BAML	Variable	Weekly
Series 2011-A-1 Refunding	04/15/11	10/01/37	\$49,920,000	7.32%	IRWD	Goldman	Variable	Weekly
Series 2011-A-2 Refunding	04/15/11	10/01/37	\$33,280,000	4.88%	IRWD	Morgan	Variable	Weekly
Series 2009 - A	06/04/09	10/01/41	\$60,000,000	8.80%	US Bank	US Bank	Variable	Daily
Series 2009 - B	06/04/09	10/01/41	\$60,000,000	8.80%	B of A	Goldman	Variable	Daily
2010 Refunding Cops	02/23/10	03/01/20	\$3,775,000	0.55%	N/A	N/A	Fixed	Fixed
2016 COPS	09/01/16	03/01/46	\$116,745,000	17.13%	N/A	N/A	Fixed	Fixed
2010 Build America Taxable Bond	12/16/10	05/01/40	\$175,000,000	25.68%	N/A	N/A	Fixed	Fixed
Series 2016	10/12/16	02/01/46	\$103,400,000	15.17%	N/A	N/A	Fixed	Fixed
<b>Total</b>			<b>\$681,520,000</b>	<b>100.00%</b>				

EXHIBIT "B-1"

**IRVINE RANCH WATER DISTRICT**  
**SUMMARY OF FIXED & VARIABLE RATE DEBT**

June-18

GENERAL BOND INFORMATION							LETTER OF CREDIT INFORMATION							TRUSTEE INFORMATION										
VARIABLE RATE ISSUES	Issue Date	Maturity Date	Principal Payment Date	Payment Date	Original Par Amount	Remaining Principal	Letter of Credit	Reimbursement Agreement Date	L/C Exp. Date	MOODY'S	S&P	FITCH	LOC Stated Amount	LOC Fee	Annual LOC Cost	Rmkt Agent	Reset	Rmkt Fees	Annual Cost	Trustee				
SERIES 1993	05/19/93	04/01/33	APR 1 (2014)	5th Bus Day	\$38,300,000	\$29,900,000	US BANK	05/07/15	11/07/18	Aa3/VMIG1	AA-/A-1+	N/R	\$30,303,036	0.3300%	\$100,000	BAML	DAILY	0.10%	\$29,900	BANK OF NY				
SERIES 2008-A Refunding	04/24/08	07/01/35	JUL 1	5th Bus Day	\$60,215,000	\$49,500,000	SUMITOMO	04/01/11	07/21/21	A1/P-1	A/A-1	A/F1	\$50,232,329	0.3150%	\$158,232	BAML	WED	0.07%	\$34,650	BANK OF NY				
SERIES 2011-A-1 Refunding	04/15/11	10/01/37	OCT 1	1st Bus Day	\$60,545,000	\$49,920,000	N/A	N/A	N/A	Aa1/VMIG1	A-1+	AAA/F1+	N/A	N/A	N/A	Goldman	WED	0.13%	\$62,400	BANK OF NY				
SERIES 2011-A-2 Refunding	04/15/11	10/01/37	OCT 1	1st Bus Day	\$40,370,000	\$33,280,000	N/A	N/A	N/A	Aa1/VMIG1	A-1+	AAA/F1+	N/A	N/A	N/A	Morgan S.	WED	0.13%	\$41,600	BANK OF NY				
SERIES 2009 - A	06/04/09	10/01/41	OCT 1	1st Bus Day	\$75,000,000	\$60,000,000	US BANK	04/01/11	12/22/20	Aa2/VMIG 1	AA-/A-1+	AA/F1+	\$60,670,685	0.4100%	\$248,750	US Bank	DAILY	0.07%	\$42,000	US BANK				
SERIES 2009 - B	06/04/09	10/01/41	OCT 1	1st Bus Day	\$75,000,000	\$60,000,000	B of A	04/01/11	07/15/19	A1/VMIG 1	A/A-1	A1/F1+	\$60,670,685	0.4000%	\$242,683	Goldman	DAILY	0.10%	\$60,000	US BANK				
<b>\$349,430,000</b>						<b>\$282,600,000</b>	<b>SUB-TOTAL VARIABLE RATE DEBT</b>							<b>\$201,876,734</b>	<b>0.3714%</b>	<b>\$749,664</b>	<b>0.10%</b>					<b>\$270,550</b>		
															(Wt. Avg)					(Wt. Avg)				
FIXED RATE ISSUES																								
2010 REFUNDING COPS	02/23/10	03/01/20	Mar - 1	MAR/SEPT	\$85,145,000	\$3,775,000	N/A	N/A	N/A	Aa1	AAA	AAA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	BANK OF NY				
2010 GO Build America Taxable Bonds	12/16/10	05/01/40	MAY (2025)	MAY/NOV	\$175,000,000	\$175,000,000	N/A	N/A	N/A	Aa1	AAA	NR	N/A	N/A	N/A	N/A	N/A	N/A	N/A	US BANK				
2016 COPS	09/01/16	03/01/46	Mar - 1	MAR/SEPT	\$116,745,000	\$116,745,000	N/A	N/A	N/A	NR	AAA	AAA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	US BANK				
SERIES 2016	10/12/16	02/01/46	Feb - 1	FEB/AUG	\$103,400,000	\$103,400,000	N/A	N/A	N/A	NR	AAA	AAA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	BANK OF NY				
<b>\$480,290,000</b>						<b>\$398,920,000</b>	<b>SUB-TOTAL FIXED RATE DEBT</b>																	
<b>\$829,720,000</b>						<b>\$681,520,000</b>	<b>TOTAL - FIXED &amp; VARIABLE RATE DEBT</b>																	

Remarketing Agents			GO VS COP's		
Goldman	109,920,000	39%	GO:	561,000,000	82%
Morgan Stanley	33,280,000	12%	COPS:	120,520,000	18%
BAML	79,400,000	28%	Total	<b>681,520,000</b>	
US Bank	60,000,000	21%			
	<b>282,600,000</b>				

LOC Banks		Breakdown Between Variable & Fixed Rate Mode	
SUMITOMO	49,500,000	Daily Issues	149,900,000 22%
BANK OF AMERICA	60,000,000	Weekly Issues	49,500,000 7%
US BANK	89,900,000	ITN Issues	83,200,000 12%
	<b>199,400,000</b>	Sub-Total	<b>282,600,000</b>
		Fixed Rate Issues	\$398,920,000 59%
		Sub-Total - Fixed	<b>398,920,000</b>
		TOTAL DEBT	
		FIXED & VAR.	<b>681,520,000 100%</b>

IRVINE RANCH WATER DISTRICT  
SUMMARY OF DEBT RATES  
Jun-18

Rmkt Agent	GOLDMAN		MORGAN STANLEY		MERRILL LYNCH		US BANK
Mode	DAILY	WEEKLY	WEEKLY	WEEKLY	DAILY	WEEKLY	DAILY
Bond Issue	2009 - B	2011 A-1	2011 A-2	2011 A-2	1993	2008-A	2009-A
Par Amount	60,000,000	49,920,000	33,280,000	33,280,000	29,900,000	49,500,000	60,000,000
Bank	BOFA	(SIFMA -1)	(SIFMA -1)	(SIFMA -1)	US BANK	Sumitomo	US BANK
Reset		Wednesday	Wednesday	Wednesday		Wednesday	
6/1/2018	0.46%	1.05%	1.05%	1.05%	0.49%	0.86%	0.46%
6/2/2018	0.46%	1.05%	1.05%	1.05%	0.49%	0.86%	0.46%
6/3/2018	0.46%	1.05%	1.05%	1.05%	0.49%	0.86%	0.46%
6/4/2018	0.50%	1.05%	1.05%	1.05%	0.46%	0.86%	0.52%
6/5/2018	0.52%	1.05%	1.05%	1.05%	0.48%	0.86%	0.56%
6/6/2018	0.59%	1.05%	1.05%	1.05%	0.50%	0.86%	0.59%
6/7/2018	0.63%	1.04%	1.04%	1.04%	0.58%	0.84%	0.63%
6/8/2018	0.70%	1.04%	1.04%	1.04%	0.61%	0.84%	0.70%
6/9/2018	0.70%	1.04%	1.04%	1.04%	0.61%	0.84%	0.70%
6/10/2018	0.70%	1.04%	1.04%	1.04%	0.61%	0.84%	0.70%
6/11/2018	0.80%	1.04%	1.04%	1.04%	0.70%	0.84%	0.80%
6/12/2018	0.85%	1.04%	1.04%	1.04%	0.79%	0.84%	0.85%
6/13/2018	1.00%	1.04%	1.04%	1.04%	0.88%	0.84%	0.95%
6/14/2018	1.12%	1.32%	1.32%	1.32%	1.02%	0.96%	1.20%
6/15/2018	1.20%	1.32%	1.32%	1.32%	1.05%	0.96%	1.20%
6/16/2018	1.20%	1.32%	1.32%	1.32%	1.05%	0.96%	1.20%
6/17/2018	1.20%	1.32%	1.32%	1.32%	1.05%	0.96%	1.20%
6/18/2018	1.25%	1.32%	1.32%	1.32%	1.18%	0.96%	1.20%
6/19/2018	1.27%	1.32%	1.32%	1.32%	1.18%	0.96%	1.20%
6/20/2018	1.20%	1.32%	1.32%	1.32%	1.23%	0.96%	1.20%
6/21/2018	1.28%	1.49%	1.49%	1.49%	1.30%	1.18%	1.30%
6/22/2018	1.31%	1.49%	1.49%	1.49%	1.32%	1.18%	1.31%
6/23/2018	1.31%	1.49%	1.49%	1.49%	1.32%	1.18%	1.31%
6/24/2018	1.31%	1.49%	1.49%	1.49%	1.32%	1.18%	1.31%
6/25/2018	1.35%	1.49%	1.49%	1.49%	1.34%	1.18%	1.31%
6/26/2018	1.38%	1.49%	1.49%	1.49%	1.35%	1.18%	1.32%
6/27/2018	1.35%	1.49%	1.49%	1.49%	1.37%	1.18%	1.35%
6/28/2018	1.36%	1.50%	1.50%	1.50%	1.45%	1.18%	1.37%
6/29/2018	1.36%	1.50%	1.50%	1.50%	1.44%	1.18%	1.40%
6/30/2018	1.36%	1.50%	1.50%	1.50%	1.44%	1.18%	1.40%
<b>Avg Interest Rates</b>	1.01%	1.27%	1.27%	1.27%	0.97%	0.99%	1.01%
Rmkt Fee	0.10%	0.13%	0.13%	0.13%	0.10%	0.07%	0.07%
LOC Fee	0.40%				0.33%	0.32%	0.41%
<b>All-In Rate</b>	<b>1.51%</b>	<b>1.39%</b>	<b>1.39%</b>	<b>1.39%</b>	<b>1.40%</b>	<b>1.37%</b>	<b>1.49%</b>
Par Amount	109,920,000		33,280,000		79,400,000		60,000,000

Interest Rate Mode	Percent of Total Variable Rate Debt	Par Outstanding	Weighted All-In Average Rate	Base Rate Average
Daily	53.04%	149,900,000	1.48%	1.00%
Weekly	46.96%	132,700,000	1.38%	1.16%
	100.00%	<b>\$ 282,600,000</b>	1.43%	1.08%
<b>Fixed</b>				
COPS 2010	0.95%	3,775,000	3.82%	
COPS 2016	29.27%	116,745,000	2.90%	
BABS 2010	43.87%	175,000,000	4.46%	(1)
SERIES 2016	25.92%	103,400,000	3.32%	
	100.00%	<b>\$ 398,920,000</b>	3.70%	
<b>All-In Debt Rate Including \$130 Million Notional Amount of Swaps</b>				<b>3.56%</b>

(1) Rate adjusted up from 4.35% as a result of sequestration reducing BAB's subsidy by 6.8%

**IRVINE RANCH WATER DISTRICT  
INTEREST RATE SWAP MONTHLY SUMMARY REPORT - DETAIL  
June 30, 2018**

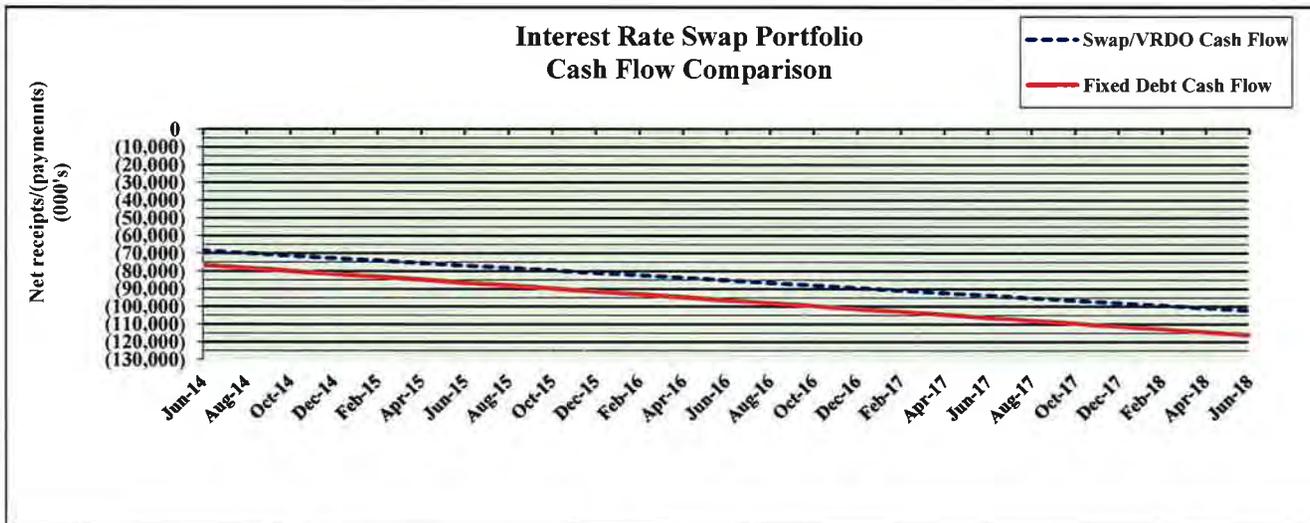
**EXHIBIT "C"**

	<b>Prior Mo.</b>	<b>Current Mo.</b>	<b>12-Mo Avg</b>
<b>LIBOR Avg %</b>	1.95%	2.07%	1.52%

Current Fiscal Year Active Swaps								Cash Flow				(Since 6/06)	Mark to Market	
Effective Date	Maturity Date	Years to Maturity	Counter Party	Notional Amt	Type	Base Index	Fixed Rate	Prior Month	Current Month	Fiscal YTD	Cumulative Cash Flow	Current Mark to Market	Notional Difference	
<b>Fixed Payer Swaps - By Effective Date</b>														
6/4/2006	6/4/2019	0.9	ML	\$ 20,000,000	FXP	LIBOR	6.200%	(73,836)	(64,397)	\$ (933,099)	\$ (11,856,392)	\$ 12,178,883	\$ (7,821,117)	
6/4/2006	6/4/2019	0.9	CG	20,000,000	FXP	LIBOR	6.200%	(73,836)	(64,397)	(933,099)	(11,856,392)	12,167,541	(7,832,459)	
6/17/2006	6/17/2019	1.0	CG	30,000,000	FXP	LIBOR	6.140%	(109,145)	(94,950)	(1,381,051)	(17,583,708)	28,938,020	(1,061,980)	
3/10/2007	3/10/2029	10.7	ML	30,000,000	FXP	LIBOR	5.687%	(97,356)	(84,225)	(1,246,101)	(15,851,908)	29,304,558	(695,442)	
3/10/2007	3/10/2029	10.7	CG	30,000,000	FXP	LIBOR	5.687%	(97,356)	(84,225)	(1,246,101)	(15,851,908)	29,305,361	(694,639)	
<b>Totals/Weighted Avgs</b>		5.4		\$ 130,000,000			5.949%	\$ (451,529)	\$ (392,194)	\$ (5,739,450)	\$ (73,000,306)	\$ 111,894,363	\$ (18,105,637)	
<b>Total Current Year Active Swaps</b>				\$ 130,000,000				\$ (451,529)	\$ (392,194)	\$ (5,739,450)	\$ (73,000,306)	\$ 111,894,363	\$ (18,105,637)	

Current Fiscal Year Terminated Swaps								Cash Flow				Mark to Market	
Effective Date	Maturity Date		Counter Party	Notional Amt	Type	Base Index	Fixed Rate	Prior Month	Current Month	Fiscal YTD	Cumulative Cash Flow	Current Mark to Market	Notional Difference
<b>Total Current Year Terminated Swaps</b>								\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Current Fiscal Year - Total Swaps								Cash Flow				Mark to Market	
Prior Month	Current Month	Fiscal YTD	Cumulative Cash Flow	Current Mark to Market	Notional Difference								
\$ (451,529)	\$ (392,194)	\$ (5,739,450)	\$ (73,000,306)	\$ 111,894,363	\$ (18,105,637)								



Cash Flow Comparison Synthetic Fixed vs. Fixed Rate Debt	
Cash Flow to Date	
Synthetic Fixed =	\$102,035,023
Fixed Rate =	\$116,027,048
<b>Assumptions:</b>	
- Fixed rate debt issued at 5.10% in Jun-06, and 4.93% in Mar-07 (estimated TE rates - Bloomberg)	
- 'Synthetic' includes swap cash flow + interest + fees to date	

# Exhibit "D"

IRWD Ledger Upgrade

Report Date: 02-JUL-2018 07:45

Include Zero Amount Payments: Yes  
Display Payee Address: No

Void Payment Register  
Period From: 01-JUN-18

Page: 1  
To: 30-JUN-18  
Date: Void Date

Bank: Bank of America N.A.

Branch: Los Angeles

Account: Checking AP and PR

Bank Account Currency: USD

Payment Currency: USD ( US Dollar )

Payment Number	Date	Payee Name	Site	Address	Payment Amount	Void Date
Payment Document: IRWD CHECK						
383232	04-JAN-18	Lum, Christopher A (Christo	HOME		36.59	28-JUN-18
383905	18-JAN-18	THE IRVINE COMPANY LLC	550 NEWPORT CT		2,804.70	12-JUN-18
384316	01-FEB-18	PANDIT, RAKESH	PAY		54.21	11-JUN-18
384338	01-FEB-18	SHERMAN, RICHARD M	PAY		20.58	11-JUN-18
384381	01-FEB-18	ZHOU, YUJIE	PAY		541.14	12-JUN-18
384463	08-FEB-18	DOUGLAS, ANDREW	PAY		68.26	11-JUN-18
384501	08-FEB-18	HUYNH, THUY LIEN	PAY		67.83	11-JUN-18
384502	08-FEB-18	HWANG, JUNG YOUNG	PAY		39.02	11-JUN-18
384523	08-FEB-18	LI, BOYU	PAY		474.68	12-JUN-18
384533	08-FEB-18	MOEEL, GULHAN	PAY		41.12	11-JUN-18
384574	08-FEB-18	REGENCY CENTERS	PAY		611.35	12-JUN-18
384598	08-FEB-18	SILVA, THERESA	PAY		71.78	11-JUN-18
384614	08-FEB-18	STEIN, ROBERT	PAY		39.39	11-JUN-18
384640	08-FEB-18	VALLEY CREST LANDSCAPE COMP	PAY		1,662.41	12-JUN-18
384647	08-FEB-18	WANG, NAN	PAY		34.27	11-JUN-18
384653	08-FEB-18	WEAVER, LARRY W	PAY		35.44	11-JUN-18
384700	15-FEB-18	CAO, HONGWEI	PAY		16.02	11-JUN-18
384746	15-FEB-18	HAN, CHANGCHENG	PAY		28.04	11-JUN-18
384753	15-FEB-18	HUSTEDT, HAYLEY	PAY		65.34	11-JUN-18
384871	22-FEB-18	Sheilds, Patrick	HOME		6.00	11-JUN-18
384939	22-FEB-18	GUO, HAOXIANG	PAY		32.21	11-JUN-18
384967	22-FEB-18	LI, TAN	PAY		1,540.34	12-JUN-18
384977	22-FEB-18	NAGARAJAN, KARTHIGEYA	PAY		33.30	11-JUN-18
385037	22-FEB-18	SWSH SHABU SHABU	PAY		357.55	12-JUN-18
386211	28-MAR-18	JIN, HIOJIN	PAY		189.01	22-JUN-18
386496	28-MAR-18	TOLOSA, MARIA	PAY		41.07	22-JUN-18
386813	04-APR-18	WEN, JING	PAY		367.38	22-JUN-18
387232	19-APR-18	WANG, DEJUN	AUSTIN		23.90	18-JUN-18
387736	10-MAY-18	MAURRAY, MAURICE	PAY		125.00	12-JUN-18
388052	17-MAY-18	POLITISKI, JACKIE B	PAY		61.50	22-JUN-18
388069	17-MAY-18	SAVAGE, WILLIAM	PAY		46.36	22-JUN-18
388111	17-MAY-18	VAZQUEZ, RAMON	PAY		29.67	22-JUN-18
388117	17-MAY-18	WANG, JUI-WAN	PAY		41.46	22-JUN-18
388162	24-MAY-18	BUSTOS, IVAN	PAY		115.95	22-JUN-18
388213	24-MAY-18	HAMILTON, KURT	PURCHASE_PAY		684.89	28-JUN-18
388238	24-MAY-18	LIU, JIMMY	PAY		15.18	22-JUN-18
388676	08-JUN-18	DUZMAN, CHERYL	PAY		48.11	11-JUN-18
388738	14-JUN-18	CHEN, ZICHANG	PAY		36.36	22-JUN-18

IRWD Ledger Upgrade

Report Date: 02-JUL-2018 07:45

Include Zero Amount Payments: Yes  
Display Payee Address: No

Void Payment Register  
Period From: 01-JUN-18

Page: 2  
To: 30-JUN-18  
Date: Void Date

Bank: Bank of America N.A.

Branch: Los Angeles

Account: Checking AP and PR

Bank Account Currency: USD

Payment Currency: USD ( US Dollar )

Payment Number	Date	Payee Name	Site	Address	Payment Amount	Void Date
Payment Document: IRWD CHECK						
388804	14-JUN-18	LEE, SUK MIN	PAY		35.72	28-JUN-18
389050	21-JUN-18	LEE, SUNHEE	PAY		38.44	22-JUN-18
389164	27-JUN-18	CHEN, MING	PAY		32.00	28-JUN-18

Payment Document Subtotal 10,613.57

Bank Account Subtotal 10,613.57

Report Count: 41

Report Total 10,613.57 Voids

\*\*\* End of Report \*\*\*

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
388469		06-JUN-18	RAMANPREET K. GREWAL	2459 PK AVE	1,575.50	07-JUN-18	1,575.50	Reconciled
388470		07-JUN-18	Brown, Morgan		833.30	29-JUN-18	833.30	Reconciled
388471		07-JUN-18	Compton, Christine A		27.63			Negotiable
388472		07-JUN-18	Cortez, Malcolm A (Malcolm)		86.11	11-JUN-18	86.11	Reconciled
388473		07-JUN-18	Hufana, Eugenio D		107.91	12-JUN-18	107.91	Reconciled
388474		07-JUN-18	Kulick, Michael		90.00	12-JUN-18	90.00	Reconciled
388475		07-JUN-18	Marcacci, Mark		30.00	15-JUN-18	30.00	Reconciled
388476		07-JUN-18	Midstokke, Paige		88.40	08-JUN-18	88.40	Reconciled
388477		07-JUN-18	Nash, Joel		79.57	11-JUN-18	79.57	Reconciled
388478		07-JUN-18	Oldewage, Lars D (Lars)		102.96	12-JUN-18	102.96	Reconciled
388479		07-JUN-18	Pfister, Ken D (Ken)		118.51	12-JUN-18	118.51	Reconciled
388480		07-JUN-18	Sinclair, Todd C (Todd)		80.00			Negotiable
388481		07-JUN-18	ABM INDUSTRY GROUPS, LLC		1,349.79	11-JUN-18	1,349.79	Reconciled
388482		07-JUN-18	ADAMS, AUSTIN		13.90	18-JUN-18	13.90	Reconciled
388483		07-JUN-18	AIR & LUBE SYSTEMS INC		29,902.52	14-JUN-18	29,902.52	Reconciled
388484		07-JUN-18	ALL AMERICAN SEWER TOOLS		1,722.97	11-JUN-18	1,722.97	Reconciled
388485		07-JUN-18	ALPHA TRAFFIC SERVICES, INC.		1,610.00	12-JUN-18	1,610.00	Reconciled
388486		07-JUN-18	AMAZON CAPITAL SERVICES, INC.		885.31	11-JUN-18	885.31	Reconciled
388487		07-JUN-18	ANTHONY N. LARSEN		200.00	11-JUN-18	200.00	Reconciled
388488		07-JUN-18	APEX LIFE SCIENCES, LLC		3,655.59	11-JUN-18	3,655.59	Reconciled
388489		07-JUN-18	APPLIED MEMBRANES INC		20.83	14-JUN-18	20.83	Reconciled
388490		07-JUN-18	AT&T		4,584.30	13-JUN-18	4,584.30	Reconciled
388491		07-JUN-18	AUTOZONE PARTS, INC.		613.72	11-JUN-18	613.72	Reconciled
388492		07-JUN-18	AVISTA TECHNOLOGIES, INC		16,976.22	14-JUN-18	16,976.22	Reconciled
388493		07-JUN-18	BALBOA HORIZONS RECOVERY SVCS		10.38	12-JUN-18	10.38	Reconciled
388494		07-JUN-18	BATTERIES PLUS AND BATTERIES PLUS BULBS		2,085.34	11-JUN-18	2,085.34	Reconciled
388495		07-JUN-18	BISBINES, EDWARD		882.90	12-JUN-18	882.90	Reconciled

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
388496		07-JUN-18	BLOOMBERG FINANCE LP		12,735.00	14-JUN-18	12,735.00	Reconciled
388497		07-JUN-18	BRENNTAG PACIFIC INC		13,972.11	13-JUN-18	13,972.11	Reconciled
388498		07-JUN-18	BRITHINEE ELECTRIC		2,382.86	11-JUN-18	2,382.86	Reconciled
388499		07-JUN-18	BROWN AND CALDWELL		5,340.84	11-JUN-18	5,340.84	Reconciled
388500		07-JUN-18	BURROUS, CHESTER		26.68			Negotiable
388501		07-JUN-18	C WELLS PIPELINE MATERIALS INC		2,182.79	12-JUN-18	2,182.79	Reconciled
388502		07-JUN-18	CALIFORNIA BARRICADE RENTAL, INC.		3,015.00	11-JUN-18	3,015.00	Reconciled
388503		07-JUN-18	CALIFORNIA DEPARTMENT OF TAX AND FEE ADMINISTRATION		570.54	14-JUN-18	570.54	Reconciled
388504		07-JUN-18	CALIFORNIA NEWSPAPER PARTNERSHIP		1,602.00	25-JUN-18	1,602.00	Reconciled
388505		07-JUN-18	CALTROL, INC.		4,325.09	11-JUN-18	4,325.09	Reconciled
388506		07-JUN-18	CANON FINANCIAL SERVICES, INC		1,312.40	11-JUN-18	1,312.40	Reconciled
388507		07-JUN-18	CAPTIVE AUDIENCE MARKETING INC.		79.00	12-JUN-18	79.00	Reconciled
388508		07-JUN-18	CCL CONTRACTING INC.		1,840,016.77	12-JUN-18	1,840,016.77	Reconciled
388509		07-JUN-18	CDW GOVERNMENT LLC		463.40	11-JUN-18	463.40	Reconciled
388510		07-JUN-18	CHAPMAN UNIVERSITY		1,050.00	13-JUN-18	1,050.00	Reconciled

388511	07-JUN-18	CHEM TECH INTERNATIONAL INC	19,936.40	14-JUN-18	19,936.40	Reconciled
388512	07-JUN-18	CITY CIRCUIT BREAKERS	3,367.19	08-JUN-18	3,367.19	Reconciled
388513	07-JUN-18	CITY OF IRVINE	90.75	11-JUN-18	90.75	Reconciled
388514	07-JUN-18	CITY OF TUSTIN	233.63	08-JUN-18	233.63	Reconciled
388515	07-JUN-18	COMMANDER 63RD REGIONAL	1,198.52			Negotiable
388516	07-JUN-18	COMMERCIAL DOOR OF ORANGE COUNTY, INC.	9,450.00	11-JUN-18	9,450.00	Reconciled
388517	07-JUN-18	COX COMMUNICATIONS, INC.	261.26	12-JUN-18	261.26	Reconciled
388518	07-JUN-18	CULLIGAN OF SANTA ANA	6,000.00	12-JUN-18	6,000.00	Reconciled
388519	07-JUN-18	CUMMINS PACIFIC, LLC	900.00	11-JUN-18	900.00	Reconciled

IRWD Ledger Upgrade Payment Register For 01-JUN-18 To 30-JUN-18 Report Date: 02-JUL-2018 07:45  
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 3  
 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )  
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
388520	07-JUN-18	D & G SIGNS	1,897.06		15-JUN-18	1,897.06	Reconciled	
388521	07-JUN-18	DATASITE INC	4,357.00		19-JUN-18	4,357.00	Reconciled	
388522	07-JUN-18	DB INDUSTRIAL SUPPLY CO	26.76		11-JUN-18	26.76	Reconciled	
388523	07-JUN-18	DELL MARKETING LP	481.64		11-JUN-18	481.64	Reconciled	
388524	07-JUN-18	DENALI WATER SOLUTIONS LLC	6,346.99		12-JUN-18	6,346.99	Reconciled	
388525	07-JUN-18	DISCOVERY SCIENCE CENTER OF ORANGE COUNTY	14,766.06		13-JUN-18	14,766.06	Reconciled	
388526	07-JUN-18	DSD - HILLCREST CONTRACTING CO.	980.51		13-JUN-18	980.51	Reconciled	
388527	07-JUN-18	EAGLE AERIAL PHOTOGRAPHY, INC.	16,500.00		21-JUN-18	16,500.00	Reconciled	
388528	07-JUN-18	EAST ORANGE COUNTY WATER DISTRICT	2,268.05		11-JUN-18	2,268.05	Reconciled	
388529	07-JUN-18	ECO SERVICES LLC	4,930.17		13-JUN-18	4,930.17	Reconciled	
388530	07-JUN-18	EI&C ENGINEERING INC	47,354.00		13-JUN-18	47,354.00	Reconciled	
388531	07-JUN-18	EMEDCO	238.27		11-JUN-18	238.27	Reconciled	
388532	07-JUN-18	EMERGENCY POWER CONTROLS INC	6,198.08		13-JUN-18	6,198.08	Reconciled	
388533	07-JUN-18	ENVIRONMENTAL CONSTRUCTION, INC.	1,750.00		12-JUN-18	1,750.00	Reconciled	
388534	07-JUN-18	ENVIRONMENTAL SCIENCE ASSOCIATES	19,017.67		15-JUN-18	19,017.67	Reconciled	
388535	07-JUN-18	FARRELL & ASSOCIATES	358.40		08-JUN-18	358.40	Reconciled	
388536	07-JUN-18	FERRADO BAYVIEW LLC	1,508.00		21-JUN-18	1,508.00	Reconciled	
388537	07-JUN-18	FIRST CHOICE SERVICES	538.00		12-JUN-18	538.00	Reconciled	
388538	07-JUN-18	FISERV	17,559.86		14-JUN-18	17,559.86	Reconciled	
388539	07-JUN-18	FISHER SCIENTIFIC COMPANY LLC	4,106.63		11-JUN-18	4,106.63	Reconciled	
388540	07-JUN-18	FLEET SOLUTIONS LLC	4,540.80		11-JUN-18	4,540.80	Reconciled	
388541	07-JUN-18	FULLER TRUCK ACCESSORIES	1,213.20		11-JUN-18	1,213.20	Reconciled	
388542	07-JUN-18	FUSCOE ENGINEERING, INC.	605.00		08-JUN-18	605.00	Reconciled	
388543	07-JUN-18	GANAHL LUMBER CO.	1,587.66		14-JUN-18	1,587.66	Reconciled	
388544	07-JUN-18	GARDENSOF	3,000.00		12-JUN-18	3,000.00	Reconciled	
388545	07-JUN-18	GHD INC.	15,259.50		13-JUN-18	15,259.50	Reconciled	
388546	07-JUN-18	GOODALL, CHARLES	39.76		22-JUN-18	39.76	Reconciled	
388547	07-JUN-18	GRAINGER	9,316.80		12-JUN-18	9,316.80	Reconciled	

IRWD Ledger Upgrade Payment Register For 01-JUN-18 To 30-JUN-18 Report Date: 02-JUL-2018 07:45  
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 4  
 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )  
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
388548	07-JUN-18	GRAYBAR ELECTRIC COMPANY	7,870.17		11-JUN-18	7,870.17	Reconciled	
388549	07-JUN-18	GRIFFITH COMPANY	902.89		11-JUN-18	902.89	Reconciled	
388550	07-JUN-18	HACH COMPANY	7,934.02		11-JUN-18	7,934.02	Reconciled	
388551	07-JUN-18	HAGHIGHAT, DENNIS	18.08		25-JUN-18	18.08	Reconciled	
388552	07-JUN-18	HELPMATES STAFFING SERVICES	18,936.47		13-JUN-18	18,936.47	Reconciled	
388553	07-JUN-18	HILL BROTHERS CHEMICAL COMPANY	25,607.71		15-JUN-18	25,607.71	Reconciled	

388554	07-JUN-18	HOME DEPOT USA INC	199.94	12-JUN-18	199.94	Reconciled
388555	07-JUN-18	HOPKINS TECHNICAL PRODUCTS INC	4,211.16	12-JUN-18	4,211.16	Reconciled
388556	07-JUN-18	HORNING, WENDY	46.06	11-JUN-18	46.06	Reconciled
388557	07-JUN-18	HUMANA INSURANCE COMPANY	73.80	18-JUN-18	73.80	Reconciled
388558	07-JUN-18	IBM CORPORATION	3,201.00	12-JUN-18	3,201.00	Reconciled
388559	07-JUN-18	IDEXX DISTRIBUTION, INC	3,096.25	11-JUN-18	3,096.25	Reconciled
388560	07-JUN-18	IRVINE PACIFIC	44.64	19-JUN-18	44.64	Reconciled
388561	07-JUN-18	IRVINE PIPE & SUPPLY INC	2,793.34	08-JUN-18	2,793.34	Reconciled
388562	07-JUN-18	IRWD-PETTY CASH CUSTODIAN	904.63	08-JUN-18	904.63	Reconciled
388563	07-JUN-18	JCI JONES CHEMICALS INC	3,324.65	13-JUN-18	3,324.65	Reconciled
388564	07-JUN-18	JOHN MICHAEL COVAS	208.70	26-JUN-18	208.70	Reconciled
388565	07-JUN-18	KIMBALL MIDWEST	1,906.14	11-JUN-18	1,906.14	Reconciled
388566	07-JUN-18	KLEINFELDER, INC.	2,295.50	11-JUN-18	2,295.50	Reconciled
388567	07-JUN-18	KONECRANES INC	5,615.00	11-JUN-18	5,615.00	Reconciled
388568	07-JUN-18	KUNZMAN, ROBERT	39.19			Negotiable
388569	07-JUN-18	LABWORKS, LLC	29,589.00	18-JUN-18	29,589.00	Reconciled
388570	07-JUN-18	LANDCARE HOLDINGS, INC.	8,231.14	12-JUN-18	8,231.14	Reconciled
388571	07-JUN-18	LEWIS BRISBOIS BISGAARD AND SMITH, LLP	27,444.50	13-JUN-18	27,444.50	Reconciled
388572	07-JUN-18	LGC GEOTECHNICAL, INC.	1,356.25	12-JUN-18	1,356.25	Reconciled
388573	07-JUN-18	LUBRICATION ENGINEERS, INC.	9,494.66	11-JUN-18	9,494.66	Reconciled
388574	07-JUN-18	MBC APPLIED ENVIRONMENTAL SCIENCES	1,350.00	11-JUN-18	1,350.00	Reconciled
388575	07-JUN-18	MBZ INDUSTRIAL, INC.	267.99	11-JUN-18	267.99	Reconciled

IRWD Ledger Upgrade Payment Register For 01-JUN-18 To 30-JUN-18 Report Date: 02-JUL-2018 07:45  
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 5  
 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )  
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
388576		07-JUN-18	MC FADDEN-DALE INDUSTRIAL		757.16	11-JUN-18	757.16	Reconciled
388577		07-JUN-18	MC MASTER CARR SUPPLY CO		3,661.41	11-JUN-18	3,661.41	Reconciled
388578		07-JUN-18	MERRIMAC PETROLEUM, INC.		21,792.60	13-JUN-18	21,792.60	Reconciled
388579		07-JUN-18	MORALES, LINDA		39.20	12-JUN-18	39.20	Reconciled
388580		07-JUN-18	MORRISROE, EDWARD		238.61	27-JUN-18	238.61	Reconciled
388581		07-JUN-18	MRO ELECTRIC & SUPPLY CO.		9,467.00	12-JUN-18	9,467.00	Reconciled
388582		07-JUN-18	MULTIQUIP INC		501.64	12-JUN-18	501.64	Reconciled
388583		07-JUN-18	MUNICIPAL UNDERGROUND SERVICES INC		3,325.00	11-JUN-18	3,325.00	Reconciled
388584		07-JUN-18	MUNICIPAL WATER DISTRICT OF ORANGE COUNTY		14,291.15	12-JUN-18	14,291.15	Reconciled
388585		07-JUN-18	MUTUAL PROPANE		343.74	12-JUN-18	343.74	Reconciled
388586		07-JUN-18	NATIONAL READY MIXED CONCRETE CO.		970.46	11-JUN-18	970.46	Reconciled
388587		07-JUN-18	NATURES IMAGE INC		1,115.00	19-JUN-18	1,115.00	Reconciled
388588		07-JUN-18	NCH CORPORATION		700.21	12-JUN-18	700.21	Reconciled
388589		07-JUN-18	NOVACOAST INC		16,000.00	13-JUN-18	16,000.00	Reconciled
388590		07-JUN-18	O.C. SUPERIOR CUSTOM CLEANING SERVICES		4,560.00	12-JUN-18	4,560.00	Reconciled
388591		07-JUN-18	OLIN CORPORATION		41,262.71	15-JUN-18	41,262.71	Reconciled
388592		07-JUN-18	OMAR DANDASHI		1,772.60	18-JUN-18	1,772.60	Reconciled
388593		07-JUN-18	ORACLE AMERICA, INC.		220,854.56	14-JUN-18	220,854.56	Reconciled
388594		07-JUN-18	ORANGE COUNTY AUTO PARTS CO		668.70	08-JUN-18	668.70	Reconciled
388595		07-JUN-18	PACE ADVANCED WATER ENGINEERING, INC.		9,975.00	12-JUN-18	9,975.00	Reconciled
388596		07-JUN-18	PACIFIC COAST BOLT CORP		11,234.07	15-JUN-18	11,234.07	Reconciled
388597		07-JUN-18	PACIFIC HYDROTECH CORPORATION		48,939.25	13-JUN-18	48,939.25	Reconciled
388598		07-JUN-18	PAPER DEPOT DOCUMENT DESTRUCTION LLC		720.00	18-JUN-18	720.00	Reconciled
388599		07-JUN-18	PARKHOUSE TIRE INC		384.13	12-JUN-18	384.13	Reconciled
388600		07-JUN-18	PASCAL & LUDWIG CONSTRUCTORS		254,909.14	14-JUN-18	254,909.14	Reconciled

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 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )

Payment Type: All

Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
388601		07-JUN-18	PASCAL & LUDWIG CONSTRUCTORS		13,416.27	13-JUN-18	13,416.27	Reconciled
388602		07-JUN-18	EDMA CORPORATION		2,895.64	11-JUN-18	2,895.64	Reconciled
388603		07-JUN-18	PIVOT INTERIORS INC		2,057.94	11-JUN-18	2,057.94	Reconciled
388604		07-JUN-18	PRAXAIR DISTRIBUTION INC		232.14	11-JUN-18	232.14	Reconciled
388605		07-JUN-18	PTI SAND & GRAVEL INC		1,046.77	12-JUN-18	1,046.77	Reconciled
388606		07-JUN-18	PULTE HOMES		100.05			Negotiable
388607		07-JUN-18	PURE EFFECT INC		16,345.00	14-JUN-18	16,345.00	Reconciled
388608		07-JUN-18	R & R INDUSTRIAL SERVICES, INC.		13,085.64	18-JUN-18	13,085.64	Reconciled
388609		07-JUN-18	R DEPENDABLE CONST INC		1,220.05	12-JUN-18	1,220.05	Reconciled
388610		07-JUN-18	RAM AIR ENGINEERING INC		2,915.00	11-JUN-18	2,915.00	Reconciled
388611		07-JUN-18	REAL WATER CONSULTANTS INC.		20,145.00	26-JUN-18	20,145.00	Reconciled
388612		07-JUN-18	RELIANCE SAFETY CONSULTANTS, INC.		1,250.00	26-JUN-18	1,250.00	Reconciled
388613		07-JUN-18	RESA POWER SOLUTIONS - TRANSFORMER SERVICES, LLC		6,731.00	13-JUN-18	6,731.00	Reconciled
388614		07-JUN-18	RICHARD C. SLADE & ASSOCIATES LLC		15,542.41	15-JUN-18	15,542.41	Reconciled
388615		07-JUN-18	RINCON TRUCK CENTER INC.		9,360.73	08-JUN-18	9,360.73	Reconciled
388616		07-JUN-18	ROESE, LYNDA		11.51	22-JUN-18	11.51	Reconciled
388617		07-JUN-18	S & J SUPPLY CO INC		7,148.14	11-JUN-18	7,148.14	Reconciled
388618		07-JUN-18	SAFETY-KLEEN SYSTEMS, INC		310.75	11-JUN-18	310.75	Reconciled
388619		07-JUN-18	SANTA ANA BLUE PRINT		1,416.41	12-JUN-18	1,416.41	Reconciled
388620		07-JUN-18	SANTA MARGARITA FORD		4,139.07	13-JUN-18	4,139.07	Reconciled
388621		07-JUN-18	SARAKKI, VENU		60.44	11-JUN-18	60.44	Reconciled
388622		07-JUN-18	SCHINDLER ELEVATOR CORPORATION		202.95	12-JUN-18	202.95	Reconciled
388623		07-JUN-18	SEAL ANALYTICAL INC		288.42	11-JUN-18	288.42	Reconciled
388624		07-JUN-18	SHAMROCK SUPPLY CO INC		1,729.06	12-JUN-18	1,729.06	Reconciled
388625		07-JUN-18	SIGMA-ALDRICH INC		83.54	12-JUN-18	83.54	Reconciled
IRWD Ledger Upgrade      Payment Register For 01-JUN-18 To 30-JUN-18      Report Date: 02-JUL-2018 07:45 BANK: Bank of America N.A.      Branch : Los Angeles      Account: Checking AP and PR      Page: 7 Bank Account Currency: USD ( US Dollar )      Payment Currency: USD ( US Dollar ) Payment Type: All      Display Supplier Address: No								

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
388626		07-JUN-18	SIRIUS COMPUTER SOLUTIONS INC		66,312.33	15-JUN-18	66,312.33	Reconciled
388627		07-JUN-18	SOLARWINDS, INC		5,097.34	12-JUN-18	5,097.34	Reconciled
388628		07-JUN-18	SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT		235.86	11-JUN-18	235.86	Reconciled
388629		07-JUN-18	SOUTH COAST ANSWERING SERVICE		679.87	12-JUN-18	679.87	Reconciled
388630		07-JUN-18	SOUTH ORANGE COUNTY REGIONAL CHAMBERS OF COMMERCE		400.00			Negotiable
388631		07-JUN-18	SOUTHERN CALIFORNIA EDISON COMPANY		257,154.94	11-JUN-18	257,154.94	Reconciled
388632		07-JUN-18	SOUTHERN COUNTIES LUBRICANTS LLC		8,962.07	11-JUN-18	8,962.07	Reconciled
388633		07-JUN-18	SPARKLETTES		454.47	13-JUN-18	454.47	Reconciled
388634		07-JUN-18	SPATIAL WAVE, INC.		50,000.00	15-JUN-18	50,000.00	Reconciled
388635		07-JUN-18	STETSON ENGINEERS INC.		1,510.00	12-JUN-18	1,510.00	Reconciled
388636		07-JUN-18	STEVEN ENTERPRISES INC		470.00	11-JUN-18	470.00	Reconciled
388637		07-JUN-18	STREAKWAVE WIRELESS, INC.		5,917.40	12-JUN-18	5,917.40	Reconciled
388638		07-JUN-18	SUMMIT CHEMICAL SPECIALTY PRODUCTS		10,047.84	22-JUN-18	10,047.84	Reconciled
388639		07-JUN-18	TALLEY INC		761.91	11-JUN-18	761.91	Reconciled
388640		07-JUN-18	TESTAMERICA LABORATORIES, INC		52.50	14-JUN-18	52.50	Reconciled

388641	07-JUN-18	TETRA TECH, INC	24,498.00	14-JUN-18	24,498.00	Reconciled
388642	07-JUN-18	THYSSENKRUPP ELEVATOR CORPORATION	191.94	11-JUN-18	191.94	Reconciled
388643	07-JUN-18	TRI COUNTY PUMP COMPANY	17,867.93	14-JUN-18	17,867.93	Reconciled
388644	07-JUN-18	TRI POINTE HOMES, INC.	102.98	15-JUN-18	102.98	Reconciled
388645	07-JUN-18	TRIPAC MARKETING INC	1,760.13	12-JUN-18	1,760.13	Reconciled
388646	07-JUN-18	TROPICAL PLAZA NURSERY INC	7,203.70	11-JUN-18	7,203.70	Reconciled
388647	07-JUN-18	TRUCPARCO	207.36	19-JUN-18	207.36	Reconciled

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 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )  
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
388648		07-JUN-18	UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA		1,397.65	12-JUN-18	1,397.65	Reconciled
388649		07-JUN-18	UNITED PARCEL SERVICE INC		65.07	11-JUN-18	65.07	Reconciled
388650		07-JUN-18	UNITED STATES POST OFFICE		25,000.00	14-JUN-18	25,000.00	Reconciled
388651		07-JUN-18	UNIVAR USA INC		7,842.05	11-JUN-18	7,842.05	Reconciled
388652		07-JUN-18	USA BLUEBOOK		2,423.24	12-JUN-18	2,423.24	Reconciled
388653		07-JUN-18	VERIZON WIRELESS SERVICES LLC		699.35	12-JUN-18	699.35	Reconciled
388654		07-JUN-18	VERTEX INC		4,958.00	11-JUN-18	4,958.00	Reconciled
388655		07-JUN-18	VO, PHUOC		35.48	11-JUN-18	35.48	Reconciled
388656		07-JUN-18	VWR INTERNATIONAL, LLC		353.45	11-JUN-18	353.45	Reconciled
388657		07-JUN-18	WARD, WILLIAM P JR.		691.24	08-JUN-18	691.24	Reconciled
388658		07-JUN-18	WASTE MANAGEMENT OF ORANGE COUNTY		5,056.74	11-JUN-18	5,056.74	Reconciled
388659		07-JUN-18	WATERLINE TECHNOLOGIES INC		13,262.80	12-JUN-18	13,262.80	Reconciled
388660		07-JUN-18	WATERSMART SOFTWARE, INC		13,597.50	14-JUN-18	13,597.50	Reconciled
388661		07-JUN-18	WATERWISE CONSULTING, INC.		1,860.90	11-JUN-18	1,860.90	Reconciled
388662		07-JUN-18	WATKINS LANDMARK CONSTRUCTION		1,523.76	14-JUN-18	1,523.76	Reconciled
388663		07-JUN-18	WAXIE'S ENTERPRISES, INC		1,959.05	11-JUN-18	1,959.05	Reconciled
388664		07-JUN-18	WEST YOST ASSOCIATES, INC		225.00	12-JUN-18	225.00	Reconciled
388665		07-JUN-18	WESTERN SAFETY PRODUCTS INC		3,309.62	14-JUN-18	3,309.62	Reconciled
388666		07-JUN-18	WIRELESS WATCHDOGS, LLC		952.00	14-JUN-18	952.00	Reconciled
388667		07-JUN-18	XIE, LINXI		292.45			Negotiable
388668		07-JUN-18	YE, HUIRU		15.04			Negotiable
388669		07-JUN-18	YORKE ENGINEERING LLC		1,793.00	08-JUN-18	1,793.00	Reconciled
388670		07-JUN-18	ZEE MEDICAL SERVICE CO		436.70	08-JUN-18	436.70	Reconciled
388671		07-JUN-18	ZGOLF FOOD & BEVERAGE SERVICES, LLC		1,513.48	11-JUN-18	1,513.48	Reconciled

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 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )  
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
388672		07-JUN-18	PERS LONG TERM CARE	PASADENA	675.35	11-JUN-18	675.35	Reconciled
388673		07-JUN-18	ORANGE COUNTY SHERIFF'S OFFICE	4601 JAMBOREE	224.50	15-JUN-18	224.50	Reconciled
388674		07-JUN-18	INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS LOCAL 47	DIAMOND BAR	1,445.00	14-JUN-18	1,445.00	Reconciled
388675		08-JUN-18	UNITED HEALTHCARE INSURANCE COMPANY	DALLAS	245.85	19-JUN-18	245.85	Reconciled
388676		08-JUN-18	DUZMAN, CHERYL	PAY	48.11			Voided
388677		08-JUN-18	Paulson, David	HOME	105.00	18-JUN-18	105.00	Reconciled
388678		08-JUN-18	Mwe, Nang	HOME	117.30	12-JUN-18	117.30	Reconciled
388679		08-JUN-18	Mwe, Nang	HOME	15.70	12-JUN-18	15.70	Reconciled
388680		14-JUN-18	Bennett, Ray R		181.77	21-JUN-18	181.77	Reconciled

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
			(Ray)					
388681		14-JUN-18	Hartoog, Jeremy		90.00	25-JUN-18	90.00	Reconciled
388682		14-JUN-18	Hufana, Eugenio D		273.85	14-JUN-18	273.85	Reconciled
388683		14-JUN-18	Legault, Dan (Dan)		750.00	25-JUN-18	750.00	Reconciled
388684		14-JUN-18	Lieuw, Jessica		167.02	14-JUN-18	167.02	Reconciled
388685		14-JUN-18	Parsons, Sheryl		735.65	19-JUN-18	735.65	Reconciled
388686		14-JUN-18	Sanchez, Hector A (Hector)		750.00	21-JUN-18	750.00	Reconciled
388687		14-JUN-18	Sciabica, Joseph		750.00	18-JUN-18	750.00	Reconciled
388688		14-JUN-18	Smyth, Jeffrey S (Jeff)		45.00	22-JUN-18	45.00	Reconciled
388689		14-JUN-18	Spencer, Jeremy J		96.96	15-JUN-18	96.96	Reconciled
388690		14-JUN-18	Wilson, Brett		750.00	14-JUN-18	750.00	Reconciled
388691		14-JUN-18	A&Y ASPHALT CONTRACTORS, INC.		14,777.00	21-JUN-18	14,777.00	Reconciled
388692		14-JUN-18	ABC ICEHOUSE, INC.		151.59	25-JUN-18	151.59	Reconciled
388693		14-JUN-18	ADS LLC		2,160.00	18-JUN-18	2,160.00	Reconciled
388694		14-JUN-18	AEGIS ENGINEERING MANAGEMENT, INC.		37,920.00	20-JUN-18	37,920.00	Reconciled
388695		14-JUN-18	AIR TECHNOLOGY LABORATORIES		289.00			Negotiable
388696		14-JUN-18	AIRGAS, INC.		1,574.87	18-JUN-18	1,574.87	Reconciled
388697		14-JUN-18	ALEXANDER'S CONTRACT SERVICES, INC.		117,856.13	20-JUN-18	117,856.13	Reconciled
388698		14-JUN-18	ALPHA TRAFFIC SERVICES, INC.		470.00	18-JUN-18	470.00	Reconciled
388699		14-JUN-18	ALSTON & BIRD LLP		26,186.08	21-JUN-18	26,186.08	Reconciled
388700		14-JUN-18	ALTA NURSERY, INC.		1,053.44	20-JUN-18	1,053.44	Reconciled
388701		14-JUN-18	AM LEONARD INC		724.98	18-JUN-18	724.98	Reconciled

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Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
388702		14-JUN-18	AMAZON CAPITAL SERVICES, INC.		173.18	18-JUN-18	173.18	Reconciled
388703		14-JUN-18	ANES, KENNETH		68.11	20-JUN-18	68.11	Reconciled
388704		14-JUN-18	APEX LIFE SCIENCES, LLC		3,231.81	18-JUN-18	3,231.81	Reconciled
388705		14-JUN-18	APPLIED INDUSTRIAL TECHNOLOGIES - CA LLC		910.85	18-JUN-18	910.85	Reconciled
388706		14-JUN-18	AQUA BEN CORPORATION		34,383.46	20-JUN-18	34,383.46	Reconciled
388707		14-JUN-18	ARB STRUCTURES, INC.		402.93	18-JUN-18	402.93	Reconciled
388708		14-JUN-18	ARCADIS U.S., INC.		2,502.10	18-JUN-18	2,502.10	Reconciled
388709		14-JUN-18	ARIZONA INSTRUMENT LLC		726.45	18-JUN-18	726.45	Reconciled
388710		14-JUN-18	ARSIN, CARL		37.42	19-JUN-18	37.42	Reconciled
388711		14-JUN-18	ASSOCIATION OF CALIFORNIA WATER AGENCIES/JPIA		35,077.91	22-JUN-18	35,077.91	Reconciled
388712		14-JUN-18	AT&T		1,670.57	19-JUN-18	1,670.57	Reconciled
388713		14-JUN-18	ATHENS SERVICES		1,563.60	18-JUN-18	1,563.60	Reconciled
388714		14-JUN-18	BANTA, BRAD		48.28	18-JUN-18	48.28	Reconciled
388715		14-JUN-18	BELL TOWER FLORIST & GIFTS		327.52	28-JUN-18	327.52	Reconciled
388716		14-JUN-18	BEST DRILLING AND PUMP, INC.		340,503.75	21-JUN-18	340,503.75	Reconciled
388717		14-JUN-18	BHOGWANI, SURESH		20.00	18-JUN-18	20.00	Reconciled
388718		14-JUN-18	BIOMAGIC INC		16,010.58	19-JUN-18	16,010.58	Reconciled
388719		14-JUN-18	BLOCK, LORI		10.69	20-JUN-18	10.69	Reconciled
388720		14-JUN-18	BOGGS, HENRY		37.41	15-JUN-18	37.41	Reconciled
388721		14-JUN-18	BOYD & ASSOCIATES		125.00	19-JUN-18	125.00	Reconciled
388722		14-JUN-18	BRITHINEE ELECTRIC		8,816.80	18-JUN-18	8,816.80	Reconciled
388723		14-JUN-18	BURKE, WILLIAMS & SORENSEN, LLP		162.50	18-JUN-18	162.50	Reconciled
388724		14-JUN-18	BUSH & ASSOCIATES INC		4,270.00			Negotiable
388725		14-JUN-18	BUSTARD, MICHAEL		23.24	21-JUN-18	23.24	Reconciled
388726		14-JUN-18	C WELLS PIPELINE MATERIALS INC		2,241.20	21-JUN-18	2,241.20	Reconciled
388727		14-JUN-18	CALIFORNIA BARRICADE RENTAL, INC.		3,092.50	18-JUN-18	3,092.50	Reconciled
388728		14-JUN-18	CALIFORNIA NEWSPAPER PARTNERSHIP		1,602.00	25-JUN-18	1,602.00	Reconciled
388729		14-JUN-18	CANNON, CRYSTAL		66.22			Negotiable

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 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
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Payment Document : IRWD CHECK

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
388730		14-JUN-18	CANON SOLUTIONS AMERICA, INC.		40.00	18-JUN-18	40.00	Reconciled
388731		14-JUN-18	CAPTIVE AUDIENCE MARKETING INC.		79.00	19-JUN-18	79.00	Reconciled
388732		14-JUN-18	CCL CONTRACTING INC.		491,627.68	22-JUN-18	491,627.68	Reconciled
388733		14-JUN-18	CDW GOVERNMENT LLC		819.93	19-JUN-18	819.93	Reconciled
388734		14-JUN-18	CENTRAL COAST POWER SERVICES, LLC		64,305.84	21-JUN-18	64,305.84	Reconciled
388735		14-JUN-18	CHANG, GRACE		25.00	20-JUN-18	25.00	Reconciled
388736		14-JUN-18	CHANG, JENNIFER		38.75	20-JUN-18	38.75	Reconciled
388737		14-JUN-18	CHEM TECH INTERNATIONAL INC		23,025.48	22-JUN-18	23,025.48	Reconciled
388738		14-JUN-18	CHEN, ZICHANG		36.36			Voided
388739		14-JUN-18	CHO DESIGN ASSOCIATES, INC		10,416.00	19-JUN-18	10,416.00	Reconciled
388740		14-JUN-18	CITY OF IRVINE		1,750.00	26-JUN-18	1,750.00	Reconciled
388741		14-JUN-18	CITY OF LAKE FOREST		24,474.92			Negotiable
388742		14-JUN-18	CITY OF TUSTIN		778.43	15-JUN-18	778.43	Reconciled
388743		14-JUN-18	CIVIL SOURCE, INC.		88,183.00	25-JUN-18	88,183.00	Reconciled
388744		14-JUN-18	COMMERCIAL DOOR OF ORANGE COUNTY, INC.		216.93	15-JUN-18	216.93	Reconciled
388745		14-JUN-18	CORMIER, DANIELLE		12.05	20-JUN-18	12.05	Reconciled
388746		14-JUN-18	CR & R INCORPORATED		827.55	18-JUN-18	827.55	Reconciled
388747		14-JUN-18	CREW, INC.		965.87	26-JUN-18	965.87	Reconciled
388748		14-JUN-18	CULLIGAN OF SANTA ANA		6,000.00	20-JUN-18	6,000.00	Reconciled
388749		14-JUN-18	CUMMINS PACIFIC, LLC		143.61	18-JUN-18	143.61	Reconciled
388750		14-JUN-18	D & H WATER SYSTEMS INC.		8,603.63	20-JUN-18	8,603.63	Reconciled
388751		14-JUN-18	DELL MARKETING LP		63,154.95	20-JUN-18	63,154.95	Reconciled
388752		14-JUN-18	DISCOUNT COURIER SERVICE		91.32	18-JUN-18	91.32	Reconciled
388753		14-JUN-18	DON WILSON BUILDERS		31.38	25-JUN-18	31.38	Reconciled
388754		14-JUN-18	DOUGHER, JACULINE		45.88	27-JUN-18	45.88	Reconciled
388755		14-JUN-18	EAGLE PRINT DYNAMICS		4,454.40	19-JUN-18	4,454.40	Reconciled
388756		14-JUN-18	ECO SERVICES LLC		5,211.17	18-JUN-18	5,211.17	Reconciled
388757		14-JUN-18	EHS INTERNATIONAL, INC		2,300.00	18-JUN-18	2,300.00	Reconciled

IRWD Ledger Upgrade Payment Register For 01-JUN-18 To 30-JUN-18 Report Date: 02-JUL-2018 07:45  
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 12  
 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )  
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
388758		14-JUN-18	EMEDCO		344.64	19-JUN-18	344.64	Reconciled
388759		14-JUN-18	ENVIRONMENTAL RESOURCE ASSOCIATES		624.37	19-JUN-18	624.37	Reconciled
388760		14-JUN-18	EUROFINS EATON ANALYTICAL, INC.		600.00	18-JUN-18	600.00	Reconciled
388761		14-JUN-18	EVOQUA WATER TECHNOLOGIES LLC		560.00	18-JUN-18	560.00	Reconciled
388762		14-JUN-18	EXECUTIVE LIGHTING & ELECTRIC		11,343.85	20-JUN-18	11,343.85	Reconciled
388763		14-JUN-18	FARRELL & ASSOCIATES		2,049.98	15-JUN-18	2,049.98	Reconciled
388764		14-JUN-18	FAVREAU, NICOLE		29.44			Negotiable
388765		14-JUN-18	FEDEX		494.92	18-JUN-18	494.92	Reconciled
388766		14-JUN-18	FIDELITY SECURITY LIFE INSURANCE COMPANY		6,888.27	22-JUN-18	6,888.27	Reconciled
388767		14-JUN-18	FISHER SCIENTIFIC COMPANY LLC		2,157.16	18-JUN-18	2,157.16	Reconciled
388768		14-JUN-18	FREEWAY MACHINE & WELDING SHOP		2,672.30	19-JUN-18	2,672.30	Reconciled
388769		14-JUN-18	FRONTIER CALIFORNIA INC.		51.81	19-JUN-18	51.81	Reconciled
388770		14-JUN-18	FUSCOE ENGINEERING, INC.		2,882.66	18-JUN-18	2,882.66	Reconciled
388771		14-JUN-18	GENTERRA CONSULTANTS INC		5,585.50	15-JUN-18	5,585.50	Reconciled
388772		14-JUN-18	GEORGE HILLS COMPANY, INC.		477.54	20-JUN-18	477.54	Reconciled
388773		14-JUN-18	GHD INC.		3,621.00	18-JUN-18	3,621.00	Reconciled
388774		14-JUN-18	GRAINGER		1,459.21	18-JUN-18	1,459.21	Reconciled
388775		14-JUN-18	GRAYBAR ELECTRIC COMPANY		4,994.49	18-JUN-18	4,994.49	Reconciled
388776		14-JUN-18	GRUTMAN, RUVIN		6.46	19-JUN-18	6.46	Reconciled
388777		14-JUN-18	HABITAT		1,183.00	26-JUN-18	1,183.00	Reconciled

			RESTORATION SCIENCES, INC.						
388778		14-JUN-18	HACH COMPANY		22,483.07	25-JUN-18		22,483.07	Reconciled
388779		14-JUN-18	HARRINGTON INDUSTRIAL PLASTICS LLC		1,157.48	18-JUN-18		1,157.48	Reconciled
388780		14-JUN-18	HAZEN AND SAWYER		6,720.00	20-JUN-18		6,720.00	Reconciled
388781		14-JUN-18	HDR ENGINEERING INC		79,814.18	25-JUN-18		79,814.18	Reconciled
388782		14-JUN-18	HELPMATES STAFFING SERVICES		23,540.75	20-JUN-18		23,540.75	Reconciled

IRWD Ledger Upgrade Payment Register For 01-JUN-18 To 30-JUN-18 Report Date: 02-JUL-2018 07:45  
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 13  
 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )  
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
388783		14-JUN-18	HENDRIX, ERIC		378.72	15-JUN-18	378.72	Reconciled
388784		14-JUN-18	HILL BROTHERS CHEMICAL COMPANY		9,988.66	19-JUN-18	9,988.66	Reconciled
388785		14-JUN-18	HOME DEPOT USA INC		757.81	19-JUN-18	757.81	Reconciled
388786		14-JUN-18	HSU, LULU M.H.		169.60			Negotiable
388787		14-JUN-18	HYDROTECH ELECTRIC		1,000.00	18-JUN-18	1,000.00	Reconciled
388788		14-JUN-18	INDUSTRIAL METAL SUPPLY CO		97.89	18-JUN-18	97.89	Reconciled
388789		14-JUN-18	IRON MOUNTAIN INFORMATION MANAGEMENT INC		1,530.43	18-JUN-18	1,530.43	Reconciled
388790		14-JUN-18	IRVINE PACIFIC		438.22	19-JUN-18	438.22	Reconciled
388791		14-JUN-18	IRVINE PIPE & SUPPLY INC		420.83	15-JUN-18	420.83	Reconciled
388792		14-JUN-18	JENTZEN, BRANDON		58.77	26-JUN-18	58.77	Reconciled
388793		14-JUN-18	JIG CONSULTANTS		7,990.27	20-JUN-18	7,990.27	Reconciled
388794		14-JUN-18	KANG, CHANG		81.04	19-JUN-18	81.04	Reconciled
388795		14-JUN-18	KAYUGA SOLUTION INC		20,570.00	19-JUN-18	20,570.00	Reconciled
388796		14-JUN-18	KENT & AMY DAHLBERG		24,484.38	20-JUN-18	24,484.38	Reconciled
388797		14-JUN-18	KHOSHNIYATI, REZA		44.29			Negotiable
388798		14-JUN-18	KHUDA, KHALED		436.51	25-JUN-18	436.51	Reconciled
388799		14-JUN-18	KILL-N-BUGS TERMITE AND PREST CONTROL SERVICES		2,725.00	18-JUN-18	2,725.00	Reconciled
388800		14-JUN-18	KIM, BRYANT		251.50	21-JUN-18	251.50	Reconciled
388801		14-JUN-18	KLEINFELDER, INC.		1,432.50	18-JUN-18	1,432.50	Reconciled
388802		14-JUN-18	LA HABRA FENCE COMPANY INC		3,188.00	20-JUN-18	3,188.00	Reconciled
388803		14-JUN-18	LANDCARE HOLDINGS, INC.		2,760.88	18-JUN-18	2,760.88	Reconciled
388804		14-JUN-18	LEE, SUK MIN		35.72			Voided
388805		14-JUN-18	LEE, SUSAN		37.25	15-JUN-18	37.25	Reconciled
388806		14-JUN-18	LEUNG, MARINA		28.42			Negotiable
388807		14-JUN-18	LEWIS BRISBOIS BISGAARD AND SMITH, LLP		260.00	20-JUN-18	260.00	Reconciled
388808		14-JUN-18	LGC GEOTECHNICAL, INC.		940.00	15-JUN-18	940.00	Reconciled
388809		14-JUN-18	LIANG, WEN		43.55	26-JUN-18	43.55	Reconciled
388810		14-JUN-18	LIU, SHUMEI		80.90	27-JUN-18	80.90	Reconciled
388811		14-JUN-18	LU, YUJIE		36.74			Negotiable
388812		14-JUN-18	LUBRICATION ENGINEERS, INC.		1,447.95	18-JUN-18	1,447.95	Reconciled
388813		14-JUN-18	M.CUBED		1,322.50	27-JUN-18	1,322.50	Reconciled

IRWD Ledger Upgrade Payment Register For 01-JUN-18 To 30-JUN-18 Report Date: 02-JUL-2018 07:45  
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 14  
 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )  
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
388814		14-JUN-18	MAG-TROL		11,879.44	20-JUN-18	11,879.44	Reconciled
388815		14-JUN-18	MARK ENTERPRISES, INC.		35,570.64	20-JUN-18	35,570.64	Reconciled
388816		14-JUN-18	MARRIOTT INT'L DBA SAN DIEGO MARRIOTT HOTEL & MARINA		1,601.35	28-JUN-18	1,601.35	Reconciled
388817		14-JUN-18	MBF CONSULTING, INC.		15,207.34	22-JUN-18	15,207.34	Reconciled
388818		14-JUN-18	MC FADDEN-DALE INDUSTRIAL		50.00	18-JUN-18	50.00	Reconciled
388819		14-JUN-18	MENTER, SANFORD		49.71	20-JUN-18	49.71	Reconciled
388820		14-JUN-18	MISSION COMMUNICATIONS, LLC		1,690.20	20-JUN-18	1,690.20	Reconciled
388821		14-JUN-18	MOBILE MODULAR MANAGEMENT		1,212.19	18-JUN-18	1,212.19	Reconciled

388822	14-JUN-18	CORPORATION MOODY'S INVESTORS SERVICE INC	15,000.00	22-JUN-18	15,000.00	Reconciled
388823	14-JUN-18	MR CRANE INC	1,053.00	18-JUN-18	1,053.00	Reconciled
388824	14-JUN-18	MUNICIPAL UNDERGROUND SERVICES INC	3,650.00	19-JUN-18	3,650.00	Reconciled
388825	14-JUN-18	MUTUAL PROPANE	212.92	20-JUN-18	212.92	Reconciled
388826	14-JUN-18	NATURALWELL, LLC	1,017.50	18-JUN-18	1,017.50	Reconciled
388827	14-JUN-18	NOVACOAST INC	1,905.00	18-JUN-18	1,905.00	Reconciled
388828	14-JUN-18	OLIN CORPORATION	25,669.74	21-JUN-18	25,669.74	Reconciled
388829	14-JUN-18	OMAR DANDASHI	1,751.73	25-JUN-18	1,751.73	Reconciled
388830	14-JUN-18	ONESOURCE DISTRIBUTORS LLC	768.43	18-JUN-18	768.43	Reconciled
388831	14-JUN-18	ORANGE COUNTY FIRE AUTHORITY	557.00	19-JUN-18	557.00	Reconciled
388832	14-JUN-18	OSTS, INC	575.00	19-JUN-18	575.00	Reconciled
388833	14-JUN-18	PAGE ADVANCED WATER ENGINEERING, INC.	2,140.00	15-JUN-18	2,140.00	Reconciled
388834	14-JUN-18	PACIFIC GAS AND ELECTRIC COMPANY	102.38	20-JUN-18	102.38	Reconciled
388835	14-JUN-18	PACIFIC HYDROTECH CORPORATION	12,466.90	20-JUN-18	12,466.90	Reconciled
388836	14-JUN-18	PACIFIC HYDROTECH CORPORATION	236,870.99	21-JUN-18	236,870.99	Reconciled
388837	14-JUN-18	PARADA PAINTING INC	18,557.84	29-JUN-18	18,557.84	Reconciled
388838	14-JUN-18	PASCAL & LUDWIG CONSTRUCTORS	340,537.07	20-JUN-18	340,537.07	Reconciled

IRWD Ledger Upgrade Payment Register For 01-JUN-18 To 30-JUN-18 Report Date: 02-JUL-2018 07:45  
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 15  
 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )  
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
388839		14-JUN-18	PASCAL & LUDWIG CONSTRUCTORS		17,923.00	20-JUN-18	17,923.00	Reconciled
388840		14-JUN-18	PATHIRANA, KEEMBIYAGE PRIYANKA		32.21	22-JUN-18	32.21	Reconciled
388841		14-JUN-18	PAYNE & FEARS LLP		2,775.00	19-JUN-18	2,775.00	Reconciled
388842		14-JUN-18	PILLSBURY WINTHROP SHAW PITTMAN LLP		1,741.75	18-JUN-18	1,741.75	Reconciled
388843		14-JUN-18	PIVOT INTERIORS INC		2,897.62	18-JUN-18	2,897.62	Reconciled
388844		14-JUN-18	PLUMBERS DEPOT INC.		1,259.73	19-JUN-18	1,259.73	Reconciled
388845		14-JUN-18	PRAXAIR DISTRIBUTION INC		1,557.51	18-JUN-18	1,557.51	Reconciled
388846		14-JUN-18	PROCARE WORK INJURY CENTER		715.00	20-JUN-18	715.00	Reconciled
388847		14-JUN-18	PSOMAS		14,474.18	26-JUN-18	14,474.18	Reconciled
388848		14-JUN-18	PUREWORKS, INC.		2,000.00	18-JUN-18	2,000.00	Reconciled
388849		14-JUN-18	QUE, RUIMING		22.63			Negotiable
388850		14-JUN-18	QUIROS, ROSE		30.04	19-JUN-18	30.04	Reconciled
388851		14-JUN-18	R & S SOIL PRODUCTS INC		700.38	25-JUN-18	700.38	Reconciled
388852		14-JUN-18	R&B AUTOMATION, INC.		7,003.75	25-JUN-18	7,003.75	Reconciled
388853		14-JUN-18	RAINBOW DISPOSAL CO INC		357.36	20-JUN-18	357.36	Reconciled
388854		14-JUN-18	RAM AIR ENGINEERING INC		29,449.12	19-JUN-18	29,449.12	Reconciled
388855		14-JUN-18	RASTEGAR, MO		18.28			Negotiable
388856		14-JUN-18	RCE CONSULTANTS, INC.		10,608.87	25-JUN-18	10,608.87	Reconciled
388857		14-JUN-18	RED HAWK FIRE & SECURITY (CA) LLC		1,650.00	19-JUN-18	1,650.00	Reconciled
388858		14-JUN-18	REED, DAVID		96.43	19-JUN-18	96.43	Reconciled
388859		14-JUN-18	REFRIGERATION SUPPLIES DISTRIBUTOR		6,687.90	15-JUN-18	6,687.90	Reconciled
388860		14-JUN-18	RELIANCE SAFETY CONSULTANTS, INC.		1,760.00	26-JUN-18	1,760.00	Reconciled
388861		14-JUN-18	RINGCLEAR LLC		124.80	19-JUN-18	124.80	Reconciled
388862		14-JUN-18	ROACH, DAVID		25.00	21-JUN-18	25.00	Reconciled
388863		14-JUN-18	ROBERT HALF INTERNATIONAL, INC.		179.74	18-JUN-18	179.74	Reconciled
388864		14-JUN-18	RYAN, NANCY		120.98			Negotiable
388865		14-JUN-18	SANDERS PAYING INC		187,101.80	20-JUN-18	187,101.80	Reconciled

IRWD Ledger Upgrade Payment Register For 01-JUN-18 To 30-JUN-18 Report Date: 02-JUL-2018 07:45  
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 16  
 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )  
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
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Payment Document : IRWD CHECK

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
388866		14-JUN-18	SANTA ANA BLUE PRINT		1,465.05	19-JUN-18	1,465.05	Reconciled
388867		14-JUN-18	SARAKKI, VENU		7.85	18-JUN-18	7.85	Reconciled
388868		14-JUN-18	SECURITAS SECURITY SERVICES USA, INC.		54,587.83	20-JUN-18	54,587.83	Reconciled
388869		14-JUN-18	SEPARATION PROCESSES INC		950.50	18-JUN-18	950.50	Reconciled
388870		14-JUN-18	SERRANO WATER DISTRICT		31,732.16	25-JUN-18	31,732.16	Reconciled
388871		14-JUN-18	SHAMROCK SUPPLY CO INC		63.46	19-JUN-18	63.46	Reconciled
388872		14-JUN-18	SHERWIN WILLIAMS COMPANY		2,127.20	18-JUN-18	2,127.20	Reconciled
388873		14-JUN-18	SHOETERIA		198.77	19-JUN-18	198.77	Reconciled
388874		14-JUN-18	SIGNATURE FLOORING, INC		1,371.00	19-JUN-18	1,371.00	Reconciled
388875		14-JUN-18	SITEONE LANDSCAPE SUPPLY, LLC		586.40	18-JUN-18	586.40	Reconciled
388876		14-JUN-18	SITMATIC		701.46	18-JUN-18	701.46	Reconciled
388877		14-JUN-18	SONOYAMA, EIICHI		50.71	15-JUN-18	50.71	Reconciled
388878		14-JUN-18	SOUTH BAY FOUNDRY, INC		9,929.17	22-JUN-18	9,929.17	Reconciled
388879		14-JUN-18	SOUTH COAST WATER CO.		90.00	18-JUN-18	90.00	Reconciled
388880		14-JUN-18	SOUTHERN CALIFORNIA EDISON COMPANY		4,253.32	18-JUN-18	4,253.32	Reconciled
388881		14-JUN-18	SOUTHERN CALIFORNIA GAS COMPANY		3,721.20	22-JUN-18	3,721.20	Reconciled
388882		14-JUN-18	SPATIAL WAVE, INC.		2,952.50	19-JUN-18	2,952.50	Reconciled
388883		14-JUN-18	STANDARD REGISTER, INC.		2,324.41	25-JUN-18	2,324.41	Reconciled
388884		14-JUN-18	STANTEC CONSULTING SERVICES INC.		1,176.00	25-JUN-18	1,176.00	Reconciled
388885		14-JUN-18	STREAKWAVE WIRELESS, INC.		592.80	22-JUN-18	592.80	Reconciled
388886		14-JUN-18	SUKLE ADVERTISING INC.		34,561.11	27-JUN-18	34,561.11	Reconciled
388887		14-JUN-18	SUKUT CONSTRUCTION, LLC		407.86	20-JUN-18	407.86	Reconciled
388888		14-JUN-18	SULLY-MILLER CONTRACTING CO.		47,211.20	20-JUN-18	47,211.20	Reconciled
388889		14-JUN-18	SUSAN A. SIROTA		4,395.00	19-JUN-18	4,395.00	Reconciled
388890		14-JUN-18	TALLEY INC		494.44	20-JUN-18	494.44	Reconciled
388891		14-JUN-18	TEST CORP		84.32			Negotiable

IRWD Ledger Upgrade

BANK: Bank of America N.A.

Bank Account Currency: USD ( US Dollar )

Payment Type: All

Payment Register For 01-JUN-18 To 30-JUN-18

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Display Supplier Address: No

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Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
388892		14-JUN-18	TESTAMERICA LABORATORIES, INC		36.75	22-JUN-18	36.75	Reconciled
388893		14-JUN-18	TETRA TECH, INC		2,492.50	21-JUN-18	2,492.50	Reconciled
388894		14-JUN-18	TETSUO, AIZAWA		37.48			Negotiable
388895		14-JUN-18	THE FURMAN GROUP, INC.		12,540.00	25-JUN-18	12,540.00	Reconciled
388896		14-JUN-18	THE IRVINE COMPANY LLC		2,804.70			Negotiable
388897		14-JUN-18	TOTAL RESOURCE MANAGEMENT, INC.		43,656.47	22-JUN-18	43,656.47	Reconciled
388898		14-JUN-18	TOTAL TELCO SPECIALISTS INC		8,162.00	20-JUN-18	8,162.00	Reconciled
388899		14-JUN-18	TOTALFUNDS		3,000.00	22-JUN-18	3,000.00	Reconciled
388900		14-JUN-18	TREVINO, PATRICIA		29.90	25-JUN-18	29.90	Reconciled
388901		14-JUN-18	TRI POINTE HOMES, INC.		443.04	22-JUN-18	443.04	Reconciled
388902		14-JUN-18	TROPICAL PLAZA NURSERY INC		5,596.10	20-JUN-18	5,596.10	Reconciled
388903		14-JUN-18	UNITED PARCEL SERVICE INC		81.07	25-JUN-18	81.07	Reconciled
388904		14-JUN-18	UNITED PARCEL SERVICE INC		48.22	21-JUN-18	48.22	Reconciled
388905		14-JUN-18	UNIVAR USA INC		9,206.17	20-JUN-18	9,206.17	Reconciled
388906		14-JUN-18	USA HOME MANAGEMENT		18.52	22-JUN-18	18.52	Reconciled
388907		14-JUN-18	V&A CONSULTING ENGINEERS		15,784.94	21-JUN-18	15,784.94	Reconciled
388908		14-JUN-18	VALDEZ, LEE		44.03			Negotiable
388909		14-JUN-18	VERIZON WIRELESS SERVICES LLC		2,950.58	22-JUN-18	2,950.58	Reconciled
388910		14-JUN-18	VIRTUAL GRAFFITI, INC.		9,406.58	19-JUN-18	9,406.58	Reconciled
388911		14-JUN-18	WALTERS WHOLESALE ELECTRIC		5,344.10	20-JUN-18	5,344.10	Reconciled
388912		14-JUN-18	WANG, STEPHEN		111.22			Negotiable

388913	14-JUN-18	WANG, ZHIJIE		37.25	29-JUN-18	37.25	Reconciled
388914	14-JUN-18	WASTE MANAGEMENT OF ORANGE COUNTY WATEREUSE ASSOCIATION		5.49	21-JUN-18	5.49	Reconciled
388915	14-JUN-18	WAXIE'S ENTERPRISES, INC		2,500.00	26-JUN-18	2,500.00	Reconciled
388916	14-JUN-18	WCT PRODUCTS, INC.		497.91	20-JUN-18	497.91	Reconciled
388917	14-JUN-18	WECK LABORATORIES INC		3,051.32	26-JUN-18	3,051.32	Reconciled
388918	14-JUN-18			2,591.00			Negotiable

IRWD Ledger Upgrade Payment Register For 01-JUN-18 To 30-JUN-18 Report Date: 02-JUL-2018 07:45  
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 18  
 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )  
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
388919		14-JUN-18	WEST YOST ASSOCIATES, INC		20,243.00	20-JUN-18	20,243.00	Reconciled
388920		14-JUN-18	WESTAMERICA COMMUNICATIONS, INC.		3,789.50	19-JUN-18	3,789.50	Reconciled
388921		14-JUN-18	WESTERN EXTERMINATOR COMPANY		55.00	26-JUN-18	55.00	Reconciled
388922		14-JUN-18	WONG, MAY		39.21	22-JUN-18	39.21	Reconciled
388923		14-JUN-18	WORKFORCE SAFETY LLC		1,572.00	25-JUN-18	1,572.00	Reconciled
388924		14-JUN-18	WU, CHUNTEKO		48.06			Negotiable
388925		14-JUN-18	YINGCHUN, LIU		92.78			Negotiable
388926		14-JUN-18	ZHANG, KATIE		36.05	21-JUN-18	36.05	Reconciled
388927		14-JUN-18	CHEN, FEINI	PAY	594.50	15-JUN-18	594.50	Reconciled
388928		19-JUN-18	JCI JONES CHEMICALS INC	NEWARK	3,599.89	26-JUN-18	3,599.89	Reconciled
388929		21-JUN-18	Chaney, David (Dave)		84.20	25-JUN-18	84.20	Reconciled
388930		21-JUN-18	Fabris, John		30.25	26-JUN-18	30.25	Reconciled
388931		21-JUN-18	Harlow, Rusty (Rusty)		100.00	26-JUN-18	100.00	Reconciled
388932		21-JUN-18	Ho, Connie		230.54	25-JUN-18	230.54	Reconciled
388933		21-JUN-18	Oldewage, Lars D (Lars)		272.73	25-JUN-18	272.73	Reconciled
388934		21-JUN-18	Reinhart, Douglas J		478.29	21-JUN-18	478.29	Reconciled
388935		21-JUN-18	Soto, Franklin E (Frank)		180.00	29-JUN-18	180.00	Reconciled
388936		21-JUN-18	Teran, Mariaelena		32.50	25-JUN-18	32.50	Reconciled
388937		21-JUN-18	Tran, Jason M (Jason)		90.00	28-JUN-18	90.00	Reconciled
388938		21-JUN-18	A.C. SPRAGGINS ENGINEERING & UNDERGROUND INC.		1,581.03	26-JUN-18	1,581.03	Reconciled
388939		21-JUN-18	ACCUZIP, INC.		3,387.00			Negotiable
388940		21-JUN-18	AFLAC		7,371.60			Negotiable
388941		21-JUN-18	AFLAC		203.12			Negotiable
388942		21-JUN-18	ALEXANDER, JEAN		535.79	28-JUN-18	535.79	Reconciled
388943		21-JUN-18	ALPHA TRAFFIC SERVICES, INC.		990.00	26-JUN-18	990.00	Reconciled
388944		21-JUN-18	AM CONSERVATION GROUP, INC.		314.99	25-JUN-18	314.99	Reconciled
388945		21-JUN-18	AMAZON CAPITAL SERVICES, INC.		513.63	25-JUN-18	513.63	Reconciled

IRWD Ledger Upgrade Payment Register For 01-JUN-18 To 30-JUN-18 Report Date: 02-JUL-2018 07:45  
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 19  
 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )  
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
388946		21-JUN-18	ANDERSONPENNA PARTNERS, INC.		48,492.50	27-JUN-18	48,492.50	Reconciled
388947		21-JUN-18	ANTHEM BLUE CROSS		290.43			Negotiable
388948		21-JUN-18	ANTHEM BLUE CROSS		214.68			Negotiable
388949		21-JUN-18	ANTHEM BLUE CROSS		546.33			Negotiable
388950		21-JUN-18	ANTHEM BLUE CROSS		546.33			Negotiable
388951		21-JUN-18	ANTHONY N. LARSEN		400.00	26-JUN-18	400.00	Reconciled
388952		21-JUN-18	APEX LIFE SCIENCES, LLC		1,190.00	26-JUN-18	1,190.00	Reconciled
388953		21-JUN-18	ARCADIS U.S., INC.		93,959.54			Negotiable
388954		21-JUN-18	AT&T		49.05	26-JUN-18	49.05	Reconciled
388955		21-JUN-18	AT&T		10,639.31	29-JUN-18	10,639.31	Reconciled
388956		21-JUN-18	AT&T		174.02	28-JUN-18	174.02	Reconciled
388957		21-JUN-18	ATHENS SERVICES		6,520.76	26-JUN-18	6,520.76	Reconciled
388958		21-JUN-18	AUTOZONE PARTS, INC.		1,202.44	29-JUN-18	1,202.44	Reconciled
388959		21-JUN-18	BANK OF NEW YORK MELLON TRUST		1,271.30	26-JUN-18	1,271.30	Reconciled

388960	21-JUN-18	COMPANY NA BIGWIG MONSTER, LLC	50,220.00	26-JUN-18	50,220.00	Reconciled
388961	21-JUN-18	BILL'S SWEEPING SERVICE INC	460.00	28-JUN-18	460.00	Reconciled
388962	21-JUN-18	BLACK & VEATCH CORPORATION	238,796.08	29-JUN-18	238,796.08	Reconciled
388963	21-JUN-18	BORCHARD SURVEYING & MAPPING, INC.	5,782.00	27-JUN-18	5,782.00	Reconciled
388964	21-JUN-18	BORLAND, KOREN	31.49			Negotiable
388965	21-JUN-18	BRENNTAG PACIFIC INC	1,449.16	25-JUN-18	1,449.16	Reconciled
388966	21-JUN-18	BRIGHT LAND SOLAR	187.16			Negotiable
388967	21-JUN-18	BRUCE NEWELL	1,250.00	27-JUN-18	1,250.00	Reconciled
388968	21-JUN-18	C WELLS PIPELINE MATERIALS INC	1,549.82	29-JUN-18	1,549.82	Reconciled
388969	21-JUN-18	CALDESAL	5,000.00			Negotiable
388970	21-JUN-18	CALIFORNIA BARRICADE RENTAL, INC.	2,420.00	29-JUN-18	2,420.00	Reconciled
388971	21-JUN-18	CALIFORNIA DEPARTMENT OF TAX AND FEE ADMINISTRATION	6,541.00	26-JUN-18	6,541.00	Reconciled
388972	21-JUN-18	CANON FINANCIAL SERVICES, INC	9,403.89	26-JUN-18	9,403.89	Reconciled
388973	21-JUN-18	CARDENAS, RANDALL	42.38			Negotiable
388974	21-JUN-18	CDW GOVERNMENT LLC	1,399.36	27-JUN-18	1,399.36	Reconciled

IRWD Ledger Upgrade Payment Register For 01-JUN-18 To 30-JUN-18 Report Date: 02-JUL-2018 07:45  
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 20  
 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )  
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
388975		21-JUN-18	CITY OF IRVINE		732,414.00	27-JUN-18	732,414.00	Reconciled
388976		21-JUN-18	CITY OF SANTA ANA		171.44	25-JUN-18	171.44	Reconciled
388977		21-JUN-18	COLONIAL LIFE & ACCIDENT INSURANCE CO.		1,368.82	29-JUN-18	1,368.82	Reconciled
388978		21-JUN-18	CONSUMERS PIPE & SUPPLY CO.		1,900.46	25-JUN-18	1,900.46	Reconciled
388979		21-JUN-18	COOPER, JORDAN		37.92			Negotiable
388980		21-JUN-18	CORDOVA, MOSES E		302.81			Negotiable
388981		21-JUN-18	CPI-INTERNATIONAL, INC		270.24	25-JUN-18	270.24	Reconciled
388982		21-JUN-18	CRAMER FISH SCIENCES		3,062.50	26-JUN-18	3,062.50	Reconciled
388983		21-JUN-18	CUMMINS PACIFIC, LLC		151.64	25-JUN-18	151.64	Reconciled
388984		21-JUN-18	D & G SIGNS		1,241.28			Negotiable
388985		21-JUN-18	D & H WATER SYSTEMS INC.		12,563.49	29-JUN-18	12,563.49	Reconciled
388986		21-JUN-18	DATA CLEAN CORPORATION		534.00	27-JUN-18	534.00	Reconciled
388987		21-JUN-18	DATASITE INC		964.00			Negotiable
388988		21-JUN-18	DBA DECKSIDE POOL SERVICE		3,799.79	25-JUN-18	3,799.79	Reconciled
388989		21-JUN-18	DEE JASPAR & ASSOCIATES, INC.		3,602.92	29-JUN-18	3,602.92	Reconciled
388990		21-JUN-18	DELL MARKETING LP		49,732.40	26-JUN-18	49,732.40	Reconciled
388991		21-JUN-18	DELOSSANTOS, JOSE		1,079.88			Negotiable
388992		21-JUN-18	DOMINGUEZ, MARTHA		44.31			Negotiable
388993		21-JUN-18	DONOHUE, THOMAS		33.96			Negotiable
388994		21-JUN-18	DUKE CULTURAL RESOURCES MANAGEMENT, LLC		1,515.00	26-JUN-18	1,515.00	Reconciled
388995		21-JUN-18	E-CIG GALLERY WHOLESALE & DISTRIBUTION		87.12	25-JUN-18	87.12	Reconciled
388996		21-JUN-18	EAGLE PRINT DYNAMICS		1,556.29	26-JUN-18	1,556.29	Reconciled
388997		21-JUN-18	ECO SERVICES LLC		5,053.76	25-JUN-18	5,053.76	Reconciled
388998		21-JUN-18	ELECTRICAL RELIABILITY SERVICES, INC.		1,915.00	26-JUN-18	1,915.00	Reconciled
388999		21-JUN-18	ERTZ, JOHN		57.36			Negotiable
389000		21-JUN-18	ESPINOSA, LAURA		50.00			Negotiable
389001		21-JUN-18	EXCEL PAVING CO.		1,412.81	26-JUN-18	1,412.81	Reconciled
389002		21-JUN-18	EXECUTIVE LIGHTING & ELECTRIC		1,236.67	27-JUN-18	1,236.67	Reconciled

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 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 21  
 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )  
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								

389003	21-JUN-18	FAIRBANK, MASLIN, MAULLIN, METZ & ASSOC. INC.	59,400.00	28-JUN-18	59,400.00	Reconciled
389004	21-JUN-18	FEDEX	203.27	26-JUN-18	203.27	Reconciled
389005	21-JUN-18	FERGUSON ENTERPRISES, INC.	6,793.64	25-JUN-18	6,793.64	Reconciled
389006	21-JUN-18	FIRENZE PROPERTY MANANGEMENT	34.89			Negotiable
389007	21-JUN-18	FIRST CHOICE SERVICES	1,601.13	27-JUN-18	1,601.13	Reconciled
389008	21-JUN-18	FISHER SCIENTIFIC COMPANY LLC	3,019.34	25-JUN-18	3,019.34	Reconciled
389009	21-JUN-18	FRANCIS, DAVID	48.10			Negotiable
389010	21-JUN-18	FREEWAY MACHINE & WELDING SHOP	625.00	26-JUN-18	625.00	Reconciled
389011	21-JUN-18	FRONTIER CALIFORNIA INC.	479.14	27-JUN-18	479.14	Reconciled
389012	21-JUN-18	FUSCOE ENGINEERING, INC.	929.00	26-JUN-18	929.00	Reconciled
389013	21-JUN-18	GJ AUTOMOTIVE EQUIPMENT CO INC	176.87	29-JUN-18	176.87	Reconciled
389014	21-JUN-18	GLENN LUKOS ASSOCIATES, INC	1,559.51	26-JUN-18	1,559.51	Reconciled
389015	21-JUN-18	GRAINGER	6,217.01	26-JUN-18	6,217.01	Reconciled
389016	21-JUN-18	GRAYBAR ELECTRIC COMPANY	7,923.78	25-JUN-18	7,923.78	Reconciled
389017	21-JUN-18	HAAKER EQUIPMENT COMPANY	744.64	26-JUN-18	744.64	Reconciled
389018	21-JUN-18	HACH COMPANY	18,569.64	28-JUN-18	18,569.64	Reconciled
389019	21-JUN-18	HARMSWORTH ASSOCIATES	3,368.00			Negotiable
389020	21-JUN-18	HARRINGTON INDUSTRIAL PLASTICS LLC	547.88	25-JUN-18	547.88	Reconciled
389021	21-JUN-18	HARTFORD LIFE AND ACCIDENT INSURANCE COMPANY	72.30			Negotiable
389022	21-JUN-18	HAZEN AND SAWYER	10,617.37	29-JUN-18	10,617.37	Reconciled
389023	21-JUN-18	HDR ENGINEERING INC	40,862.29	28-JUN-18	40,862.29	Reconciled
389024	21-JUN-18	HELPMATES STAFFING SERVICES	21,895.18	27-JUN-18	21,895.18	Reconciled
389025	21-JUN-18	HERITAGE FIELDS EL TORO, LLC	3,565.28	27-JUN-18	3,565.28	Reconciled
389026	21-JUN-18	HILL BROTHERS CHEMICAL COMPANY	4,639.52	26-JUN-18	4,639.52	Reconciled

IRWD Ledger Upgrade  
 BANK: Bank of America N.A. Branch : Los Angeles  
 Bank Account Currency: USD ( US Dollar )  
 Payment Type: All

Payment Register For 01-JUN-18 To 30-JUN-18 Report Date: 02-JUL-2018 07:45  
 Account: Checking AP and PR Page: 22  
 Payment Currency: USD ( US Dollar )  
 Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
389027		21-JUN-18	HILL, LEON		43.53			Negotiable
389028		21-JUN-18	HOME DEPOT USA INC		40.14	26-JUN-18	40.14	Reconciled
389029		21-JUN-18	HORIZON TECHNOLOGY INC		999.45	25-JUN-18	999.45	Reconciled
389030		21-JUN-18	HYDRANAUTICS		67,597.51	27-JUN-18	67,597.51	Reconciled
389031		21-JUN-18	IBM CORPORATION		925.00	26-JUN-18	925.00	Reconciled
389032		21-JUN-18	IDEXX		4,892.21	25-JUN-18	4,892.21	Reconciled
389033		21-JUN-18	DISTRIBUTION, INC INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS LOCAL 47		1,445.00	29-JUN-18	1,445.00	Reconciled
389034		21-JUN-18	IRVINE PIPE & SUPPLY INC		1,119.83	25-JUN-18	1,119.83	Reconciled
389035		21-JUN-18	IRWD-PETTY CASH CUSTODIAN		1,004.68	22-JUN-18	1,004.68	Reconciled
389036		21-JUN-18	JARIABAK, PAUL		44.21	29-JUN-18	44.21	Reconciled
389037		21-JUN-18	JCI JONES CHEMICALS INC		3,296.09	27-JUN-18	3,296.09	Reconciled
389038		21-JUN-18	JIANG, HAI-TAO		48.72			Negotiable
389039		21-JUN-18	KAYUGA SOLUTION INC		16,640.00	27-JUN-18	16,640.00	Reconciled
389040		21-JUN-18	KENNEDY, SHAYNE		691.29			Negotiable
389041		21-JUN-18	KILEY COMPANY		3,500.00	25-JUN-18	3,500.00	Reconciled
389042		21-JUN-18	KIM, SOON TAE		1,200.00	27-JUN-18	1,200.00	Reconciled
389043		21-JUN-18	KNOWBE4, INC.		1,125.00	25-JUN-18	1,125.00	Reconciled
389044		21-JUN-18	KOELLER NEBEKER CARLSON & HALUCK, LLP		200.00	25-JUN-18	200.00	Reconciled
389045		21-JUN-18	KOLLI, JAGADEESH		30.52			Negotiable
389046		21-JUN-18	KONECRANES INC		747.50	25-JUN-18	747.50	Reconciled
389047		21-JUN-18	KUBE ENGINEERING		886.58			Negotiable
389048		21-JUN-18	LAMB, JASON M		33.22			Negotiable
389049		21-JUN-18	LCS TECHNOLOGIES, INC.		9,720.00	27-JUN-18	9,720.00	Reconciled
389050		21-JUN-18	LEE, SUNHEE		38.44			Voided
389051		21-JUN-18	LENNAR HOMES		111.55	25-JUN-18	111.55	Reconciled

389052	21-JUN-18	LI, JING	95.38				Negotiable
389053	21-JUN-18	LI, ZHAO	734.21	25-JUN-18	734.21		Reconciled
389054	21-JUN-18	MACDUFF, CHRIS	697.42				Negotiable
389055	21-JUN-18	MAJIBZADEH, ALIREZA	1,066.28				Negotiable
389056	21-JUN-18	MARVIN GARDENS LLC	1,362.21	21-JUN-18	1,362.21		Reconciled
389057	21-JUN-18	MBK ENGINEERS	2,197.38	26-JUN-18	2,197.38		Reconciled
389058	21-JUN-18	MC FADDEN-DALE INDUSTRIAL	101.81	26-JUN-18	101.81		Reconciled

IRWD Ledger Upgrade Payment Register For 01-JUN-18 To 30-JUN-18 Report Date: 02-JUL-2018 07:45  
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 23  
 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )  
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
389059		21-JUN-18	MC MASTER CARR SUPPLY CO		201.27	25-JUN-18	201.27	Reconciled
389060		21-JUN-18	MCKEARN, CHRISTIE		13.75			Negotiable
389061		21-JUN-18	MCR TECHNOLOGIES INC		2,321.13	27-JUN-18	2,321.13	Reconciled
389062		21-JUN-18	MEGGER		306.47	28-JUN-18	306.47	Reconciled
389063		21-JUN-18	MIP BROS INC.		44.05	28-JUN-18	44.05	Reconciled
389064		21-JUN-18	MOINI, KIMIA		86.58			Negotiable
389065		21-JUN-18	MRO ELECTRIC & SUPPLY CO.		653.00	26-JUN-18	653.00	Reconciled
389066		21-JUN-18	NATIONAL METER & AUTOMATION, INC.		112,878.90	29-JUN-18	112,878.90	Reconciled
389067		21-JUN-18	NATIONAL READY MIXED CONCRETE CO.		469.16	25-JUN-18	469.16	Reconciled
389068		21-JUN-18	NEOPOST USA INC.		39.34	27-JUN-18	39.34	Reconciled
389069		21-JUN-18	NGUYEN, HEATHER K		72.64			Negotiable
389070		21-JUN-18	NINYO & MOORE		1,286.75	25-JUN-18	1,286.75	Reconciled
389071		21-JUN-18	NMG GEOTECHNICAL INC		6,983.50			Negotiable
389072		21-JUN-18	OCPC AN RR DONNELLEY COMPANY		4,103.12	27-JUN-18	4,103.12	Reconciled
389073		21-JUN-18	OLIN CORPORATION		18,113.98	29-JUN-18	18,113.98	Reconciled
389074		21-JUN-18	ORANGE COUNTY AUTO PARTS CO		848.55	25-JUN-18	848.55	Reconciled
389075		21-JUN-18	ORANGE COUNTY FIRE AUTHORITY		1,084.00	25-JUN-18	1,084.00	Reconciled
389076		21-JUN-18	ORANGE COUNTY PUMPING, INC.		1,100.00	27-JUN-18	1,100.00	Reconciled
389077		21-JUN-18	ORANGE COUNTY SANITATION DISTRICT		122,227.92	27-JUN-18	122,227.92	Reconciled
389078		21-JUN-18	ORANGE COUNTY SHERIFF'S OFFICE		224.50	29-JUN-18	224.50	Reconciled
389079		21-JUN-18	PACRIM ENGINEERING INC.		3,240.00	26-JUN-18	3,240.00	Reconciled
389080		21-JUN-18	PALO VERDE IRRIGATION DISTRICT		221,429.00	29-JUN-18	221,429.00	Reconciled
389081		21-JUN-18	PARKWAY LAWNMOWER SHOP		569.39			Negotiable
389082		21-JUN-18	PELLETIER & ASSOCIATES, INC.		1,800.00	25-JUN-18	1,800.00	Reconciled
389083		21-JUN-18	PERKINELMER HEALTH SCIENCES INC		261.44	25-JUN-18	261.44	Reconciled
389084		21-JUN-18	PERS LONG TERM CARE		675.35	28-JUN-18	675.35	Reconciled

IRWD Ledger Upgrade Payment Register For 01-JUN-18 To 30-JUN-18 Report Date: 02-JUL-2018 07:45  
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 24  
 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )  
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
389085		21-JUN-18	PHOENIX, DAVIN		66.28			Negotiable
389086		21-JUN-18	PLUMBERS DEPOT INC.		1,375.43	25-JUN-18	1,375.43	Reconciled
389087		21-JUN-18	PRAXAIR DISTRIBUTION INC		418.45	26-JUN-18	418.45	Reconciled
389088		21-JUN-18	PRE-PAID LEGAL SERVICES INC		1,235.90			Negotiable
389089		21-JUN-18	PRO MOBILE AUTO DETAILING		300.00	26-JUN-18	300.00	Reconciled
389090		21-JUN-18	PRUDENTIAL OVERALL SUPPLY		7,706.35	25-JUN-18	7,706.35	Reconciled
389091		21-JUN-18	QUICKEL PAVING INC		3,995.00	25-JUN-18	3,995.00	Reconciled
389092		21-JUN-18	RAM AIR ENGINEERING INC		43,274.17			Negotiable
389093		21-JUN-18	RECORD, BRENT		100.90	25-JUN-18	100.90	Reconciled
389094		21-JUN-18	RELIABLE WATER SOLUTIONS, LLC		9,103.42	28-JUN-18	9,103.42	Reconciled
389095		21-JUN-18	RESPONSE ENVELOPE,		2,847.30	25-JUN-18	2,847.30	Reconciled

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
389096		21-JUN-18	INC RICHMOND AMERICAN HOMES OF MARYLAND, INC		837.16			Negotiable
389097		21-JUN-18	RINCON TRUCK CENTER INC.		64.75	26-JUN-18	64.75	Reconciled
389098		21-JUN-18	RMC WATER AND ENVIRONMENT		3,675.00	25-JUN-18	3,675.00	Reconciled
389099		21-JUN-18	ROBERT HALF INTERNATIONAL, INC.		224.68	25-JUN-18	224.68	Reconciled
389100		21-JUN-18	SAFETY CENTER INCORPORATED		1,680.00	29-JUN-18	1,680.00	Reconciled
389101		21-JUN-18	SANTA ANA BLUE PRINT		1,552.38	26-JUN-18	1,552.38	Reconciled
389102		21-JUN-18	SANTA MARGARITA FORD		4,446.17	28-JUN-18	4,446.17	Reconciled
389103		21-JUN-18	SCHLOSSER, NICOLE		46.98			Negotiable
389104		21-JUN-18	SHAMROCK SUPPLY CO INC		241.49	26-JUN-18	241.49	Reconciled
389105		21-JUN-18	SKORUZ TECHNOLOGIES INC		17,496.00	27-JUN-18	17,496.00	Reconciled
389106		21-JUN-18	SOUTHERN CALIFORNIA EDISON COMPANY		3,602.61	25-JUN-18	3,602.61	Reconciled
389107		21-JUN-18	SOUTHERN CALIFORNIA EDISON COMPANY		570,854.09	25-JUN-18	570,854.09	Reconciled

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 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )  
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
389108		21-JUN-18	SOUTHERN CALIFORNIA EDISON COMPANY		18.85	26-JUN-18	18.85	Reconciled
389109		21-JUN-18	SOUTHERN CALIFORNIA GAS COMPANY		1,219.93	27-JUN-18	1,219.93	Reconciled
389110		21-JUN-18	SOUTHERN CALIFORNIA SECURITY CENTERS, INC.		112.00			Negotiable
389111		21-JUN-18	SOUTHERN COUNTIES LUBRICANTS LLC		1,751.96	26-JUN-18	1,751.96	Reconciled
389112		21-JUN-18	STANDARD REGISTER, INC.		2,314.80	26-JUN-18	2,314.80	Reconciled
389113		21-JUN-18	STANTEC CONSULTING SERVICES INC.		7,208.00	25-JUN-18	7,208.00	Reconciled
389114		21-JUN-18	STEFANIAK, GLENN		41.66			Negotiable
389115		21-JUN-18	STETSON ENGINEERS INC.		3,893.75	25-JUN-18	3,893.75	Reconciled
389116		21-JUN-18	STICE COMPANY, INC.		1,484.24			Negotiable
389117		21-JUN-18	STREAKWAVE WIRELESS, INC.		4,429.64	26-JUN-18	4,429.64	Reconciled
389118		21-JUN-18	SURTERRE PROPERTY MANAGEMENT		41.33	27-JUN-18	41.33	Reconciled
389119		21-JUN-18	SUZUKI, SHABNAM		38.93			Negotiable
389120		21-JUN-18	TA, TRACY		113.41			Negotiable
389121		21-JUN-18	TAN, ZHAOXIA		32.70			Negotiable
389122		21-JUN-18	TEKDRAULICS		5,313.59	28-JUN-18	5,313.59	Reconciled
389123		21-JUN-18	THAYER, DAN		170.41	29-JUN-18	170.41	Reconciled
389124		21-JUN-18	THE FISHEL COMPANY		3,176.47			Negotiable
389125		21-JUN-18	THE NEW HOME COMPANY SOUTHERN CALIFORNIA LLC		1,644.92	28-JUN-18	1,644.92	Reconciled
389126		21-JUN-18	TIMOTHY W. HOGAN		1,175.00	25-JUN-18	1,175.00	Reconciled
389127		21-JUN-18	TODAY REAL, ESTATE		39.66			Negotiable
389128		21-JUN-18	TOLL BROS., INC.		339.36	29-JUN-18	339.36	Reconciled
389129		21-JUN-18	TRAN, THANG		25.84			Negotiable
389130		21-JUN-18	TRI POINTE HOMES, INC.		1,487.83			Negotiable
389131		21-JUN-18	TROPICAL PLAZA NURSERY INC		51,417.09	28-JUN-18	51,417.09	Reconciled
389132		21-JUN-18	TRUCPARCO		530.56	26-JUN-18	530.56	Reconciled
389133		21-JUN-18	VANDERMOLEN, LOUIS		378.84	26-JUN-18	378.84	Reconciled

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 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )  
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
389134		21-JUN-18	VAUGHAN'S		18,420.18	27-JUN-18	18,420.18	Reconciled

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
389135	21-JUN-18	INDUSTRIAL REPAIR CO INC			8,785.15	26-JUN-18	8,785.15	Reconciled
389136	21-JUN-18	VEOLIA WATER TECHNOLOGIES, INC.			41.49			Negotiable
389137	21-JUN-18	WALSH, KYLE WALTERS WHOLESALE ELECTRIC			9,065.49	26-JUN-18	9,065.49	Reconciled
389138	21-JUN-18	WATERFORD PUBLISHING GROUP			7,730.82	25-JUN-18	7,730.82	Reconciled
389139	21-JUN-18	WATERWISE CONSULTING, INC.			1,190.00			Negotiable
389140	21-JUN-18	WAXIE'S ENTERPRISES, INC			1,443.56	25-JUN-18	1,443.56	Reconciled
389141	21-JUN-18	WECK LABORATORIES INC			1,281.00			Negotiable
389142	21-JUN-18	WIN-911 SOFTWARE			2,850.00	28-JUN-18	2,850.00	Reconciled
389143	21-JUN-18	WORKFORCE SAFETY LLC			3,064.00	29-JUN-18	3,064.00	Reconciled
389144	21-JUN-18	XIE, JINGQIU			26.08			Negotiable
389145	21-JUN-18	YEH, RULAN			31.36			Negotiable
389146	21-JUN-18	YEUNG, BALDWIN			69.66	28-JUN-18	69.66	Reconciled
389147	21-JUN-18	YSL, INC			6,087.26	26-JUN-18	6,087.26	Reconciled
389148	25-JUN-18	SOUTH COAST AIR DIAMOND QUALITY MANAGEMENT DISTRICT			5,344.14			Negotiable
389149	25-JUN-18	CITY OF SANTA ANA SANTA ANA 1			0.00			Negotiable
389150	25-JUN-18	COUNTY OF 2724			0.00			Negotiable
389151	25-JUN-18	RIVERSIDE GATEWAY DR EMEDCO			0.00			Negotiable
389152	25-JUN-18	MEDIAVALET INC. PURCHASE			0.00			Negotiable
389153	25-JUN-18	SYN-TECH SYSTEMS TALLAHASSE INC			0.00			Negotiable
389154	25-JUN-18	SUMMIT CHEMICAL PURCHASE SPECIALTY PRODUCTS			0.00			Negotiable
389155	25-JUN-18	ANIXTER INC PAY			0.00			Negotiable
389156	25-JUN-18	CALIFORNIA BANK & 520 CAP TRUST			0.00			Negotiable
389157	25-JUN-18	LAKE WEEDERS NEW HOPE DIGEST, LLC			0.00			Negotiable
389158	25-JUN-18	O'HAREN GOVERNMENT TELK GROVE RELATIONS			0.00			Negotiable
389159	25-JUN-18	SUSAN A. SIROTA 3 TITAN			0.00			Negotiable
389160	25-JUN-18	ALSTON & BIRD LLP ATLANTA			0.00			Negotiable

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 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
389161	26-JUN-18	IRWD-PETTY CASH CUSTODIAN	IRVINE		0.00			Negotiable
389162	26-JUN-18	CITY OF IRVINE	IRVINE 1		2,783.00			Negotiable
389163	26-JUN-18	JCI JONES CHEMICALS INC	NEWARK		5,255.25			Negotiable
389164	27-JUN-18	CHEN, MING	PAY		32.00			Voided
389165	28-JUN-18	Bonkowski, Leslie A (Leslie)			34.00	29-JUN-18	34.00	Reconciled
389166	28-JUN-18	Clinton, Bryan R (Bryan)			86.60			Negotiable
389167	28-JUN-18	Compton, Christine A			159.62			Negotiable
389168	28-JUN-18	Drzymkowski, Michele A (Michele)			180.00			Negotiable
389169	28-JUN-18	Frost, Garrick A (Garrick)			120.00	29-JUN-18	120.00	Reconciled
389170	28-JUN-18	Johnson, Dane			70.54			Negotiable
389171	28-JUN-18	Lao, Richard S			46.68	29-JUN-18	46.68	Reconciled
389172	28-JUN-18	Midstokke, Paige			155.45	28-JUN-18	155.45	Reconciled
389173	28-JUN-18	Nash, Joel			51.23			Negotiable
389174	28-JUN-18	Obenshain, Jenna			200.00			Negotiable
389175	28-JUN-18	Weghorst, Paul A (Paul)			44.44			Negotiable
389176	28-JUN-18	Wise, Maureen			810.51			Negotiable
389177	28-JUN-18	Zanetti, Enrique			564.06			Negotiable
389178	28-JUN-18	ABC ICEHOUSE, INC.			151.59			Negotiable
389179	28-JUN-18	ADS LLC			2,160.00			Negotiable
389180	28-JUN-18	AIR TECHNOLOGY LABORATORIES			503.00			Negotiable
389181	28-JUN-18	AIRGAS, INC.			269.99			Negotiable
389182	28-JUN-18	ALLIANCE RESOURCE CONSULTING LLC			7,000.00			Negotiable
389183	28-JUN-18	ALLIED ELECTRONICS INC			1,208.16			Negotiable
389184	28-JUN-18	ALPHA TRAFFIC SERVICES, INC.			470.00			Negotiable
389185	28-JUN-18	ALSTON & BIRD LLP			214,402.80			Negotiable
389186	28-JUN-18	AMAZON CAPITAL			1,151.00			Negotiable

389187	28-JUN-18	SERVICES, INC. AMERICAN GEO TECHNICAL, INC.	1,378.75	Negotiable
389188	28-JUN-18	APEX LIFE SCIENCES, LLC	2,698.06	Negotiable
389189	28-JUN-18	APPLIED TECHNOLOGY GROUP INC	12,734.18	Negotiable

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Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
389190		28-JUN-18	AQUA-METRIC SALES COMPANY		100.87			Negotiable
389191		28-JUN-18	ARCHROCK SERVICES, L.P.		47,876.62			Negotiable
389192		28-JUN-18	ARMORCAST PRODUCTS COMPANY		10,749.23			Negotiable
389193		28-JUN-18	AT&T		248.37			Negotiable
389194		28-JUN-18	ATKINSON, ANDELSON, LOYA, RUUD AND ROMO		9,643.04			Negotiable
389195		28-JUN-18	AUSTIN HARDWOODS, INC		153.28			Negotiable
389196		28-JUN-18	AUTOZONE PARTS, INC.		1,346.52			Negotiable
389197		28-JUN-18	AVIVA ENERGY CORP		12,000.00			Negotiable
389198		28-JUN-18	B & K ELECTRIC WHOLESALE		18,135.26			Negotiable
389199		28-JUN-18	HALBOA HORIZONS RECOVERY SVCS		131.51			Negotiable
389200		28-JUN-18	BALTAZAR, JOHNNY		14.71			Negotiable
389201		28-JUN-18	BATTERIES PLUS AND BATTERIES PLUS BULBS		305.75			Negotiable
389202		28-JUN-18	BATTERY SYSTEMS INC		5,814.12			Negotiable
389203		28-JUN-18	BAVCO BACKFLOW APPARATUS & VALVE COMPANY		903.83			Negotiable
389204		28-JUN-18	BDC SPECIAL WASTE		579.20			Negotiable
389205		28-JUN-18	BEST DRILLING AND PUMP, INC.		38,712.50			Negotiable
389206		28-JUN-18	BIGWIG MONSTER, LLC		54,750.00			Negotiable
389207		28-JUN-18	BIOMAGIC INC		13,363.16			Negotiable
389208		28-JUN-18	BLYTHE REALTY INC.		3,400.95			Negotiable
389209		28-JUN-18	BOYD & ASSOCIATES		675.00			Negotiable
389210		28-JUN-18	BRENNTAG PACIFIC INC		5,675.20			Negotiable
389211		28-JUN-18	BROWN AND CALDWELL		2,126.22			Negotiable
389212		28-JUN-18	BRUCE CLARK		7,500.00			Negotiable
389213		28-JUN-18	BRUCE NEWELL		1,250.00			Negotiable
389214		28-JUN-18	BUREAU VERITAS NORTH AMERICA, INC		5,545.00			Negotiable
389215		28-JUN-18	C WELLS PIPELINE MATERIALS INC		4,052.50			Negotiable
389216		28-JUN-18	CALATLANTIC HOMES		1,867.63			Negotiable

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Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
389217		28-JUN-18	CALIFORNIA BANK & TRUST		22,487.92			Negotiable
389218		28-JUN-18	CALIFORNIA BARRICADE RENTAL, INC.		3,640.00			Negotiable
389219		28-JUN-18	CALIFORNIA PACIFIC HOMES		24.02			Negotiable
389220		28-JUN-18	CALSENSE		4,375.00			Negotiable
389221		28-JUN-18	CAMERON-COLE, LLC		2,633.45			Negotiable
389222		28-JUN-18	CANON SOLUTIONS AMERICA, INC.		476.12			Negotiable
389223		28-JUN-18	CARLSON STRATEGIC LAND SOLUTIONS		4,987.50			Negotiable
389224		28-JUN-18	CAROLLO ENGINEERS, INC		17,451.75			Negotiable
389225		28-JUN-18	CCL CONTRACTING INC.		222,815.04			Negotiable
389226		28-JUN-18	CDW GOVERNMENT LLC		134.59			Negotiable
389227		28-JUN-18	CENTRAL PARK WEST HOLDINGS, LLC		39,267.00			Negotiable

389228	28-JUN-18	CHAIREL CUSTOM HAY, INC.	5,467.21	Negotiable
389229	28-JUN-18	CHANG, YAN	42.90	Negotiable
389230	28-JUN-18	CHEM TECH INTERNATIONAL INC	12,292.80	Negotiable
389231	28-JUN-18	CITY OF NEWPORT BEACH	1,303.04	Negotiable
389232	28-JUN-18	CIVIL SOURCE, INC.	36,224.00	Negotiable
389233	28-JUN-18	CLA-VAL COMPANY	6,185.77	Negotiable
389234	28-JUN-18	CLARIS STRATEGY INC.	3,000.00	Negotiable
389235	28-JUN-18	COHEN, NEAL	233.39	Negotiable
389236	28-JUN-18	COMMERCIAL DOOR OF ORANGE COUNTY, INC.	2,835.18	Negotiable
389237	28-JUN-18	CONSUMERS PIPE & SUPPLY CO.	300.59	Negotiable
389238	28-JUN-18	COUNTY OF ORANGE	6,124.25	Negotiable
389239	28-JUN-18	COWART, JAMES	88.53	Negotiable
389240	28-JUN-18	COX COMMUNICATIONS, INC.	3,400.88	Negotiable
389241	28-JUN-18	CROSS CREEK APTS	39.66	Negotiable
389242	28-JUN-18	CSAC EXCESS INSURANCE AUTHORITY	1,456,235.00	Negotiable

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 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
389243		28-JUN-18	CULLIGAN OF SANTA ANA		8,000.00			Negotiable
389244		28-JUN-18	CYBERNETICS		16,904.00			Negotiable
389245		28-JUN-18	D & G SIGNS		1,535.36			Negotiable
389246		28-JUN-18	DARTMOUTH COURT APTS		167.20			Negotiable
389247		28-JUN-18	DATASITE INC		784.00			Negotiable
389248		28-JUN-18	DB INDUSTRIAL SUPPLY CO		842.14			Negotiable
389249		28-JUN-18	DEACON, JANET		1,566.70			Negotiable
389250		28-JUN-18	DEVINE, MARY		20.00			Negotiable
389251		28-JUN-18	DEX MEDIA, INC.		91.00			Negotiable
389252		28-JUN-18	DIRECTV INC		255.51			Negotiable
389253		28-JUN-18	DISCOUNT COURIER SERVICE		67.47			Negotiable
389254		28-JUN-18	DISCOVERY SCIENCE CENTER OF ORANGE COUNTY		26,810.52			Negotiable
389255		28-JUN-18	DIVERSIFIED COMMUNICATIONS SERVICES INC		4,600.00			Negotiable
389256		28-JUN-18	DSD - SNYDER LANGSTON		674.35			Negotiable
389257		28-JUN-18	DUDLEY RIDGE WATER DISTRICT		62,260.84			Negotiable
389258		28-JUN-18	EMEDCO		265.61			Negotiable
389259		28-JUN-18	ENTERPRISE RIDESHARE		21,677.37			Negotiable
389260		28-JUN-18	ENTERPRISE SECURITY, INC		2,500.00			Negotiable
389261		28-JUN-18	ENVIRONMENTAL ENGINEERING AND CONTRACTING, INC.		21,022.50			Negotiable
389262		28-JUN-18	ENVIRONMENTAL RESOURCE ASSOCIATES		347.75			Negotiable
389263		28-JUN-18	EXECUTIVE LIGHTING & ELECTRIC		25,611.43			Negotiable
389264		28-JUN-18	FEDEX		245.83			Negotiable
389265		28-JUN-18	FERGUSON, ROBERT		857.31			Negotiable
389266		28-JUN-18	FIONA HUTTON & ASSOCIATES, INC.		19,664.60			Negotiable
389267		28-JUN-18	FIRST AMERICAN TITLE CO.		2,000.00			Negotiable
389268		28-JUN-18	FISERV		20,774.29			Negotiable

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 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
389269		28-JUN-18	FISHER SCIENTIFIC COMPANY LLC		8,421.68			Negotiable

389270	28-JUN-18	FLEET SOLUTIONS LLC	4,939.66	Negotiable
389271	28-JUN-18	FOOTHILL/EASTERN TRANSPORTATION	4,650.00	Negotiable
389272	28-JUN-18	FRONTIER CALIFORNIA INC.	100.01	Negotiable
389273	28-JUN-18	FULLER TRUCK ACCESSORIES	452.55	Negotiable
389274	28-JUN-18	GALLADE CHEMICAL INC	2,437.31	Negotiable
389275	28-JUN-18	GANAHL LUMBER CO.	895.88	Negotiable
389276	28-JUN-18	GATEKEEPER SYSTEMS INC	45.05	Negotiable
389277	28-JUN-18	GAVIN, LOUISE	51.36	Negotiable
389278	28-JUN-18	GELLING, LYNN	45.72	Negotiable
389279	28-JUN-18	GENOOT, EFRAIM	140.61	Negotiable
389280	28-JUN-18	GENTERRA CONSULTANTS INC	2,590.00	Negotiable
389281	28-JUN-18	GJ AUTOMOTIVE EQUIPMENT CO INC	3,107.94	Negotiable
389282	28-JUN-18	GOLDEN BELL PRODUCTS	63,980.50	Negotiable
389283	28-JUN-18	GRAINGER	3,578.66	Negotiable
389284	28-JUN-18	GRAYBAR ELECTRIC COMPANY	1,484.68	Negotiable
389285	28-JUN-18	HACH COMPANY	12,660.51	Negotiable
389286	28-JUN-18	HAMILTON, KURT	684.89	Negotiable
389287	28-JUN-18	HARRINGTON INDUSTRIAL PLASTICS LLC	9,216.88	Negotiable
389288	28-JUN-18	HAZEN AND SAWYER	151.83	Negotiable
389289	28-JUN-18	HDR ENGINEERING INC	83,032.77	Negotiable
389290	28-JUN-18	HELPMATES STAFFING SERVICES	22,547.92	Negotiable
389291	28-JUN-18	HILL BROTHERS CHEMICAL COMPANY	12,894.88	Negotiable
389292	28-JUN-18	HOME DEPOT USA INC	728.57	Negotiable
389293	28-JUN-18	HOWDEN ROOTS LLC	29,384.50	Negotiable
389294	28-JUN-18	HSU, FEIMIN	10.60	Negotiable
389295	28-JUN-18	IBM CORPORATION	3,201.00	Negotiable
389296	28-JUN-18	IDEA HALL	7,700.00	Negotiable

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 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 32  
 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )  
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
389297		28-JUN-18	INDUSTRIAL ELECTRIC MACHINERY LLC		387.60			Negotiable
389298		28-JUN-18	INDUSTRIAL NETWORKING SOLUTIONS		3,636.21			Negotiable
389299		28-JUN-18	INTERIOR MANAGEMENT		55.13			Negotiable
389300		28-JUN-18	IRVINE PACIFIC		294.16			Negotiable
389301		28-JUN-18	IRVINE PIPE & SUPPLY INC		2,666.53			Negotiable
389302		28-JUN-18	IRWD-PETTY CASH CUSTODIAN		1,142.37			Negotiable
389303		28-JUN-18	JAMES BRADFORD HALDEMAN		4,300.00			Negotiable
389304		28-JUN-18	JASMINE COMMUNITY ASSN		679.14			Negotiable
389305		28-JUN-18	JUST ENERGY SOLUTIONS INC.		44.11			Negotiable
389306		28-JUN-18	KAESER COMPRESSORS, INC.		1,073.94			Negotiable
389307		28-JUN-18	KIM, YONG JUN		37.02			Negotiable
389308		28-JUN-18	KLEINFELDER, INC.		5,880.75			Negotiable
389309		28-JUN-18	KRONICK MOSKOVITZ TIEDEMANN & GIRARD		29,834.24			Negotiable
389310		28-JUN-18	LA HABRA FENCE COMPANY INC		23,046.05			Negotiable
389311		28-JUN-18	LABUS, KEITH		20.42			Negotiable
389312		28-JUN-18	LAM, UYEN		48.80			Negotiable
389313		28-JUN-18	LANDCARE HOLDINGS, INC.		78,972.49			Negotiable
389314		28-JUN-18	LANDSEA LS-OC PORTOLA LLC		1,827.90			Negotiable
389315		28-JUN-18	LENNAR HOMES		2,578.36			Negotiable
389316		28-JUN-18	LEWIS BRISBOIS BISGAARD AND SMITH, LLP		61,022.54			Negotiable
389317		28-JUN-18	LIM, JOON		46.32			Negotiable
389318		28-JUN-18	LU'S LIGHTHOUSE, INC.		725.80			Negotiable
389319		28-JUN-18	MALANDS LLC		69.53			Negotiable
389320		28-JUN-18	MARVIN GARDENS LLC		1,341.14			Negotiable

389321 28-JUN-18 MBC APPLIED 1,350.00 Negotiable  
 ENVIRONMENTAL SCIENCES

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 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )  
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
389322		28-JUN-18	MC FADDEN-DALE		187.39			Negotiable
389323		28-JUN-18	INDUSTRIAL MC MASTER CARR SUPPLY CO		842.30			Negotiable
389324		28-JUN-18	MEDORA CORPORATION		46,924.58			Negotiable
389325		28-JUN-18	MERITAGE HOMES OF CALIFORNIA, INC		257.02			Negotiable
389326		28-JUN-18	MERRIMAC PETROLEUM, INC.		20,519.86			Negotiable
389327		28-JUN-18	MGH PAINTING INC		12,471.75			Negotiable
389328		28-JUN-18	MICHAEL BAKER INTERNATIONAL, INC.		26,255.21			Negotiable
389329		28-JUN-18	MISCOWATER		2,432.63			Negotiable
389330		28-JUN-18	MOBILE MODULAR MANAGEMENT CORPORATION		1,212.19			Negotiable
389331		28-JUN-18	MOORE, GEMMA		90.37			Negotiable
389332		28-JUN-18	MORALES, DEBORAH		36.56			Negotiable
389333		28-JUN-18	MOTOROLA SOLUTIONS INC		11,355.36			Negotiable
389334		28-JUN-18	MR CRANE INC		1,042.20			Negotiable
389335		28-JUN-18	MRO ELECTRIC & SUPPLY CO.		2,725.00			Negotiable
389336		28-JUN-18	MSDSOONLINE, INC.		4,000.00			Negotiable
389337		28-JUN-18	MUNICIPAL UNDERGROUND SERVICES INC		7,875.00			Negotiable
389338		28-JUN-18	MUNICIPAL WATER DISTRICT OF ORANGE COUNTY		96,884.09			Negotiable
389339		28-JUN-18	NATIONAL READY MIXED CONCRETE CO.		1,691.13			Negotiable
389340		28-JUN-18	NINYO & MOORE		5,532.25			Negotiable
389341		28-JUN-18	NMG GEOTECHNICAL INC		7,922.40			Negotiable
389342		28-JUN-18	NORMAN A. OLSSON CONSTRUCTION, INC.		1,931.24			Negotiable
389343		28-JUN-18	NORTHWOOD PLACE APTS		32.94			Negotiable
389344		28-JUN-18	O'HAREN GOVERNMENT RELATIONS		6,500.00			Negotiable
389345		28-JUN-18	OC PRO PROPERTY MANAGEMENT		25.00			Negotiable
389346		28-JUN-18	OLIN CORPORATION		19,288.61			Negotiable

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 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )  
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
389347		28-JUN-18	OLSON, HAGEL & FISHBURN, LLP		967.00			Negotiable
389348		28-JUN-18	ONESOURCE DISTRIBUTORS LLC		1,454.53			Negotiable
389349		28-JUN-18	ORANGE COUNTY AUTO PARTS CO		183.60			Negotiable
389350		28-JUN-18	ORANGE COUNTY FIRE AUTHORITY		937.00			Negotiable
389351		28-JUN-18	ORANGE COUNTY HOSE		53.43			Negotiable
389352		28-JUN-18	ORANGE COUNTY SANITATION DISTRICT		2,053.43			Negotiable
389353		28-JUN-18	OUTFORM		182.29			Negotiable
389354		28-JUN-18	PACI STRUCTURES		8,169.63			Negotiable
389355		28-JUN-18	PACIFIC HYDROTECH CORPORATION		152,555.99			Negotiable
389356		28-JUN-18	PARADA PAINTING INC		17,800.00			Negotiable
389357		28-JUN-18	PARHAM, NICOLE		49.45			Negotiable
389358		28-JUN-18	PARKHOUSE TIRE INC		6,037.53			Negotiable
389359		28-JUN-18	PASCAL & LUDWIG CONSTRUCTORS		13,361.73			Negotiable
389360		28-JUN-18	PASCAL & LUDWIG CONSTRUCTORS		316,990.77			Negotiable
389361		28-JUN-18	PASCAL & LUDWIG		3,322.00			Negotiable

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
CONSTRUCTORS								
389362	28-JUN-18		PAYNE & FEARS LLP		13,921.52			Negotiable
389363	28-JUN-18		PEDROZA, ANDREA		29.36			Negotiable
389364	28-JUN-18		PINNACLE TOWERS LLC		720.39			Negotiable
389365	28-JUN-18		PIVOT INTERIORS INC		32,061.87			Negotiable
389366	28-JUN-18		PONTON INDUSTRIES INC		90.00			Negotiable
389367	28-JUN-18		PRAXAIR DISTRIBUTION INC		1,824.44			Negotiable
389368	28-JUN-18		PTI SAND & GRAVEL INC		934.58			Negotiable
389369	28-JUN-18		QUINN, KRISTINA		123.48			Negotiable
389370	28-JUN-18		R & R INDUSTRIAL SERVICES, INC.		1,268.76			Negotiable
389371	28-JUN-18		RAM AIR ENGINEERING INC		17,665.90			Negotiable
389372	28-JUN-18		REACH EMPLOYEE ASSISTANCE INC		1,016.40			Negotiable
389373	28-JUN-18		REGENCY CENTERS		1,517.63			Negotiable
IRWD Ledger Upgrade								
BANK: Bank of America N.A.			Branch : Los Angeles		Payment Register For 01-JUN-18 To 30-JUN-18		Report Date: 02-JUL-2018 07:45	
Bank Account Currency: USD ( US Dollar )					Account: Checking AP and PR		Page: 35	
Payment Type: All					Payment Currency: USD ( US Dollar )			
					Display Supplier Address: No			

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
389374	28-JUN-18		RELIANCE SAFETY CONSULTANTS, INC.		2,530.00			Negotiable
389375	28-JUN-18		RELIANCE STANDARD LIFE INSURANCE COMPANY		30,232.12			Negotiable
389376	28-JUN-18		RESILIENT COMMUNICATIONS INC.		1,195.95			Negotiable
389377	28-JUN-18		RICHARD C. SLADE & ASSOCIATES LLC		35,913.53			Negotiable
389378	28-JUN-18		RINCON TRUCK CENTER INC.		3,796.13			Negotiable
389379	28-JUN-18		RMC WATER AND ENVIRONMENT		937.50			Negotiable
389380	28-JUN-18		ROKNI ELECTRIC COMPANY INC.		6,250.00			Negotiable
389381	28-JUN-18		ROSEDALE - RIO BRAVO WATER STORAGE DISTRICT		53,254.09			Negotiable
389382	28-JUN-18		RS HUGHES COMPANY, INC.		2,887.17			Negotiable
389383	28-JUN-18		SAN CARLO APARTMENTS		36.05			Negotiable
389384	28-JUN-18		SAN MARINO APTS		10.82			Negotiable
389385	28-JUN-18		SAN REMO APTS		38.77			Negotiable
389386	28-JUN-18		SANDERS PAVING INC		87,690.33			Negotiable
389387	28-JUN-18		SANTA ANA BLUE PRINT		8,242.41			Negotiable
389388	28-JUN-18		SANTA MARGARITA FORD		520.27			Negotiable
389389	28-JUN-18		SAVANT CONSTRUCTION, INC		2,074.24			Negotiable
389390	28-JUN-18		SCHENDEL, HERBERT		55.91			Negotiable
389391	28-JUN-18		SHAMROCK SUPPLY CO INC		1,189.41			Negotiable
389392	28-JUN-18		SHIN, CHISUN		36.00			Negotiable
389393	28-JUN-18		SIEMENS INDUSTRY INC		22,321.07			Negotiable
389394	28-JUN-18		SIGNATURE FLOORING, INC		1,845.00			Negotiable
389395	28-JUN-18		SITMATIC		438.97			Negotiable
389396	28-JUN-18		SOUTHERN CALIFORNIA EDISON COMPANY		159,852.75			Negotiable

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 BANK: Bank of America N.A. Branch : Los Angeles Payment Register For 01-JUN-18 To 30-JUN-18 Report Date: 02-JUL-2018 07:45  
 Bank Account Currency: USD ( US Dollar ) Account: Checking AP and PR Page: 36  
 Payment Type: All Payment Currency: USD ( US Dollar )  
 Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
389397	28-JUN-18		SOUTHERN CALIFORNIA EDISON COMPANY		1,948.42			Negotiable
389398	28-JUN-18		SOUTHERN COUNTIES LUBRICANTS LLC		1,160.91			Negotiable
389399	28-JUN-18		SOUTHLAND WATER TECHNOLOGIES LLC		4,953.79			Negotiable
389400	28-JUN-18		SPX CORP		186.91			Negotiable

389401	28-JUN-18	SS MECHANICAL CONSTRUCTION CORP	28,333.23	Negotiable
389402	28-JUN-18	STANDARD PACIFIC HOMES	263.30	Negotiable
389403	28-JUN-18	STANFORD COURT APARTMENTS	1,853.64	Negotiable
389404	28-JUN-18	STETSON ENGINEERS INC.	338.39	Negotiable
389405	28-JUN-18	SULLY-MILLER CONTRACTING CO.	126,904.21	Negotiable
389406	28-JUN-18	SUN-STAR ELECTRIC, INC.	49,084.00	Negotiable
389407	28-JUN-18	SWAINS ELECTRIC MOTOR SERVICE	4,165.75	Negotiable
389408	28-JUN-18	T.E. ROBERTS, INC.	92,767.50	Negotiable
389409	28-JUN-18	TAN, GAIA L	43.94	Negotiable
389410	28-JUN-18	TELOG INSTRUMENTS, INC.	200.00	Negotiable
389411	28-JUN-18	THE NEW HOME COMPANY SOUTHERN CALIFORNIA LLC	461.12	Negotiable
389412	28-JUN-18	THOMPSON INDUSTRIAL SUPPLY	215.48	Negotiable
389413	28-JUN-18	TIC-RETAIL PROPERTIES	291.11	Negotiable
389414	28-JUN-18	TIMOTHY W. HOGAN	17,879.79	Negotiable
389415	28-JUN-18	TOLL BROS., INC.	46.23	Negotiable
389416	28-JUN-18	TONY VALENTINE CONSTRUCTION	1,750.00	Negotiable
389417	28-JUN-18	TOTAL RESOURCE MANAGEMENT, INC.	9,366.87	Negotiable
389418	28-JUN-18	TRAILS4ALL	750.00	Negotiable
389419	28-JUN-18	TRI COUNTY PUMP COMPANY	18,371.38	Negotiable
389420	28-JUN-18	TROPICAL PLAZA NURSERY INC	13,269.50	Negotiable
389421	28-JUN-18	TRUCPARCO	591.94	Negotiable

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 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )  
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
389422		28-JUN-18	TURTLE ROCK CANYON APTS		18.03			Negotiable
389423		28-JUN-18	TYLER SABER AND RYAN TOWNLEY		74.68			Negotiable
389424		28-JUN-18	ULTRA SCIENTIFIC		275.80			Negotiable
389425		28-JUN-18	UNITED SITE SERVICES OF CALIFORNIA INC		152.29			Negotiable
389426		28-JUN-18	US BANK NAT'L ASSOCIATION NORTH DAKOTA		85,102.30			Negotiable
389427		28-JUN-18	VERIZON WIRELESS SERVICES LLC		1,755.72			Negotiable
389428		28-JUN-18	VWR INTERNATIONAL, LLC		3,224.95			Negotiable
389429		28-JUN-18	WALTERS WHOLESALE ELECTRIC		3,756.28			Negotiable
389430		28-JUN-18	WATERLINE TECHNOLOGIES INC		5,680.00			Negotiable
389431		28-JUN-18	WAXIE'S ENTERPRISES, INC		2,226.70			Negotiable
389432		28-JUN-18	WECK LABORATORIES INC		475.00			Negotiable
389433		28-JUN-18	WEST COAST SAFETY SUPPLY INC		2,855.91			Negotiable
389434		28-JUN-18	WESTERN AV		445.22			Negotiable
389435		28-JUN-18	WESTERN EXTERMINATOR COMPANY		7,338.00			Negotiable
389436		28-JUN-18	WILLIAM LYON HOMES, INC.		510.18			Negotiable
389437		28-JUN-18	WORKFORCE SAFETY LLC		3,144.00			Negotiable
389438		28-JUN-18	XIE, YI		33.17			Negotiable
389439		28-JUN-18	YP LLC		91.00			Negotiable
389440		28-JUN-18	ZHANG, CHEN		48.16			Negotiable
389441		28-JUN-18	ZHUANG, ZIXUAN		25.98			Negotiable
389442		29-JUN-18	Cortez, Malcolm A (Malcolm)		66.49			Negotiable
389443		29-JUN-18	Johnson, Dane		51.41			Negotiable
389444		29-JUN-18	Swan, Peer		4,357.63			Negotiable
389445		29-JUN-18	SMARTCOVER SYSTEMSPURCHASE		24,576.58			Negotiable
389446		29-JUN-18	ALLIANCE AG SERVICES, LLC		3,000.00			Negotiable
389447		29-JUN-18	ARCHROCK SERVICES, L.P.		45,528.97			Negotiable

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 Payment Currency: USD ( US Dollar )  
 Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
389448		29-JUN-18	AT&T		11.59			Negotiable
389449		29-JUN-18	BRITHINEE ELECTRIC		44,140.01			Negotiable
389450		29-JUN-18	BUSH & ASSOCIATES INC		3,264.00			Negotiable
389451		29-JUN-18	CALIFORNIA BARRICADE RENTAL, INC.		455.00			Negotiable
389452		29-JUN-18	CIVIL SOURCE, INC.		34,928.00			Negotiable
389453		29-JUN-18	FEDEX		172.27			Negotiable
389454		29-JUN-18	PIERRO, SERGIO D		3,705.50			Negotiable
389455		29-JUN-18	FISHER SCIENTIFIC COMPANY LLC		607.10			Negotiable
389456		29-JUN-18	FRONTIER CALIFORNIA INC.		271.90			Negotiable
389457		29-JUN-18	GENERAL MONITORS INC.		1,099.05			Negotiable
389458		29-JUN-18	GRAINGER		106.69			Negotiable
389459		29-JUN-18	HACH COMPANY		5,905.24			Negotiable
389460		29-JUN-18	HARRINGTON INDUSTRIAL PLASTICS LLC		4,686.77			Negotiable
389461		29-JUN-18	HAZEN AND SAWYER		11,055.00			Negotiable
389462		29-JUN-18	HILL BROTHERS CHEMICAL COMPANY		2,305.00			Negotiable
389463		29-JUN-18	HOME DEPOT USA INC		262.65			Negotiable
389464		29-JUN-18	IRVINE PIPE & SUPPLY INC		2,558.43			Negotiable
389465		29-JUN-18	KENNY THE PRINTER		367.80			Negotiable
389466		29-JUN-18	LANDCARE HOLDINGS, INC.		65,704.02			Negotiable
389467		29-JUN-18	LUBRICATION ENGINEERS, INC.		5,688.38			Negotiable
389468		29-JUN-18	NATIONAL READY MIXED CONCRETE CO.		1,415.38			Negotiable
389469		29-JUN-18	OLIN CORPORATION		8,275.19			Negotiable
389470		29-JUN-18	ORANGE COUNTY FIRE PROTECTION		478.10			Negotiable
389471		29-JUN-18	PACE ADVANCED WATER ENGINEERING, INC.		9,960.00			Negotiable
389472		29-JUN-18	PRAXAIR DISTRIBUTION INC		249.00			Negotiable
389473		29-JUN-18	SANTA ANA BLUE PRINT		70.02			Negotiable

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 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )  
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
389474		29-JUN-18	SOUTHERN CALIFORNIA EDISON COMPANY		60.80			Negotiable
389475		29-JUN-18	STETSON ENGINEERS INC.		11,470.00			Negotiable
389476		29-JUN-18	SUPERIOR WATER TECHNOLOGIES		7,971.82			Negotiable
389477		29-JUN-18	TESTAMERICA LABORATORIES, INC		52.50			Negotiable
389478		29-JUN-18	TRI COUNTY PUMP COMPANY		9,203.93			Negotiable
389479		29-JUN-18	TROPICAL PLAZA NURSERY INC		213.00			Negotiable
389480		29-JUN-18	UNITED SITE SERVICES OF CALIFORNIA INC		478.06			Negotiable
389481		29-JUN-18	VERIZON WIRELESS SERVICES LLC		10,811.99			Negotiable
389482		29-JUN-18	WAXIE'S ENTERPRISES, INC		433.26			Negotiable
389483		29-JUN-18	YORKE ENGINEERING LLC		1,660.50			Negotiable
389484		29-JUN-18	INLAND POTABLE SERVICES, INC.	CENTENNIAL	74,471.17			Negotiable

Payment Document Subtotal: 15,072,340.61 9,561,886.95

Payment Document : IRWD Wire

12622	06-JUN-18	BANK OF AMERICA	CHICAGO	14,040.11	Negotiable
12623	12-JUN-18	MERRILL LYNCH ORANGE COUNTY SANITATION VALLEY	FOUNTAIN VALLEY	1,085,179.96	Negotiable
12624	12-JUN-18	CITIGROUP GLOBAL MARKETS INC.	NEW YORK	451,463.96	Negotiable
12625	12-JUN-18	MERRILL LYNCH CAPITAL SERVICES, INC	CHARLOTTE	451,463.96	Negotiable
12626	12-JUN-18	BANK OF NEW YORK MELLON TRUST COMPANY NA	NEWARK	26,666.67	Negotiable
12627	14-JUN-18	U.S. BANK NATIONALST. ASSOCIATION	LOUIS	22,507.07	Negotiable

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 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )  
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD Wire								
12628		14-JUN-18	SUMITOMO MITSUI BANKING CORPORATION	NEW YORK	52,673.42			Negotiable
12629		14-JUN-18	BANK OF NEW YORK MELLON TRUST COMPANY NA	NEWARK	100,637.80			Negotiable
12630		14-JUN-18	U.S. BANK NATIONALST. ASSOCIATION	LOUIS	41,736.98			Negotiable
12631		18-JUN-18	BANK OF AMERICA	SAN FRANCISCO	41,391.78			Negotiable
12632		18-JUN-18	U.S. BANK NATIONALST. ASSOCIATION	LOUIS	7,710.28			Negotiable
12633		18-JUN-18	FILANC-BALFOUR BEATY JV	ACT 4427724347	624,518.57			Negotiable
12634		18-JUN-18	FILANC-BALFOUR BEATY JV	ESR 211084000	3,885.78			Negotiable
12635		20-JUN-18	MUNICIPAL WATER DISTRICT OF ORANGE VALLEY COUNTY	FOUNTAIN	883,778.27			Negotiable
12636		20-JUN-18	CITIGROUP GLOBAL MARKETS INC.	NEW YORK	661,003.90			Negotiable
12637		22-JUN-18	ORANGE COUNTY SANITATION VALLEY DISTRICT	FOUNTAIN VALLEY	1,129,012.18			Negotiable
12638		21-JUN-18	EMPLOYEE BENEFIT SPECIALISTS, INC.	PO BOX 11657	15,527.19			Negotiable
12639		21-JUN-18	EMPLOYEE BENEFIT SPECIALISTS, INC.	PO BOX 11657	1,285.00			Negotiable
12640		25-JUN-18	CALIFORNIA DEPARTMENT OF CHILD SUPPORT SERVICES	SACRAMENTO	1,993.83			Negotiable
12641		25-JUN-18	INTERNAL REVENUE SERVICE	FRESNO	178,178.83			Negotiable
12642		25-JUN-18	FRANCHISE TAX BOARD	SACRAMENTO	55,570.55			Negotiable
12643		25-JUN-18	GREAT-WEST LIFE & ANNUITY INSURANCE COMPANY	DENVER	124,049.86			Negotiable
12644		25-JUN-18	CALPERS	SACRAMENTO	183,555.66			Negotiable
12645		25-JUN-18	EMPLOYEE BENEFIT SPECIALISTS, INC.	PO BOX 11657	13,851.14			Negotiable
12646		25-JUN-18	EMPLOYEE BENEFIT SPECIALISTS, INC.	PO BOX 11657	13,219.32			Negotiable

IRWD Ledger Upgrade Payment Register For 01-JUN-18 To 30-JUN-18 Report Date: 02-JUL-2018 07:45  
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 41  
 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )  
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD Wire								
12647		25-JUN-18	EMPLOYMENT DEVELOPMENT DEPARTMENT	W SACRAMENTO	13,711.17			Negotiable
12648		25-JUN-18	FILANC-BALFOUR BEATY JV	ACT 4427724347	0.00			Negotiable
12649		25-JUN-18	PCL CONSTRUCTION, INC.	ACCT 6971821722	0.00			Negotiable
12650		25-JUN-18	CALPERS	PAY	4,851.81			Negotiable
12651		25-JUN-18	YORK INSURANCE SERVICES GROUP INC - CA	PAY	12,515.68			Negotiable
12652		27-JUN-18	YORK INSURANCE SERVICES GROUP INC - CA	PAY	3,765.49			Negotiable

12653	27-JUN-18	YORK INSURANCE SERVICES GROUP INC - CA	PAY		4,545.87		Negotiable
12654	27-JUN-18	YORK INSURANCE SERVICES GROUP INC - CA	PAY		10,665.47		Negotiable
12655	27-JUN-18	CALPERS		SACRAMENTO 1	484,021.30		Negotiable
12656	27-JUN-18	CALPERS		SACRAMENTO 1	2,805.07		Negotiable
12657	28-JUN-18	BANK OF AMERICA MERRILL LYNCH		CHICAGO	73,010.08		Negotiable
12658	28-JUN-18	CALPERS		SACRAMENTO	448.74		Negotiable
12659	28-JUN-18	INTERNAL REVENUE SERVICE		FRESNO	178,958.27		Negotiable
12660	28-JUN-18	FRANCHISE TAX BOARD		SACRAMENTO	56,049.69		Negotiable
12661	28-JUN-18	EMPLOYMENT DEVELOPMENT DEPARTMENT		W SACRAMENTO	13,635.88		Negotiable
12662	28-JUN-18	CALIFORNIA DEPARTMENT OF CHILD SUPPORT SERVICES		SACRAMENTO	1,993.83		Negotiable
12663	28-JUN-18	GREAT-WEST LIFE & ANNUITY INSURANCE COMPANY		DENVER	124,765.07		Negotiable
12664	28-JUN-18	CALPERS		SACRAMENTO	498.23		Negotiable
12665	28-JUN-18	INTERNAL REVENUE SERVICE		FRESNO	29,272.46		Negotiable
12666	28-JUN-18	FRANCHISE TAX BOARD		SACRAMENTO	7,735.57		Negotiable

IRWD Ledger Upgrade Payment Register For 01-JUN-18 To 30-JUN-18 Report Date: 02-JUL-2018 07:45  
 BANK: Bank of America N.A. Branch: Los Angeles Account: Checking AP and PR Page: 42  
 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )  
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD Wire								
12667		28-JUN-18	EMPLOYMENT DEVELOPMENT DEPARTMENT	W SACRAMENTO	1,193.01			Negotiable
12668		28-JUN-18	BANK OF NEW YORK MELLON TRUST COMPANY NA	NEWARK	24,305.56			Negotiable
12669		28-JUN-18	CALPERS	SACRAMENTO	1,158.79			Negotiable
Payment Document Subtotal:					7,234,809.11			
Bank Account Subtotal :					22,307,149.72		9,561,886.95	
Report Count : 1064	Report Total:			22,307,149.72	9,561,886.95			
Disbursements								

\*\*\* End of Report \*\*\*

\$ 22,307,149.72 Disbursements  
 <10,613.57> Voids  
 \$ 22,296,536.15 Total Disbursements and Voids

## MONTHLY SUMMARY OF PAYROLL ACH PAYMENTS

June  
2018

	AMOUNT	VENDOR	PURPOSE
6/8/2018	931,037.49	BANK OF AMERICA	ACH Payments for Payroll
6/22/2018	944,645.65	BANK OF AMERICA	ACH Payments for Payroll
	<u><u>\$1,875,683.14</u></u>		

## Exhibit "F"

### IRWD Gov Code 53065.5 Disclosure Report

Payment or Reimbursements for Individual charges of \$100 or more per transaction for services or product received.

01-JUN-18 to 30-JUN-18

NAME	CHECK NO.	CHECK DATE	AMOUNT	ITEM DESCRIPTION	EXPENSE JUSTIFICATION
Bennett, Rav	388680	14-Jun-18	166.77	Mileage	Monthly Rio Bravo DRP Project Tour/Inspection
Brown, Morgan	388470	7-Jun-18	199.09	Lodging	Society of Wetland Scientists Conf., Denver, CO - May 29, 2018
Brown, Morgan	388470	7-Jun-18	199.09	Lodging	Society of Wetland Scientists Conf., Denver, CO - May 30, 2018
Brown, Morgan	388470	7-Jun-18	199.09	Lodging	Society of Wetland Scientists Conf., Denver, CO - May 31, 2018
Drzymkowski, Michele	389168	28-Jun-18	180.00	Membership Renewal	CWEA annual renewal
Frost, Garrick	389169	28-Jun-18	120.00	Certification Renewal	SWRCB Water Distribution Operator Grade D3
Harlow, Rusty	388931	21-Jun-18	100.00	Other(Misc)	Clean Energy Fuels compressed natural gas reimbursement.
Hufana, Eugenio	388682	14-Jun-18	273.85	Other(Misc)	Data processing cabling materials for Nutanix Server
Legault, Dan	388683	14-Jun-18	111.99	Other(Misc)	FY 17-18 Annual tool replacement
Legault, Dan	388683	14-Jun-18	158.71	Other(Misc)	FY 17-18 Annual tool replacement
Lieuw, Jessica	388684	14-Jun-18	167.02	Other(Misc)	Safety shoe allowance
Midstokke, Paige	389172	28-Jun-18	106.61	Shuttle/Taxi	One Voice, Two Capitols Advocacy, Washington, DC - May 21-23, 2018 (from hotel to airport)
Obenshain, Jenna	389174	28-Jun-18	200.00	Other(Misc)	Safety shoe allowance
Oldewage, Lars	388933	21-Jun-18	255.00	Membership Renewal	WEF annual membership
Parsons, Sheryl	388685	14-Jun-18	199.09	Lodging	Society of Wetland Scientists Conf., Denver, CO - May 29, 2018
Parsons, Sheryl	388685	14-Jun-18	199.09	Lodging	Society of Wetland Scientists Conf., Denver, CO - May 30, 2018
Parsons, Sheryl	388685	14-Jun-18	199.09	Lodging	Society of Wetland Scientists Conf., Denver, CO - May 31, 2018
Paulson, David	388677	8-Jun-18	105.00	Certification Renewal	SWRCB Water Treatment Operator Grade IV
Pfister, Ken	388479	7-Jun-18	118.51	Other(Misc)	Wireless device reimbursement
Reinhart, Doug	388934	21-Jun-18	236.20	Lodging	ACWA 2018 Spring Conf., Sacramento, CA - May 8, 2018
Reinhart, Doug	388934	21-Jun-18	236.20	Lodging	ACWA 2018 Spring Conf., Sacramento, CA - May 9, 2018
Sanchez, Hector	388686	14-Jun-18	135.00	Other(Misc)	FY 17-18 Annual tool replacement
Sanchez, Hector	388686	14-Jun-18	249.46	Other(Misc)	FY 17-18 Annual tool replacement
Sanchez, Hector	388686	14-Jun-18	260.00	Other(Misc)	FY 17-18 Annual tool replacement
Sciabica, Joseph	388687	14-Jun-18	218.39	Other(Misc)	FY 17-18 Annual tool replacement
Sciabica, Joseph	388687	14-Jun-18	188.58	Other(Misc)	FY 17-18 Annual tool replacement
Sciabica, Joseph	388687	14-Jun-18	144.90	Other(Misc)	FY 17-18 Annual tool replacement
Soto, Frank	388935	21-Jun-18	180.00	Membership Renewal	CWEA annual renewal
Swan, Peer	389444	29-Jun-18	313.09	Other(Misc)	October 3, 2017 - expenses related to repairing Apple iPad - Board approved June 25, 2018
Swan, Peer	389444	29-Jun-18	119.24	Mileage	Urban Water Institute Conf., Palm Springs, CA - February 7-9, 2018 - (roundtrip)
Swan, Peer	389444	29-Jun-18	120.00	Dinner <40	Urban Water Institute Conf., Palm Springs, CA - February 7-9, 2018 - (six people)
Swan, Peer	389444	29-Jun-18	182.41	Lodging	Urban Water Institute Conf., Palm Springs, CA - February 8, 2018
Swan, Peer	389444	29-Jun-18	519.96	Airfare	ACWA Energy Committee meeting, Sacramento, CA - February 15, 2018
Swan, Peer	389444	29-Jun-18	1,207.56	Airfare	CASA & ACWA Annual Conf., Washington, DC - February 25-March 1, 2018
Swan, Peer	389444	29-Jun-18	361.62	Lodging	CASA & ACWA Annual Conf., Washington, DC - February 25, 2018
Swan, Peer	389444	29-Jun-18	361.62	Lodging	CASA & ACWA Annual Conf., Washington, DC - February 26, 2018
Swan, Peer	389444	29-Jun-18	361.62	Lodging	CASA & ACWA Annual Conf., Washington, DC - February 27, 2018
Swan, Peer	389444	29-Jun-18	361.62	Lodging	CASA & ACWA Annual Conf., Washington, DC - February 28, 2018
Wilson, Brett	388690	14-Jun-18	644.19	Other(Misc)	FY 17-18 Annual tool replacement
Wilson, Brett	388690	14-Jun-18	105.81	Other(Misc)	FY 17-18 Annual tool replacement
Wise, Maureen	389176	28-Jun-18	199.09	Lodging	Society of Wetland Scientists Conf., Denver, CO - May 29, 2018
Wise, Maureen	389176	28-Jun-18	199.09	Lodging	Society of Wetland Scientists Conf., Denver, CO - May 30, 2018
Wise, Maureen	389176	28-Jun-18	199.09	Lodging	Society of Wetland Scientists Conf., Denver, CO - May 31, 2018
Zanetti, Enrique	389177	28-Jun-18	208.45	Lodging	CalWEP Peer-to-Peer Conf., San Francisco, CA - May 30, 2018
Zanetti, Enrique	389177	28-Jun-18	208.45	Lodging	CalWEP Peer-to-Peer Conf., San Francisco, CA - May 31, 2018
<b>Total Amount:</b>			<b>\$10,779.64</b>		

July 23, 2018

Prepared by: Christopher Smithson 

Submitted by: Cheryl Clary 

Approved by: Paul A. Cook 

## CONSENT CALENDAR

### SETTING CONNECTION FEES AND PROPERTY TAXES FOR FISCAL YEAR 2018-19

#### SUMMARY:

Connection fees were last updated in July 2017. The proposed changes are based on periodic updates to the capital budget and other changing assumptions including increases to the Engineering News Record (ENR) construction cost index and are discussed below.

The proposed changes to connection fees and property taxes are discussed below. Staff recommends that the Board:

- Adopt a resolution amending the Rates and Charges for connection fees effective August 1, 2018,
- Adopt a resolution amending the Ad Valorem Property Tax Rates; and
- Adopt a resolution amending Allocation of Ad Valorem Property Taxes to Debt Service providing for the annual allocation of 1% tax revenue.

#### BACKGROUND:

The Long-Term Capital Funding Plan (LTFP), completed in November 2013, established connection fees and formed new improvement districts (ID) for funding capital requirements and setting tax rates. A fundamental concept in the District's LTFP is that the costs of new capital facilities are shared equally between the connection fees paid by the developer and property taxes paid by property owners (a 50/50 split). The District uses a comprehensive financial model to incorporate capital costs, debt funding, future development, growth rates, inflation and other variables to determine connection fees. Connection fee increases were modeled for both residential and commercial development along with a consolidated tax rate. Staff updated the District's financial model for FY 2018-19 connection fees and tax rate-setting to include the following:

- Updated capital improvement program;
- Updated ENR estimated capital cost increase of 3.0%;
- Fund balance adjustments through May 2018 with assumptions through fiscal year end;
- Updated assessed valuations; and
- Updated development units.

Exhibit "A" provides a summary of the proposed connection fees and property tax rates by ID. Exhibit "B" provides an analysis of changes within each ID.

IDs 112/212:

There are three separate developments contributing to IDs 112/212: the City of Irvine (City)/ Great Park, FivePoint Communities – Great Park Neighborhoods, and the County of Orange 100-acre parcel. Connection fees for these developments will be set separately.

*City of Irvine / Great Park*

The recycled water connection fee of \$28.85 million for the Great Park per agreement with the City was approved by the Board on June 12, 2017. The City made the first recycled water connection fee payment of \$9.9 million in September 2017. The remainder will be paid as the parcels are put into service. The Great Park will pay 100 percent of the planned recycled capital expenditures versus the previous assumption of a 50/50 cost sharing with the property owner. As a result of the City agreeing to pay 100% of the capital expenditures, which reduces the burden on the connection fees, staff recommends a 6% reduction to the water and sewer connection fees.

*FivePoint Communities – Great Park Neighborhoods*

The Great Park Neighborhoods is the FivePoint Communities development within ID 112/212. Staff recommends a 6.0% reduction in the current connection fees for the reasons discussed above. The consolidated water and sewer connection fee decreases by \$308, from \$5,138 to \$4,830 per unit. Staff recommends maintaining the current consolidated tax rate of \$0.7500 per \$100 of land-assessed value in order to maintain the 50/50 split.

*County of Orange 100-acre Parcel*

Staff recommends applying the same 6.0% reduction to the connection fees for the reasons discussed above for the 100-acre development site owned by the County of Orange, which has no tax base. The consolidated water and sewer connection fee will decrease by \$567, from \$9,455 to \$8,887 per unit. The property tax rate will remain at zero as long as this property is owned by the County, which has no tax base.

Improvement Districts	Connection Fees		Property Tax	
	Current	Proposed	Current	Proposed
112/212 (Great Park Neighborhood)	\$5,138	\$4,830	\$0.0750	\$0.0750
112a/212a (County 100-acre Parcel)	\$9,455	\$8,887	\$0.0000	\$0.0000

IDs 113/213 – Tustin Base:

Staff recommends increasing connection fees by 3.0%, consistent with ENR. This will increase the water and sewer connection fee \$244, from \$8,135 to \$8,379 per unit. Staff recommends maintaining the current consolidated tax rate of \$0.09900 per \$100 of land-assessed value in order to maintain the 50/50 split.

Improvement Districts	Connection Fees		Property Tax	
	Current	Proposed	Current	Proposed
113/213	\$8,135	\$8,379	\$0.0990	\$0.0990

IDs 185/285 – Opportunity Study Area, Excluding Portola:

Staff recommends increasing connection fees by 3.0%, consistent with ENR. This will increase the water and sewer connection fee \$142, from \$4,726 to \$4,868 per unit. Staff recommends maintaining the current consolidated tax rate of \$0.0535 per \$100 of land-assessed value.

Improvement Districts	Connection Fees		Property Tax	
	Current	Proposed	Current	Proposed
185/285 (Opportunity Study)	\$4,726	\$4,868	\$0.0535	\$0.0535

IDs 188/288 – Portola – Portion of Opportunity Study Area:

Staff recommends a 3.0% increase in the current connection fees, consistent with ENR. The consolidated water and sewer connection fee will increase by \$124, increasing the water and sewer connection fee from \$4,144 to \$4,268 per residential unit; and staff recommends maintaining the current consolidated tax rate of \$0.0835 per \$100 of land assessed value in order to maintain the 50/50 split.

Improvement Districts	Connection Fees		Property Tax	
	Current	Proposed	Current	Proposed
188/288 (Opportunity Study)	\$4,144	\$4,268	\$.0835	\$.0835

IDs 153/253 – Developing IDs:

Staff has been working with the Irvine Company to establish future usage and related revenue from the sale of native water from Irvine Lake since the completion of the LTFP. A portion of the revenue produced by native water sales is applied to connection fees for the developing IDs 153/253. Staff is working with the Irvine Company to amend the Irvine Lake agreement to ensure that the Irvine Company pays its fair share of capital infrastructure (without overpaying), recognizing that future sales of native water will reduce the amount of connection fees. The new assumption includes 3,800 acre-feet (AF) per year, increased from the current 3,200 AF per year, at \$291 per AF with the cost of water escalating annually at 3%. The agreement will also provide for a reconciliation every five years between the assumed and the actual native water revenue. The final reconciliation would occur at the end of 20 years.

Staff recommends decreasing the consolidated water and sewer connection fee from \$4,301 to \$3,312 (a net reduction of \$989 or 23%). Staff recommends maintaining the current consolidated tax rate of \$0.0410 per \$100 of land-assessed value in order to maintain the 50/50 split.

Improvement Districts	Connection Fees		Property Tax	
	Current	Proposed	Current	Proposed
153/253 (Undeveloped ID)	\$4,301	\$3,312	\$0.0410	\$0.0410

ID 256 – Orange Park Acres (OPA) Sewer:

Staff recommends a 3.0% increase in the current connection fees, consistent with ENR. The sewer connection fee will increase by \$177, increasing the connection fee from \$5,900 to \$6,077 per residential unit.

Improvement Districts	Connection Fees		Property Tax	
	Current	Proposed	Current	Proposed
156/256 (Undeveloped ID)	\$5,900	\$6,077	\$0.0000	\$0.0000

All Other IDs:

Other areas experienced no significant changes in funding requirements. The recommendation for these IDs is a 3.0% increase (ENR) to connection fees.

Improvement Districts	Connection Fees		Property Tax	
	Current	Proposed	Current	Proposed
125/225(Developed)	\$5,633	\$5,801	\$0.028	\$0.028
125/240(Developed)	\$6,427	\$6,620	\$0.028	\$0.028
111/222 (Developed, no GO Authority) <sup>1</sup>	\$9,346	\$9,626	NA	NA

Resolutions are attached relating to the above discussed items:

- Exhibit “C” provides the resolution adopting changes to the Rates and Charges for the Connection Fees as discussed above;
- Exhibit “D” provides the resolution adopting changes to the Ad Valorem Property Tax Rates as discussed above;
- Exhibit “E” provides the resolution amending the allocation of Ad Valorem Property Taxes to Debt Service; and
- Exhibit “F” provides the amended Schedule of Rates and Charges.

FISCAL IMPACTS:

Total connection fees discussed above are included in the FY 2018-19 Non-Operating budget.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

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<sup>1</sup> Identifies the consolidated connection fee for a density between 5.9 to 10.8 dwelling units (DU) per acre.

COMMITTEE STATUS:

This item was reviewed by the Finance and Personnel Committee on July 3, 2018.

RECOMMENDATION:

THAT THE BOARD ADOPT THE FOLLOWING RESOLUTIONS BY TITLE EFFECTIVE AUGUST 1, 2018:

RESOLUTION NO. 2018-

RESOLUTION OF THE BOARD OF DIRECTORS OF IRVINE RANCH WATER DISTRICT, ORANGE COUNTY, CALIFORNIA ADOPTING CHANGES TO CONNECTION FEES AS SET FORTH IN THE SCHEDULE OF RATES AND CHARGES IN EXHIBIT "B" TO THE RULES AND REGULATIONS OF IRVINE RANCH WATER DISTRICT FOR WATER, SEWER, RECYCLED WATER, AND NATURAL TREATMENT SYSTEM SERVICE

AND ADOPT THE FOLLOWING RESOLUTIONS BY TITLE:

RESOLUTION NO. 2018-

RESOLUTION OF THE BOARD OF DIRECTORS OF IRVINE RANCH WATER DISTRICT, ORANGE COUNTY, CALIFORNIA ESTABLISHING *AD VALOREM* TAX REVENUES FOR FISCAL YEAR 2018-19

RESOLUTION NO. 2018 --

RESOLUTION OF THE BOARD OF DIRECTORS OF THE IRVINE RANCH WATER DISTRICT AMENDING ALLOCATION OF *AD VALOREM* PROPERTY TAXES TO DEBT SERVICE, SUBJECT TO PLEDGE

LIST OF EXHIBITS:

- Exhibit "A" – Proposed Connection Fees and Property Tax Rates
- Exhibit "B" – Analysis of Changes within IDs
- Exhibit "C" – Resolution Adopting Changes to Rates and Charges
- Exhibit "D" – Resolution Adopting Ad Valorem Property Tax Rates
- Exhibit "E" – Resolution Amending Allocation of Ad Valorem Property Taxes to Debt Service
- Exhibit "F" – Rates and Charges

Exhibit "A"

**Proposed Connection Fees and Property Tax Rates  
Fiscal Year 2018-19**

**CONNECTION FEES**

Improvement District	Current			Proposed			Change <sup>(1)</sup>	
	Water	Sewer	Total	Water	Sewer	Total	\$	%
	111/222	\$3,348	\$5,998	\$9,346	\$3,448	\$6,178	\$9,626	\$280
112/212	\$1,423	\$3,715	\$5,138	\$1,338	\$3,492	\$4,830	(\$308)	-6.0%
112a/212a No Tax Authority (100% Connection Fee)	\$2,619	\$6,836	\$9,455	\$2,462	\$6,426	\$8,887	(\$567)	-6.0%
113/213	\$2,959	\$5,176	\$8,135	\$3,047	\$5,331	\$8,379	\$244	3.0%
125/240	\$2,708	\$3,719	\$6,427	\$2,789	\$3,830	\$6,620	\$193	3.0%
125/225	\$2,708	\$2,924	\$5,633	\$2,789	\$3,012	\$5,801	\$169	3.0%
153/253	\$1,989	\$2,312	\$4,301	\$1,532	\$1,780	\$3,312	(\$989)	-23.0%
153/253 PA 30	\$3,716	\$3,878	\$7,595	\$3,828	\$3,995	\$7,822	\$228	3.0%
256 OPA		\$5,900	\$5,900		\$6,077	\$6,077	\$177	3.0%
185/285	\$1,697	\$3,029	\$4,726	\$1,748	\$3,120	\$4,868	\$142	3.0%
188/288	\$1,527	\$2,617	\$4,144	\$1,572	\$2,696	\$4,268	\$124	3.0%

**PROPERTY TAX RATES <sup>(2)</sup>**

Improvement District	Current			Proposed		
	Water	Sewer	Total	Water	Sewer	Total
112/212	\$0.0300	\$0.0450	\$0.0750	\$0.0300	\$0.0450	\$0.0750
113/213	\$0.0400	\$0.0590	\$0.0990	\$0.0400	\$0.0590	\$0.0990
125/225	\$0.0130	\$0.0150	\$0.0280	\$0.0130	\$0.0150	\$0.0280
153/253	\$0.0200	\$0.0210	\$0.0410	\$0.0200	\$0.0210	\$0.0410
185/285	\$0.0230	\$0.0305	\$0.0535	\$0.0230	\$0.0305	\$0.0535
188/288	\$0.0735	\$0.0100	\$0.0835	\$0.0735	\$0.0100	\$0.0835

(1) ENR for April 2017 through June 2018 is approximately 3%.

(2) Based on \$100 of land assessed value.

**IRVINE RANCH WATER DISTRICT**  
**Identifying Changes within IDs**  
(in millions)

Improvement District:

112/212
---------

**To Date:**

	Water	Sewer	Total
<b>Expenditures <sup>(1)</sup></b>	\$ (15.9)	\$ (39.3)	\$ (55.2)
<b>Connection Fees</b>	\$ 2.8	\$ 5.8	8.6
<b>GO Property Taxes</b>	2.4	6.4	8.8
<b>Previous Bond Sales</b>	8.1	26.0	34.1
<b>Other <sup>(2)</sup></b>	4.1	5.5	9.6
<b>Fund Balance (4/30/2018)</b>	\$ 1.5	\$ 4.4	\$ 5.9

**Future Projection:****Revenue:**

<b>Interest Income on Balance</b>	\$ 3.7	\$ 25.4	\$ 29.0
<b>Other Revenues <sup>(2)</sup></b>	(3.2)	8.1	4.9
<b>1% and Enhancement</b>	-	-	
<b>Bond Sales</b>	11.2	44.4	55.6
<b>Connection Fees</b>	10.6	45.5	56.1
<b>GO Property Taxes</b>	19.9	35.1	55.0
<b>Total Revenue</b>	\$ 42.2	\$ 158.4	\$ 200.6

**Expenditures:**

<b>Capital</b>	\$ (11.1)	\$ (45.8)	\$ (56.9)
<b>Debt</b>	(30.6)	(114.0)	(144.5)
<b>Total Expenditures</b>	\$ (41.7)	\$ (159.8)	\$ (201.5)
<b>Fund Balance (FY 2057-58)</b>	\$ 2.0	\$ 3.0	\$ 5.0

Change
--------

**Connection Fees:**

	Current	Propose	\$	%
<b>Previous</b>	\$2.8	\$5.8	\$8.6	
<b>Future</b>	10.6	45.5	56.1	
<b>Total Connection Fees</b>	\$13.4	\$51.2	\$64.7	50%
	\$5,138	\$4,830	(\$308)	-6.0%

**GO Property Taxes:**

<b>Previous</b>	\$2.4	\$6.4	\$8.8	
<b>Underlay (ID 125/225)</b>	0.0	0.0	0.0	
<b>Future</b>	19.9	35.1	55.0	
<b>Total GO Property Taxes</b>	\$22.3	\$41.5	\$63.8	50%
	\$0.0750	\$0.0750	\$0.0000	0.0%

(1) Expenditures includes both capital infrastructure and general plant expenditures.

(2) Other includes Grants, AMP, LRP, LPP, and any other revenue sources that were used to offset capital.

# IRVINE RANCH WATER DISTRICT

## Identifying Changes within IDs

(in millions)

Improvement District:

<b>113/213</b>
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**To Date:**

	Water	Sewer	Total
<b>Expenditures <sup>(1)</sup></b>	\$ (17.6)	\$ (29.5)	\$ (47.1)
<b>Connection Fees</b>	3.4	6.4	9.8
<b>GO Property Taxes</b>	0.8	1.2	2.0
<b>Previous Bond Sales</b>	16.3	28.6	44.9
<b>Other <sup>(2)</sup></b>	1.2	0.1	1.3
<b>Fund Balance (4/30/2018)</b>	\$ 4.1	\$ 6.7	\$ 10.8

**Future Projection:**

**Revenue:**

<b>Interest Income on Balance</b>	\$ 13.4	\$ 0.5	\$ 13.9
<b>Other Revenues <sup>(2)</sup></b>	0.2	1.1	1.3
<b>1% and Enhancement</b>	-	-	
<b>Bond Sales</b>	6.9	14.6	21.5
<b>Connection Fees</b>	10.1	15.8	25.9
<b>GO Property Taxes</b>	15.2	19.1	34.3
<b>Total Revenue</b>	\$ 45.9	\$ 51.1	\$ 97.0

**Expenditures:**

<b>Capital</b>	\$ (6.9)	\$ (12.9)	\$ (19.9)
<b>Debt</b>	(32.8)	(54.5)	(87.3)
<b>Total Expenditures</b>	\$ (39.7)	\$ (67.4)	\$ (107.1)
<b>Fund Balance (FY 2057-58)</b>	\$ 10.3	\$ (9.6)	\$ 0.7

<b>Change</b>
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**Connection Fees:**

	Water	Sewer	Total		Current	Propose	Change	%
					\$		\$	%
<b>Previous</b>	\$3.4	\$6.4	\$9.8					
<b>Future</b>	10.1	15.8	25.9					
<b>Total Connection Fees</b>	\$13.5	\$22.1	\$35.7	50%	\$8,135	\$8,379	\$244	3.0%

**GO Property Taxes:**

<b>Previous</b>	\$0.8	\$1.2	\$2.0					
<b>Underlay (ID 125/225)</b>	0.0	0.0	0.0					
<b>Future</b>	15.2	19.1	34.3					
<b>Total GO Property Taxes</b>	\$16.1	\$20.3	\$36.4	50%	\$0.0990	\$0.0990	\$0.0000	0.0%

(1) Expenditures includes both capital infrastructure and general plant expenditures.

(2) Other includes Grants, AMP, LRP, LPP, and any other revenue sources that were used to offset capital.

# IRVINE RANCH WATER DISTRICT

## Identifying Changes within IDs

(in millions)

Improvement District

<b>153/253 (Undeveloped)</b>
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**To Date:**

	Water	Sewer	Total
<b>Expenditures <sup>(1)</sup></b>	\$ (4.7)	\$ (28.1)	\$ (32.8)
<b>Connection Fees</b>	9.88	11.41	21.28
<b>GO Property Taxes</b>	0.71	0.74	1.45
<b>Previous Bond Sales</b>	7.60	11.90	19.50
<b>Other <sup>(2)</sup></b>	4.50	6.10	10.60
<b>Fund Balance (4/30/2018)</b>	\$ 18.0	\$ 2.1	\$ 20.1
<b>Underlay</b>	\$ 5.0	\$ 2.7	\$7.7

**Future Projection:**

**Revenue:**

<b>Interest Income on Balance</b>	\$ 5.8	\$ (17.4)	\$ (11.6)
<b>Other Revenues <sup>(2)</sup></b>	25.7	87.8	113.5
<b>1% and Enhancement</b>	-	-	
<b>Bond Sales</b>	14.0	19.7	33.7
<b>Connection Fees</b>	13.8	15.9	29.7
<b>GO Property Taxes</b>	2.0	2.7	4.6
<b>Total Revenue</b>	\$ 61.3	\$ 108.6	\$ 169.9

**Expenditures:**

<b>Capital</b>	\$ (39.8)	\$ (52.4)	\$ (92.3)
<b>Debt</b>	(37.0)	(52.2)	(89.2)
<b>Total Expenditures</b>	\$ (76.8)	\$ (104.7)	\$ (181.5)

**Fund Balance (FY 2057-58)**

	\$ 2.5	\$ 6.0	\$ 8.5
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<b>Change</b>
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**Connection Fees:**

	Water	Sewer	Total		Current	Propose	Change \$	Change %
<b>Previous</b>	\$9.9	\$11.4	\$21.3					
<b>Future</b>	\$13.8	\$15.9	\$29.7					
<b>Total Connection Fees</b>	\$24	\$27	\$51.0	50%	\$4,301	\$3,312	(\$989)	-23%

**GO Property Taxes:**

<b>Previous</b>	\$5.8	\$3.4	\$9.2					
<b>Underlay (ID 125/225)</b>	\$18.7	\$18.7	\$37.4					
<b>Future</b>	\$2.0	\$2.7	\$4.6					
<b>Total GO Property Taxes</b>	\$26	\$25	\$51.2	50%	\$0.0410	\$0.0410	\$0.0000	0%

(1) Expenditures includes both capital infrastructure and general plant expenditures.

(2) Other Revenues include native water and golf course revenue for 153/253, buy-in costs, and estimated grant revenue.

**IRVINE RANCH WATER DISTRICT**  
**Identifying Changes within IDs**  
(in millions)

Improvement District:

<b>185/285</b>
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**To Date:**

	Water	Sewer	Total
Expenditures <sup>(1)</sup>	\$ (0.7)	\$ (2.0)	\$ (2.7)
Connection Fees	\$ 1.9	\$ 2.9	4.8
GO Property Taxes	\$ 0.2	\$ 0.2	0.4
Previous Bond Sales	\$ 1.5	\$ 1.8	3.3
Other <sup>(2)</sup>	\$ 0.3	\$ 2.8	3.1
<b>Fund Balance (4/30/2018)</b>	<b>\$ 3.2</b>	<b>\$ 5.7</b>	<b>\$ 8.9</b>

**Future Projection:**

**Revenue:**

Interest Income on Balance	\$ 2.6	\$ 10.3	\$ 12.9
Other Revenues	-	-	-
1% and Enhancement	-	-	-
Bond Sales	3.0	4.3	7.3
Connection Fees	0.9	1.6	2.5
GO Property Taxes	0.7	0.9	1.6
<b>Total Revenue</b>	<b>\$ 7.2</b>	<b>\$ 17.1</b>	<b>\$ 24.3</b>

**Expenditures:**

Capital	\$ (3.5)	\$ (4.9)	\$ (8.4)
Debt	(7.7)	(10.2)	(17.9)
<b>Total Expenditures</b>	<b>\$ (11.2)</b>	<b>\$ (15.2)</b>	<b>\$ (26.3)</b>
<b>Fund Balance (FY 2057-58)</b>	<b>\$ (0.7)</b>	<b>\$ 7.6</b>	<b>\$ 6.9</b>

**Connection Fees:**

Previous	\$1.9	\$2.9	\$4.8
Future	\$0.9	\$1.6	\$2.5
<b>Total Connection Fees</b>	<b>\$3</b>	<b>\$4</b>	<b>\$7.3 50%</b>

**GO Property Taxes:**

Previous	\$0.2	\$0.2	\$0.4
Underlay (ID 125/225)	\$5.3	\$0.0	\$5.3
Future	\$0.7	\$0.9	\$1.6
<b>Total GO Property Taxes</b>	<b>\$6</b>	<b>\$1</b>	<b>\$7.2 50%</b>

		Change	
Current	Propose	\$	%
\$4,726	\$4,868	\$142	3.0%

(1) Other includes any other revenue sources that were used to offset capital.

**IRVINE RANCH WATER DISTRICT**  
**Identifying Changes within IDs**

(in millions)

Improvement District:

<b>188/288</b>
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**To Date:**

	Water	Sewer	Total
Expenditures <sup>(1)</sup>	\$ (9.3)	\$ (8.7)	\$ (17.9)
Connection Fees	0.4	0.6	1.1
GO Property Taxes	2.1	0.2	2.3
Previous Bond Sales	4.6	0.4	5.0
Other <sup>(2)</sup>	2.6	6.7	9.3
<b>Fund Balance (4/30/2018)</b>	<b>\$ 0.4</b>	<b>\$ (0.7)</b>	<b>\$ (0.3)</b>

**Future Projection:**

**Revenue:**

Interest Income on Balance	\$ 2.2	\$ 4.3	\$ 6.5
Other Revenues <sup>(2)</sup>	0.1	0.0	0.1
1% and Enhancement	-	-	
Bond Sales	0.9	0.5	1.4
Connection Fees	1.3	2.3	3.6
GO Property Taxes	1.9	0.5	2.4
<b>Total Revenue</b>	<b>\$ 6.4</b>	<b>\$ 7.7</b>	<b>\$ 14.1</b>

**Expenditures:**

Capital	\$ (0.8)	\$ (0.4)	\$ (1.2)
Debt	(4.2)	(1.4)	(5.6)
<b>Total Expenditures</b>	<b>\$ (5.0)</b>	<b>\$ (1.8)</b>	<b>\$ (6.8)</b>
<b>Fund Balance (FY 2057-58)</b>	<b>\$ 1.8</b>	<b>\$ 5.2</b>	<b>\$ 7.0</b>

<b>Change</b>
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**Connection Fees:**

					<b>Current</b>	<b>Propose</b>	<b>\$</b>	<b>%</b>
Previous	\$0.4	\$0.6	\$1.1					
Future	\$1.3	\$2.3	\$3.6					
<b>Total Connection Fees</b>	<b>\$1.8</b>	<b>\$2.9</b>	<b>\$4.7</b>	<b>50%</b>	\$4,144	\$4,268	\$124	3.0%

**GO Property Taxes:**

Previous	\$2.1	\$0.2	\$2.3					
Underlay (ID 125/225)	\$0.0	\$0.0	\$0.0					
Future	\$1.9	\$0.5	\$2.4					
<b>Total GO Property Taxes</b>	<b>\$3.9</b>	<b>\$0.8</b>	<b>\$4.7</b>	<b>50%</b>	\$0.0835	\$0.0835	\$0.0000	0.0%

(1) Expenditures includes both capital infrastructure and general plant expenditures.

(2) Other includes Grants, AMP, LRP, LPP, and any other revenue sources that were used to offset capital.

**IRVINE RANCH WATER DISTRICT**  
**Identifying Changes within IDs**

(in millions)

**Improvement District:**

<b>125/225</b>
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**To Date:**

**Fund Balance (4/30/2018)**

	<b>Water</b>	<b>Sewer</b>	<b>Total</b>
	\$ 147.0	\$ (5.7)	\$ 141.4

**Future Projection:**

**Revenue:**

<b>Interest Income on Balance</b>	\$ 81.6	\$ 33.7	\$ 115.3
<b>Other Revenues <sup>(1)</sup></b>	5.7	23.0	\$ 28.7
<b>1% and Enhancement</b>	0.3	181.2	\$ 181.4
<b>Bond Sales</b>	77.1	138.3	215.4
<b>Connection Fees</b>	1.0	1.1	2.2
<b>GO Property Taxes</b>	172.3	404.3	576.7

<b>Total Revenue</b>	\$ 337.9	\$ 781.6	\$ 1,119.6
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**Expenditures:**

<b>Capital</b>	\$ (73.4)	\$ (126.0)	\$ (199.4)
<b>Debt</b>	(403.5)	(622.9)	(1,026.4)

<b>Total Expenditures</b>	\$ (476.9)	\$ (748.9)	\$ (1,225.8)
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**Fund Balance (FY 2057-58)**

	\$ 8.1	\$ 27.1	\$ 35.2
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(1) Other includes Grants, AMP, LRP, LPP, and any other revenue sources that were used to offset capital.

**IRVINE RANCH WATER DISTRICT**  
**Identifying Changes within IDs**

(in millions)

Improvement District:

<b>111/222</b>
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**To Date:**

**Fund Balance (4/30/2018)**

	<b>Water</b>	<b>Sewer</b>	<b>Total</b>
	\$ 1.8	\$ (25.1)	\$ (23.3)

**Future Projection:**

**Revenue:**

<b>Interest Income on Balance</b>	\$ 1.8	\$ (12.5)	\$ (10.7)
<b>Other Revenues <sup>(1)</sup></b>	1.4	5.0	\$ 6.3
<b>1% and Enhancement</b>	87.3	131.0	\$ 218.4
<b>Bond Sales</b>	44.5	50.0	94.5
<b>Connection Fees</b>	4.1	7.3	11.4
<b>GO Property Taxes</b>	-	-	-

<b>Total Revenue</b>	\$ 139.0	\$ 180.8	\$ 319.8
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**Expenditures:**

<b>Capital</b>	\$ (60.0)	\$ (60.0)	\$ (120.0)
<b>Debt</b>	(71.7)	(74.6)	(146.3)

<b>Total Expenditures</b>	\$ (131.7)	\$ (134.6)	\$ (266.3)
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<b>Fund Balance (FY 2057-58)</b>	\$ 9.1	\$ 21.1	\$ 30.2
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(1) Other includes Grants, AMP, LRP, LPP, and any other revenue sources that were used to offset capital.

## Exhibit “C”

### RESOLUTION NO. 2018-

RESOLUTION OF THE BOARD OF DIRECTORS OF  
IRVINE RANCH WATER DISTRICT  
ADOPTING CHANGES TO CONNECTION FEES AS SET FORTH IN  
THE SCHEDULE OF RATES AND CHARGES IN EXHIBIT “B” TO THE  
RULES AND REGULATIONS OF IRVINE RANCH WATER DISTRICT  
FOR WATER, SEWER, RECYCLED WATER, AND NATURAL  
TREATMENT SYSTEM SERVICE  
(EFFECTIVE AUGUST 1, 2018)

The Irvine Ranch Water District (“IRWD”) is a California Water District organized and existing under the California Water District Law, and all of the lands within the boundaries of said District are located in the County of Orange, State of California.

California Water Code Sections 35423, 35470, and 35501 empower the District to establish, print and distribute equitable rules and regulations and prescribe and collect rates or other charges for water and sewer service, which includes connection fees for connection and service capacity.

The Board of Directors of IRWD, by adoption of Resolution No. 2018-14 approved and adopted amended “Rules and Regulations of Irvine Ranch Water District for Water, Sewer, Recycled Water, and Natural Treatment System Service effective May 29, 2018 (“Rules and Regulations”).

Exhibit “B” of the Rules and Regulations sets forth rates and charges, which may be changed from time to time by adoption of changes to any of the rates and charges or establishing any new rates and charges.

Public Resources Code Section 21080(b) (8) provides that the establishment, modification, structuring, restructuring or approval of rates, tolls, fares, or other charges by public agencies are exempt from the requirements of the California Environmental Quality Act if certain findings are made specifying the basis for the claim of exemption.

Article XIIB of the Constitution of the State of California, limiting local agencies’ appropriations of proceeds of taxes, excludes user charges or fees or regulatory fees from the definition of proceeds of taxes, as long as such fees and charges do not produce revenue exceeding the costs reasonably borne in providing the regulation, product or service, and further excludes appropriations for debt service and appropriations for qualified capital outlay projects from appropriations subject to limitation.

The Board of Directors of IRWD deems it advisable and finds that it would be in the best interest of the District to amend or establish connection fees, consistent with applicable constitutional and statutory requirements.

The proposed revisions to the connection fees, as set forth in Exhibit “A” to this resolution, do not modify or establish any property-related fees or charges subject to the notice and hearing procedures of Article XIID of the Constitution of the State of California.

The Board of Directors of IRWD therefore resolves as follows:

Section 1. It is hereby found and determined that the proposed changes to the Schedule of Rates and Charges are within the purposes set forth in Section 21080(b) of the Public Resources Code including but not by way of limitation, the purposes of (1) obtaining funds for capital projects necessary to maintain service within existing areas, and (2) meeting financial reserve needs, and therefore, that such changes are exempt from CEQA.

Section 2. It is hereby found and determined that relative to Article XIII B of the Constitution of the State of California, the charges or fees or regulatory fees established or increased hereby do not produce revenues exceeding the costs reasonably borne in providing the regulation, product or service and/or are used for debt service or qualified capital outlay projects and accordingly do not constitute proceeds of taxes, the appropriation of which is limited under Article XIII B, and that the documentation used in making such determinations has been on file in the office of IRWD for not less than 15 days prior to the date hereof, pursuant to Section 7910 of the Government Code of the State of California. It is hereby further found and determined that relative to the requirements of Sections 66013 and 66016 of the Government Code of the State of California, the availability of such documentation also satisfies the requirement to make publicly available the data indicating the estimated cost and revenue sources to provide the service for which the fee is imposed at least 10 days prior to the meeting at which this resolution is adopted, and that the connection fees established or increased hereby do not exceed the estimated reasonable cost of providing the service for which they are imposed.

Section 3. The new and/or revised connection fees as set forth in Exhibit "A" attached to this resolution and by this reference incorporated herein are hereby adopted, and the corresponding rate(s), fee(s) or charge(s), if any, as set forth in Rules and Regulations Exhibit "B" currently in effect, are hereby superseded. Staff is directed to incorporate the hereby adopted new and/or revised connection fee(s) into Exhibit "B" to the Rules and Regulations.

Section 4. That the provisions of this Resolution shall be effective August 1, 2018.

Section 5. That the Secretary is hereby ordered and directed to post a certified copy of this Resolution in a public place within the Irvine Ranch Water District.

ADOPTED, SIGNED and APPROVED on July 23, 2018.

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President, IRVINE RANCH WATER DISTRICT  
and of the Board of Directors thereof

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Secretary, IRVINE RANCH WATER DISTRICT  
and of the Board of Directors thereof

APPROVED AS TO FORM:  
Lewis Brisbois Bisgaard & Smith LLP

By: \_\_\_\_\_  
District Counsel

## Exhibit "D"

### RESOLUTION NO. 2018-

#### RESOLUTION OF THE BOARD OF DIRECTORS OF IRVINE RANCH WATER DISTRICT ESTABLISHING AD VALOREM TAX REVENUES FOR FISCAL YEAR 2018-19

The Board of Directors of the Irvine Ranch Water District (IRWD) has duly considered the financial needs of IRWD and its Improvement District Nos. 112, 113, 125, 153, 185, 188, 212, 213, 225, 240, 253, 285, and 288, for the fiscal year 2018-19 and the funds available and established to become available for meeting said financial needs.

Pursuant to Water Code Section 37206, the Board of Directors annually shall furnish to the Board of Supervisors of Orange County and to the County Auditor, an estimate in writing of the amount of money needed to be raised by the District during the fiscal year for the payment of its proportion of the amount required for the purposes of the District.

Article XIII B of the Constitution of the State of California provides that the appropriations of local agencies will be limited each year to those of the previous year with specified adjustments permitted.

Section 9(a) of Article XIII B specifically excludes appropriations required to pay the cost of interest and redemption charges, including the funding of any reserve or sinking fund required in connection therewith, on indebtedness existing or legally authorized as of January 1, 1979, or on bonded indebtedness thereafter approved according to law by a vote of electors.

The ad valorem tax revenues established by IRWD are used entirely for debt service and are therefore exempt from the appropriations formula established by Article XIII B.

The ad valorem tax revenues received by IRWD pursuant to this Resolution will provide a portion of the funds needed to pay principal and interest with respect to the General Obligation Bonds referenced below, and this Board wishes to specify the sources of the remainder of the amounts needed therefor in the current year.

The Board of Directors of IRWD therefore resolves as follows:

Section 1. That the tax to be levied for servicing the General Obligation Bonds of Improvement District No. 153 of IRWD for fiscal year 2018-19 is .02000 percent (.0002000) of full value.

Section 2. That the tax to be levied for servicing the General Obligation Bonds of Improvement District No. 253 of IRWD for fiscal year 2018-19 is .02100 percent (.0002100) of full value.

Section 3. That the tax to be levied for servicing the General Obligation Bonds of Improvement District No. 225 of IRWD for fiscal year 2018-19 is .01500 percent (.0001500) of full value.

Section 4. That the tax to be levied for servicing the General Obligation Bonds of Improvement District No. 240 of IRWD for fiscal year 2018-19 is .01500 percent (.0001500) of full value.

Section 5. That the tax to be levied for servicing the General Obligation Bonds of Improvement District No. 125 of IRWD for fiscal year 2018-19 is .01300 percent (.0001300) of full value.

Section 6. That the tax to be levied for servicing Improvement District No. 252's just proportion of liability determined pursuant to Resolution No. 2005-41, for the General Obligation Bonds of Improvement District No. 225 of IRWD for fiscal year 2018-19 is .00001 percent (.0000001) of full value.

Section 7. That the tax to be levied for servicing the General Obligation Bonds of Improvement District No. 188 of IRWD for fiscal year 2018-19 is .07350 percent (.0007350) of full value.

Section 8. That the tax to be levied for servicing the General Obligation Bonds of Improvement District No. 288 of IRWD for fiscal year 2018-19 is .01000 percent (.0001000) of full value.

Section 9. That the tax to be levied for servicing the General Obligation Bonds of Improvement District No. 113 of IRWD for fiscal year 2018-19 is .04000 percent (.0004000) of full value.

Section 10. That the tax to be levied for servicing the General Obligation Bonds of Improvement District No. 213 of IRWD for fiscal year 2018-19 is .05900 percent (.000590) of full value.

Section 11. That the tax to be levied for servicing the General Obligation Bonds of Improvement District No. 112 of IRWD for fiscal year 2018-19 is .03000 percent (.00030000) of full value.

Section 12. That the tax to be levied for servicing the General Obligation Bonds of Improvement District No. 212 of IRWD for fiscal year 2018-19 is .04500 percent (.0004500) of full value.

Section 13. That the tax to be levied for servicing the General Obligation Bonds of Improvement District No. 185 of IRWD for fiscal year 2018-19 is .02300 percent (.0002300) of full value.

Section 14. That the tax to be levied for servicing the General Obligation Bonds of Improvement District No. 285 of IRWD for fiscal year 2018-19 is .03050 percent (.0003050) of full value.

Section 15. The taxes levied pursuant to Sections 1 and 2 of this Resolution are for bonds approved before January 1, 1989. The taxes levied pursuant to Sections 7 through 14 are for bonds approved after January 1, 1989. The taxes levied pursuant to Sections 3 through 6 are for bonds approved before January 1, 1989 and bonds approved after January 1, 1989.

Section 16. That the Secretary and Treasurer of the District are hereby directed to furnish a certified copy of this resolution to the Auditor of the County of Orange.

Section 17. That the ad valorem tax revenues established by IRWD hereby for the fiscal year 2018-19 are in compliance with the provisions of Article XIIIB of the constitution of the State of California.

Section 18. That principal and interest with respect to the General Obligation Bonds of IRWD shall be paid from (1) the ad valorem assessments received by IRWD pursuant to this Resolution; (2) any amounts held in bona fide debt service funds; (3) other monies, if any, required to be applied to the payment of debt service by the applicable indenture or resolution of issuance; (4) tax revenues applied pursuant to Resolution No. 2002-10 and to certain parity obligations as described in the Indenture of Trust, dated April 1, 2011, as amended and supplemented, relating to the Bonds of Irvine Ranch Water District, Refunding Series 2011A-1 (pledge of the 1% levy), as such application may be modified by resolution amending the allocation of tax revenues; and (5) to the extent additional amounts are necessary for such purpose, revenues which are received by IRWD within twelve months of being applied to the payment of debt service and which are legally available therefor, including income from the investment of such revenues where both the investment income and the revenues on which it is earned are received by IRWD within twelve months of being applied to the payment of debt service.

ADOPTED, SIGNED and APPROVED on July 23, 2018.

\_\_\_\_\_  
President, IRVINE RANCH WATER DISTRICT  
and of the Board of Directors thereof

\_\_\_\_\_  
Secretary, IRVINE RANCH WATER DISTRICT  
and of the Board of Directors thereof

APPROVED AS TO FORM:  
Lewis Brisbois Bisgaard & Smith LLP

By: \_\_\_\_\_  
District Counsel

## Exhibit “E”

### RESOLUTION NO. 2018 –

#### RESOLUTION OF THE BOARD OF DIRECTORS OF IRVINE RANCH WATER DISTRICT AMENDING ALLOCATION OF *AD VALOREM* PROPERTY TAXES TO DEBT SERVICE, SUBJECT TO PLEDGE

The Board of Directors of the Irvine Ranch Water District (“IRWD”) has adopted Resolution Nos. 1992-48 and 2002-10, relating to IRWD’s appropriation and pledge of revenues from the general 1% *ad valorem* property tax.

Those resolution authorized and directed the Treasurer to annually allocate the general 1% *ad valorem* property tax revenues received by IRWD among the debt service requirements of the issues of bonds specified in those resolutions (“Secured Bonds”) in accordance with a formula set forth therein, with the 2002 pledge formula to be applied in lieu of the 1992 pledge formula to the extent provided in Resolution No. 2002-10.

No Secured Bonds that received a pledge of general 1% *ad valorem* property tax revenues under Resolution Nos. 1992-48 or 2002-10 currently remain outstanding, except for the Series 1993 bonds.

IRWD’s revenues from the general 1% *ad valorem* property tax have, to the extent not applied to pay principal and interest on the Secured Bonds, been pledged by IRWD to certain parity obligations (the “Parity Obligations”) identified by the Indenture of Trust, dated April 1, 2011, as amended and supplemented (the “2011 Indenture”), relating to the Bonds of Irvine Ranch Water District, Refunding Series 2011A-1.

On November 11, 2013, pursuant to Water Code Section 36454 *et seq.*, the Board of Directors adopted Resolution No. 2013-43, ordering the consolidation of Improvement District Nos. 102, 105, 106, 121, 130, 135, 140, 161, 182, 184 and 186, as modified by certain annexations and detachments ordered by the Board, into a single improvement district designated “Improvement District No. 125” and the consolidation of Improvement District Nos. 2(202), 206, 221, 230, 235, 250, 261, 282, 284 and 286, as modified by certain annexations and detachments ordered by the Board, into a single improvement district designated “Improvement District No. 225”.

The consolidation is one of several actions taken by IRWD based upon its comprehensive evaluation and study of its long-term financial requirements, including: a detailed planning, engineering and financial assessment of the total costs of existing and future facilities in the water and wastewater systems; available bond authorization and other revenue sources to finance facilities to serve future development, system reliability necessary to meet upgraded regulatory requirements for both existing and future demands and replacement and refurbishment to the existing systems; debt service; simplification of the improvement district structure; and assurance of equitable and fair sharing of regional and local cost between existing and future users and among the areas that have comprised the various existing improvement districts and other geographic areas served by the system; and

Pursuant to Water Code Section 36454.1 , the included amounts and/or included percentages of each series of the Secured Bonds or Parity Obligations that constituted the general obligation of one or more of Improvement District Nos. 105, 121, 130, 135, 140, 161, 182, 184 and 186 were assumed by and became the liability of Improvement District No. 125, and the included amounts and/or included percentages of the respective series of the Secured Bonds or Parity Obligations that constituted the general obligation of one or more of Improvement District Nos. 221, 230, 235, 250, 261, 282, 284 and 286 were assumed by and became the liability of Improvement District No. 225.

The Board deems it to be appropriate, in the interest of IRWD and consistent with the pledges contained in Resolution No. 2002-10 and the 2011 Indenture (collectively, the “Pledges”), to modify the allocation of the revenues from the general 1% *ad valorem* property tax received during the 2018-19 fiscal year (the “Fiscal Year”), subject to the availability of other revenues for debt service on Secured Bonds and Parity Obligations in such year.

The proposed modifications consist of substitution of an allocation of 1% *ad valorem* tax revenues among debt service obligations that is different from the allocation that would be calculated under the formulas specified in the Pledges; in addition, by separate resolution adopting the capital budget, this Board has allocated a portion of the 1% *ad valorem* tax revenues for the Fiscal Year to one or both of IRWD’s Replacement Fund or Enhancement Fund.

Article XIII B of the Constitution of the State of California provides that the appropriations of local agencies will be limited each year to those of the previous year, adjusted for changes in population, cost of living and transfers in sources of funding.

Section 9 of Article XIII B excludes from the appropriations subject to limitation appropriations for debt service and appropriations for all qualified capital outlay projects; a qualified capital outlay project is defined by statute as an appropriation for a fixed asset (including land and construction) with a useful life of 10 or more years and a value which equals or exceeds one hundred thousand dollars (\$100,000).

The Board of Directors of the Irvine Ranch Water District therefore resolves as follows:

Section 1. Subject in all respects to the Pledges, the Treasurer is hereby authorized and directed to implement a modified allocation of the pledged amounts (as defined in the Pledges) of the general 1% *ad valorem* property tax revenues for the Fiscal Year 2018-19 in the manner set forth as follows:

- (a) the amount to be allocated to the Replacement Fund shall be as specified in the resolution adopting the capital budget for the Fiscal Year;
- (b) the amount to be allocated to the Enhancement Fund shall be as specified in the resolution adopting the capital budget for the Fiscal Year;
- (c) the amount to be allocated to the sharing of regional and local cost by existing and future users of the areas known as 111 and 222 shall be as set forth in Exhibit “A,” which exhibit is attached to this resolution and by this reference made a part hereof;

(d) the allocation among the Improvement Districts' debt service obligations shall be as set forth in Exhibit "A," subject to adjustments as may be necessary to reflect actual tax revenues received by IRWD;

(e) the amount allocated to each Improvement District or combination of Improvement Districts specified in Exhibit "A" shall be further allocated by the Treasurer among the various outstanding bond issues based upon their debt service requirements and/or other criteria as he deems appropriate;

(f) the amounts to be allocated pursuant to paragraphs (d) and (e) from the pledged amount of the general 1% *ad valorem* property tax revenues received by IRWD shall be held unallocated until such allocations are made, and each such amount shall be deposited into the appropriate debt service fund or account for the respective bond issue as and when determined by the Treasurer.

The applications described in this section shall be made only if and to the extent there is not a deficiency at the time of application in the amounts available to pay debt service for any Secured Bonds or Parity Obligations.

Section 2. Nothing contained in this resolution is intended to impair or modify in any way the pledge of the general 1% *ad valorem* property tax revenues as stated in the Pledges. Nothing contained in this resolution is intended to create any entitlement with respect to the use of general 1% *ad valorem* property tax revenues for any particular purpose, it being intended that such revenues are unrestricted except by such Pledges and are subject to application as determined in the discretion of the Board of Directors from time to time.

Section 3. It is hereby found and determined that relative to appropriations subject to limitation under Article XIII B of the Constitution of the State of California, the applications of revenues described in this resolution are for debt service, and accordingly do not constitute proceeds of taxes the appropriation of which is limited under Article XIII B, and that the documentation used in making such determinations has been on file in the office of IRWD for not less than 15 days prior to the date hereof, pursuant to Section 7910 of the Government Code of the State of California

Section 4. The President, Secretary, Treasurer and each other officer of IRWD, acting singly, be and hereby is authorized and directed to execute and deliver any and all documents or instruments and to do and perform any and all acts and things necessary or proper for carrying out the transactions contemplated by this resolution.

ADOPTED, SIGNED AND APPROVED on July 23, 2018.

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President/Vice President  
IRVINE RANCH WATER DISTRICT  
and of the Board of Directors thereof

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Secretary/Assistant Secretary  
IRVINE RANCH WATER DISTRICT  
and of the Board of Directors thereof

APPROVED AS TO FORM:  
Lewis Brisbois Bisgaard & Smith LLP  
By \_\_\_\_\_  
District Counsel

EXHIBIT A

ID or Area (Water)	2002 Pledge Formula Allocation of 1% General Tax Revenue <sup>a</sup>	2018-19 Allocation of 1% General Tax Revenue	ID or Area (Sewer)	2002 Pledge Formula Allocation of 1% General Tax Revenue <sup>a</sup>	2018-19 Allocation of 1% General Tax Revenue
112	0	0	212	0	0
113	0	0	213	0	0
125 <sup>b c</sup>	17%	23%	225 <sup>d e</sup>	23%	29%
153	0	0	240	3%	9%
154	0	0	252	0	0
185	0	0	253	0	0
188	0	0	288	0	0
111	0	5%	222	0	5%

Fund	Allocation of 1% Revenue, Per 2018-19 Capital Budget Resolution
Replacement Fund	29%
Enhancement Fund	0

<sup>a</sup> No Secured Bonds that received a pledge of 1% general tax levy revenues under Resolution No. 1992-48 remain outstanding. The pledge made by Resolution No. 2002-10 secured the outstanding Consolidated Series 1993 Bonds (consisting of the included percentages of Improvement District Nos. 105 (14.67%), 140 (15.20%), 240 (43.73%) and 250 (26.40%))

<sup>b</sup> Improvement District No. 125 assumed the liability for the included amounts and/or included percentages of debt service for each series of the Secured Bonds or Parity Obligations that constituted the general obligation of one or more of the improvement districts consolidated as Improvement District No. 125: Nos. 105, 121, 130, 135, 140, 161, 182, 184 and 186.

<sup>c</sup> After the formation of Improvement District No. 125, with respect to the Series 1993 Bonds, the aggregated included percentages of Improvement District Nos. 105 and 140 (36.87%) were assumed by Improvement District No. 125.

<sup>d</sup> Improvement District No. 225 assumed the liability for the included amounts and/or included percentages of debt service for each series of the Secured Bonds or Parity Obligations that constituted the general obligation of one or more of the improvement districts consolidated as Improvement District No. 225: Nos. 2(202), 206, 221, 230, 235, 250, 261, 282, 284 and 286.

<sup>e</sup> After the formation of Improvement District No. 225, with respect to the Series 1993 Bonds, the included percentage of Improvement District No. 250 (26.40%) was assumed by Improvement District No. 225.

Section

**3**

**Developer Services**

**Water Connection Fees**

**Residential**

	IMPROVEMENT DISTRICT	0-5.8 DUs/acre	5.9-10.8 DUs/acre	10.9-25.8 DUs/acre	25.9+ DUs/acre	
Connection Fees Per Dwelling Unit	111*	\$3,910 \$3,796	\$3,448 \$3,348	\$2,922 \$2,837	\$2,467 \$2,395	
	112	\$1,338 \$1,423	\$1,338 \$1,423	\$1,338 \$1,423	\$1,338 \$1,423	
	112a (tax exempt)	\$2,462 \$2,619	\$2,462 \$2,619	\$2,462 \$2,619	\$2,462 \$2,619	
	113	\$3,047 \$2,959	\$3,047 \$2,959	\$3,047 \$2,959	\$3,047 \$2,959	
	Development shall be gross acres excluding private parks.	125	\$2,789 \$2,708	\$2,789 \$2,708	\$2,789 \$2,708	\$2,789 \$2,708
	153	\$1,532 \$1,989	\$1,532 \$1,989	\$1,532 \$1,989	\$1,532 \$1,989	
	153 PA 30	\$3,828 \$3,716	\$3,828 \$3,716	\$3,828 \$3,716	\$3,828 \$3,716	
	185	\$1,748 \$1,697	\$1,748 \$1,697	\$1,748 \$1,697	\$1,748 \$1,697	
	188	\$1,572 \$1,527	\$1,572 \$1,527	\$1,572 \$1,527	\$1,572 \$1,527	
		*All others				

**Commercial, industrial and public authority**

	IMPROVEMENT DISTRICT	Commercial	Industrial	Public Authority
Connection Fees Per Gross Acre	111*	\$21,694 \$21,062	\$33,042 \$32,080	\$21,694 \$21,062
	112	\$8,696 \$ 9,251	\$8,696 \$ 9,251	\$8,696 \$ 9,251
	112a (tax exempt)	\$16,001 \$17,022	\$16,001 \$17,022	\$16,001 \$17,022
	113	\$22,258 \$21,610	\$0 \$0	\$22,258 \$21,610
	125	\$13,834 \$13,431	\$19,638 \$19,066	\$13,834 \$13,431
	153	\$8,047 \$10,450	\$11,422 \$14,834	\$8,047 \$10,450
	PA 30	\$18,993 \$18,440	\$26,961 \$26,176	\$18,993 \$18,440
	185	\$8,166 \$ 7,928	\$8,166 \$ 7,928	\$8,166 \$ 7,928
	188	\$6,206 \$ 6,025	\$6,206 \$ 6,025	\$6,206 \$ 6,025
		*All others		

**Parks, churches and recreational facilities**

	IMPROVEMENT DISTRICT	Indoor Water Use	Outdoor <sup>(1)</sup> Water Use	
Connection Fees Per Fixture Unit	111*	\$67.94 \$66.96	\$239.09 \$232.13	
	125	\$45.98 \$44.64	\$161.16 \$156.46	
	(1) Calculated per Uniform Plumbing Code	153	\$26.78 \$34.78	\$93.86 \$121.89
	PA 30	\$63.17 \$61.33	\$221.41 \$214.96	
	185	\$46.98 \$45.62	\$164.99 \$160.18	
	188	\$31.01 \$30.10	\$109.08 \$105.91	
	*All others			

**Schools (public and private)**

	IMPROVEMENT DISTRICT	Indoor Primary &/or Intermediate	Indoor Secondary	Landscape Primary Intermediate & Secondary
Connection Fees Per 100 Students Based on Max Daily Attendance	111*	\$5,354 \$5,198	\$7,180 \$6,974	\$230 \$223
	125	\$3,616 \$3,514	\$4,855 \$4,714	\$162 \$157
	153	\$2,106 \$2,735	\$2,827 \$3,672	\$94 \$122
	PA 30	\$4,968 \$4,823	\$6,670 \$6,476	\$222 \$216
	185	\$3,542 \$3,439	\$4,969 \$4,824	\$160 \$155
	188	\$2,836 \$2,753	\$3,795 \$3,684	\$122 \$118
	*All others			



\* Prices shown are for standard meter installations only and do not include services, angle stops, meter boxes, meter box covers, vaults or meter box lids. Additional costs may apply. The customer will be responsible for any plumbing modifications downstream of the water meter.

\*\* Developer installed-Residential only.

\*\*\* When a customer requests a meter to be upsized from 5/8" x 3/4" to 1", additional parts and labor will be required to make the conversion. The cost for District staff to perform this work is \$2,000.00 and will be collected along with the above 1" meter cost.

Costs for meters larger than 4-inches will be determined by the District's Purchasing Department at the time of request. Meters costs includes strainer.

### Upsizing and downsizing meter requests

1. It is the customer's responsibility to ensure that any upsizing or downsizing of the meter will not have any adverse effects to the customer's system as it relates to water pressure, fire protection or ability to successfully serve the demand of the home or business. The District may require OCFA approval of any modifications and/or a signed Request & Authorization to Change Meter Size form.
2. Any private-side (downstream of the water meter) modifications or repairs are the sole responsibility of the customer.
3. If for any reason the customer chooses to change back to the original size meter, all installation costs would once again apply.

A Quote Request Form for Service or Meter Modifications can be obtained at the District's Development Services Counter.

### Domestic water, recycled water and Natural Treatment System (NTS) plan check and inspection fees

Plan check and inspection fees for water systems shall be calculated as 10% of the bondable cost for the off-site, public, potable or recycled water system or a fixed fee as described below.: Residential or Natural Treatment Systems plans require a non-refundable deposit of 5% of the estimated cost. Non-residential plans require a nonrefundable \$100 deposit. The deposit shall be submitted when submitting for first plan check. Any remaining fees shall be paid prior to final approval of the plans

1. Installation of a 1" or 2" service	\$400.00
2. Removal of a 1" or 2" service	\$400.00
3. Installation of Fire DDCA or fire hydrants	\$1000.00
4. Installation of recycled water hydrants or temporary construction connections	\$1000.00

The overtime inspection rate is \$175.00/hr.

### Interim water service charge – new development

Builders and developers will be charged \$35.10 per connection in a new tract and/or development for water service for the period of time after in-tract lines have been connected to the District's water system until the new customer begins metered water service. Connection method and appropriate use of water is at the sole discretion of the District. Examples of unpermitted uses may include but are not limited to connections to sales/construction trailers or any construction practice that could pose risk to public health resulting from a backflow condition.

Unmetered water service is not permitted for custom lots. Developers for custom lots will be required to apply for a domestic water construction meter prior to starting construction.

[C11]

# Sewer Connection Fees

## Residential

	IMPROVEMENT DISTRICT	0-5.8 DUs/acre	5.9-10.8 DUs/acre	10.9-25.8 DUs/acre	25.9+ DUs/acre
Connection Fees Per Dwelling Unit	1 (222)*	\$6,942 \$6,740	\$6,178 \$5,998	\$5,085 \$4,937	\$4,012 \$3,895
	212	\$3,492 \$3,715	\$3,492 \$3,715	\$3,492 \$3,715	\$3,492 \$3,715
	212a (tax exempt)	\$6,426 \$6,836	\$6,426 \$6,836	\$6,426 \$6,836	\$6,426 \$6,836
	213	\$5,331 \$5,176	\$5,331 \$5,176	\$5,331 \$5,176	\$5,331 \$5,176
Total acreage for any given development shall be gross acres excluding private parks.	240	\$3,830 \$3,719	\$3,830 \$3,719	\$3,830 \$3,719	\$3,830 \$3,719
	225	\$3,012 \$2,924	\$3,012 \$2,924	\$3,012 \$2,924	\$3,012 \$2,924
	253	\$1,780 \$2,312	\$1,780 \$2,312	\$1,780 \$2,312	\$1,780 \$2,312
Parks.	253 PA 30	\$3,995 \$3,878	\$3,995 \$3,878	\$3,995 \$3,878	\$3,995 \$3,878
	256	\$6,077 \$5,900	\$6,077 \$5,900	\$6,077 \$5,900	\$6,077 \$5,900
	285	\$3,120 \$3,029	\$3,120 \$3,029	\$3,120 \$3,029	\$3,120 \$3,029
	288	\$2,696 \$2,617	\$2,696 \$2,617	\$2,696 \$2,617	\$2,696 \$2,617
	OPA1 (Ridgeline)	\$6,077 \$5,900	\$6,077 \$5,900	\$6,077 \$5,900	\$6,077 \$5,900
	*All others				

## Commercial, industrial and public authority

	IMPROVEMENT DISTRICT	Commercial	Industrial	Public Authority
Connection Fees Per Gross Acre	1 (222)*	\$38,906 \$37,773	\$67,880 \$65,903	\$38,906 \$37,773
	212	\$20,849 \$22,180	\$20,849 \$22,180	\$20,849 \$22,180
	212a (tax exempt)	\$38,365 \$40,814	\$38,365 \$40,814	\$38,365 \$40,814
	213	\$31,764 \$30,839	\$0 \$0	\$31,764 \$30,839
	240	\$17,490 \$16,981	\$0 \$0	\$17,490 \$16,981
	225	\$14,726 \$14,297	\$17,420 \$16,913	\$14,726 \$14,297
	253	\$8,168 \$10,608	\$13,554 \$17,603	\$8,168 \$10,608
	253 PA 30	\$17,812 \$17,293	\$29,556 \$28,695	\$17,812 \$17,293
	285	\$6,235 \$-6,053	\$6,235 \$-6,053	\$6,235 \$-6,053
	288	\$10,640 \$10,330	\$10,640 \$10,330	\$10,640 \$10,330
	*All others			

## Parks, churches and recreational facilities

	IMPROVEMENT DISTRICT	Fee
Connection Fees Per Fixture Unit	1 (222)*	\$430.45
	240	\$260.21 \$252.63
	225	\$230.81 \$224.08
	253	\$128.02 \$166.26
	253 PA 30	\$279.16 \$271.03
	288	\$70.60
	*All others	

## Schools (public and private)

	IMPROVEMENT DISTRICT	Primary & Intermediate	Secondary
Connection Fees Per 100 Students Based on Max Daily Attendance	1 (222)*	\$20,397 \$19,803	\$27,200 \$26,407
	240	\$12,298 \$11,940	\$16,400 \$15,923
	225	\$10,844 \$10,528	\$14,459 \$14,038
	253	\$6,015 \$-7,811	\$8,020 \$10,415
	253 PA 30	\$13,116 \$12,734	\$17,488 \$16,979
	288	\$3,399 \$-3,300	\$4,529 \$-4,397
	*All others		

**Sewer lateral installations by District**

The District does not install sewer laterals.

**Irvine Business Complex (IBC) – non-residential**

	-----Commercial/Industrial-----		
	(1) <u>Low Demand</u>	(2) <u>Average Demand</u>	(3) <u>High Demand</u>
Connection Fees Per 1,000 Square Feet	<u>\$268</u> \$260	<u>\$1,654</u> \$1,606	<u>\$3,921</u> \$3,807

- (1) Low Demand connections are the following categories of users: Nurseries, Warehouses, Parking Structures, RV Storage, Churches, Truck Terminals, RV Parks, Lumber/Construction Yards, and other discharge whose flow is similar in volume to these listed categories.
- (2) Average Demand connections other than listed in Low or High Demand categories.
- (3) High Demand connections are the following categories of users: Restaurants, Supermarkets, Car Washes, Coin Laundries, Amusement Parks, Shopping Centers with Restaurants, Food Processing Facilities, Textile Manufacturers, and other discharges whose flow is similar in volume to these listed categories.

**High volume user – commercial, industrial and public authority**

This section shall apply to all non-residential applicants in addition to standard connection fees in all improvement districts.

Connection Fee Formula	Additional High Volume Sewer User Connection Fee =	
* Sewer GPD = 90% of water GPD	<u>[Est. GPD use * – (no. acres x use factor**)] x \$17.2476/Gal. of Sewer Flow</u>	
**Non-Residential Sewage Flow Generators (Use Factors)	<u>Land Use Category</u>	<u>Average Flows</u>
	Commercial	1,300.00
	Industrial	2,600.00
	UCI	Special Contract

Definitions

Commercial: Commercial development includes but is not limited to the following uses: Hotels, retail and offices.

Industrial: Industrial development includes but is not limited to the following uses: Manufacturing, research and development, and distribution.

**Methodology for calculating redevelopment connection fees**

Redevelopment connection fees will be calculated using the following methodology, effective January 1, 2014:

1. Calculate water and sewer connection fee based on redevelopment plans utilizing current rates and charges;
2. Provide a credit based on the existing project (to be redeveloped) by calculating a connection fee using current rates and charges; and
3. The redevelopment connection fee calculation is the difference between the new development connection fee and the connection fee credit. No refunds will be given if the credit is greater than connection fee.

### **Sanitary sewer plan check and inspection fees**

The plan check and inspection fee for public sewer systems will be calculated as 10% of the bondable cost. A non-refundable deposit of 5% of the estimated cost of the sewer system is required with the submittal of the first plan check. Any remaining fees shall be paid prior to final approval of the plans. The overtime inspection rate is \$175.00.

### **District closed circuit television inspection charges** **Initial TV inspection fee**

A fee of \$.70 per linear foot as measured from the center line of manholes will be charged for all 6-inch and larger sewer lines to be inspected by a closed circuit television camera. The District will furnish the special camera equipment and manpower to fulfill this inspection requirement. This fee is to be paid along with the other connection, meter, and inspection fees prior to the District signing developer's tract utility plans.

### **Reinspection**

Fees will be assessed for Reinspection by District TV Crew after corrective work is completed. Those portions of the pipeline system that have been corrected must be retelevised.

1. District fees for retelevising corrective work will be a flat set-up fee of two hundred fifty dollars (\$250.00) plus \$0.70 per foot of sewer line reinspected measured centerline to centerline of manholes.
2. Payment for retelevising estimated inspection fees must be received by the Development and Inspection Services prior to scheduling the reinspection. Retelevising will not be done until the fees are paid.

### **Cancellation of District's TV inspection**

If it is determined by either the Contractor or Developer that the job site will not be ready or accessible for the television inspection on the scheduled date, as notified, the Contractor shall notify the District Inspection Division of the necessary cancellation at least 24 hours in advance of the scheduled inspection to avoid being charged a cancellation fee.

1. If the District's television crew arrives at the job site and the work is not ready or accessible, the Contractor and owner will be billed for the cancellation fee of two hundred fifty dollars (\$250.00), payable to the District prior to the date of the rescheduled television inspection.
2. A rescheduled inspection is to be made through the District's project inspection division.

### **Optional developer TV inspection**

If the Contractor or Owner desires to have a portion of, or the entire job, TV inspected for his convenience, he will be charged a fee of one hundred fifty dollars (\$150.00) plus \$0.70 per foot of sewer line inspected measured centerline to centerline of manholes.

July 23, 2018

Prepared by: J. McGehee/R. Mori

Submitted by: K. Burton 

Approved by: Paul A. Cook 

## CONSENT CALENDAR

### IRVINE LAKE PIPELINE NORTH CONVERSION OFFSITE PIPELINES CONTRACT CHANGE ORDER

#### SUMMARY:

CCL Contracting, Inc. is constructing the Irvine Lake Pipeline (ILP) North Conversion Offsite Pipelines project, which is approximately 80% complete. Staff recommends that the Board approve Contract Change Order (CCO) No. 7 in the amount of \$110,068.17 for additional construction work caused by previously unknown adverse soil conditions in Santiago Canyon Road.

#### BACKGROUND:

IRWD is converting a significant portion of the ILP from untreated water to recycled water. The overall conversion project includes construction of a 2.4 million gallon buried prestressed concrete reservoir, associated improvements at the Rattlesnake Reservoir Complex, and the offsite pipelines necessary to connect the new reservoir to both the untreated and recycled water distribution systems. The scope of this project is the offsite pipelines portion of the overall project. Construction of the offsite pipelines began in September 2017 and is estimated for completion in August 2018.

During construction of the 42-inch ILP in Santiago Canyon Road, CCL encountered poor and unstable soil conditions that led to extensive caving of the walls of the pipeline trench. NMG Geotechnical reviewed the field conditions and determined that the trench paralleled an unmapped inactive fault consisting of two different soil types. As CCL excavated for the pipe trench, unstable soils on both sides of the inactive fault were exposed resulting in caving of the pipeline trench walls. Since the ILP alignment is near the middle of Santiago Canyon Road with vehicular travel lanes located on both sides of the trench, CCL determined that further trenching would require beam and plate shoring in lieu of the hydraulic speed shoring that was used to construct previous portions of the pipeline.

Since the inactive fault and associated adverse soil conditions were not identified in the geotechnical report, staff approved CCO No. 4 in the amount of \$77,155.83 for the beam and plate shoring system that would be required to construct approximately 320 feet of the 42-inch ILP. After execution of the change order, CCL began working with a shoring designer to develop the beam and plate shoring system. Through this process, CCL determined that beam and plate shoring would add substantial time to the construction period so it ultimately elected to proceed with the remainder of the pipeline construction, at its risk, using an alternative shoring method consisting of a custom 32-foot long trench shoring box. Use of the trench shoring box was successful and resulted in a credit of \$6,946.83 to the previously approved CCO No.4 for beam and plate shoring.

CCO No. 7:

To prepare for construction of the 42-inch Zone C+ pipeline also located in Santiago Canyon Road, CCL performed potholing to identify if similar soil conditions would be encountered on the Zone C+ pipeline since it is parallel to, and approximately 35 feet away from, the 42-inch ILP. Potholing confirmed that an approximately 360-foot long portion of the Zone C+ pipeline was also routed through similar adverse soil conditions as encountered during construction of the 42-inch ILP. Similar to the construction of the ILP, CCL elected to proceed with construction in the adverse soil areas using the same custom 32-foot long trench shoring box. For the Zone C+ pipeline, the effort required to construct the pipeline through this area was magnified because the C+ pipeline is approximately eight feet deeper than the ILP. The increased depth resulted in slower production and additional effort by CCL to stabilize the pipe trench. Nonetheless, CCL successfully completed construction of the Zone C+ pipeline through this challenging area.

CCL submitted CCO No. 7 in the amount of \$110,068.17 for the additional work associated with constructing approximately 360 feet of the Zone C+ pipeline using an alternative shoring system. The change order, provided as Exhibit "A", includes the \$6,946.83 credit for the 42-inch ILP discussed above. Staff reviewed the change order and recommends approval of CCO No. 7 in the amount of \$110,068.17. A summary of change orders to date is provided as Exhibit "B".

FISCAL IMPACTS:

The ILP North Conversion Offsite Pipelines, Project 05823, is included in the FY 2018-19 Capital Budget. The existing budget is sufficient to fund the recommendation presented herein.

The project is receiving grant funding from the Bureau of Reclamation and the State Water Resources Control Board. The Bureau of Reclamation funding in the amount of \$300,000 is being provided through the Drought Resiliency Grant program with 75 percent IRWD matching requirements. The State Board is providing Proposition 1 Recycled Water Program grant funds, which will contribute up to a 35 percent match on eligible construction costs up to a maximum of \$29,510,300 in project costs.

ENVIRONMENTAL COMPLIANCE:

This project is subject to the California Environmental Quality Act (CEQA) and in conformance with California Code of Regulations Title 14, Chapter 3, Article 6, a Notice of Intent to adopt a Mitigated Negative Declaration was filed with the County of Orange on November 3, 2015. Pursuant to State Guideline § 15073, the Initial Study/Mitigated Negative Declaration (IS/MND) was made available for public review for a period of 30 days from November 4, 2015 through December 3, 2015. The IS/MND was adopted by IRWD Board of Directors at its January 11, 2016, meeting. A Notice of Determination was filed with the Orange County Clerk/Recorder and the CA State Clearinghouse on January 12, 2016.

COMMITTEE STATUS:

This item was reviewed by the Engineering and Operations Committee on July 17, 2018.

RECOMMENDATION:

THAT THE BOARD APPROVE CONTRACT CHANGE ORDER NO. 7 WITH CCL CONTRACTING, INC. IN THE AMOUNT OF \$110,068.17 FOR ADDITIONAL CONSTRUCTION WORK FOR THE IRVINE LAKE PIPELINE NORTH CONVERSION OFFSITE PIPELINES, PROJECT 05823.

LIST OF EXHIBITS:

- Exhibit "A" – Contract Change Order No. 7
- Exhibit "B" – Contract Change Order Summary Log

# EXHIBIT "A"

## CONTRACT CHANGE ORDER

**IRVINE RANCH WATER DISTRICT**  
 15600 Sand Canyon Avenue  
 P. O. Box 57000  
 Irvine, California 92619-7000  
 (949) 453-5300



C.O. No. 7  
 Final  
 Project No. 05823

**Offsite Pipelines for the ILP North Conversion Project**

Project Title	Date: <u>6/25/2018</u>		
<b>THE FOLLOWING CHANGE TO CONTRACT, DRAWINGS AND SPECIFICATIONS IS PROPOSED.</b>			
1. Change Request 23	\$ ADDITIONS	\$ DELETIONS	DAYS ±
Extra work on C+ pipeline alignment in Santiago Canyon Road due to adverse soil conditions	117,015.00	0.00	0
Credit for alternative shoring system in lieu of beam and plate shoring approved as part of Change Order No. 4	0.00	6,946.83	0
Contract Completion Date: September 19, 2018			
<b>TOTAL</b>	<b>117,015.00</b>	<b>6,946.83</b>	<b>0</b>

1. NET AMOUNT THIS CHANGE ORDER	=	110,068.17	DAYS ±	0
2. ORIGINAL CONTRACT AMOUNT	=	8,337,193.50		400
3. TOTAL PREVIOUS CHANGE ORDER(S)	=	171,720.21		0
4. TOTAL BEFORE THIS CHANGE ORDER (2+3)	=	8,508,913.71		400
5. PROPOSED REVISED CONTRACT AMOUNT TO DATE (1+4)	=	8,618,981.88		400

We hereby agree to make the above change subject to the terms of this change order for the sum of:

One Hundred Ten Thousand Sixty Eight and 17/100 ----- Dollars

Date: 6-25-18 Contractor: CCL Contracting, Inc. By: [Signature]

SIGNATURE	DATE	APPROVAL LEVEL REQUIRED
<u>[Signature]</u> IRWD Engineer or Consulting Engineer	<u>6/25/18</u> Date	Department Director Approval Required <input type="checkbox"/> Executive Director Approval Required <input type="checkbox"/> General Manager Approval Required <input type="checkbox"/> Board Approval Required <input checked="" type="checkbox"/>
<u>[Signature]</u> Principal Engineer	<u>06/27/18</u> Date	
<u>[Signature]</u> Executive Director of Engineering & Water Quality	<u>6/27/18</u> Date	
General Manager	Date	By _____ Date _____ Purchase Order No. <u>603290</u>

**NOTE:** The documents supporting this Change Order, including any drawings and estimates of cost, if required are attached hereto and made a part hereof. This Change Order shall not be considered as such until it has been signed by the Owner and the Contractor. Upon final approval, distribution of copies will be made as required. The parties mutually agree the pricing set forth in this Change Order are complete and fair compensation for the entirety of the work authorized under this Change Order and that no additional compensation is warranted nor shall it be allowed.

**CHANGES:** All workmanship and materials called for by this Order shall be fully in accord with the original Contract Documents insofar as the same may be applied without conflict to the conditions set forth by this Order. The time for completing the contract will not be extended unless expressly provided for in this Change Order.

# EXHIBIT "B"

## Offsite Pipelines for the ILP North Conversion Project PR 05823 Construction Change Order Summary

Contractor: CCL Contracting, Inc.  
Design Engineer: MBI  
Award Date: 8/15/2017

		Contract Amount						Contract Days				Original Completion Date:
		Original Contract Amount: \$8,337,193.50						Original Days: 400				9/19/2018
Change Order	Description	Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Change Order Days	Previous Change Orders	Cum. Total C.O. days	Revised Total Contract Days	Revised Completion Date
1	Approved by Executive Director Approved on 12/11/2017 CR No. 1 - 20" PVC pipeline changes	\$ 12,810.00	\$12,810.00	\$0.00	\$12,810.00	0.15%	\$8,350,003.50	0	0	0	400	9/19/2018
2	Approved by Executive Director Approved on 2/28/2018 CR No. 2 - Addition of warf head hydrant CR No. 5 - Unknown utility crossing (20" PVC pipeline) CR No. 6 - Unknown utility crossing (42" WSP) CR No. 7 - Pipeline elevation changes due to utility crossing CR No. 9 - ILP Connection No. 2 changes	\$ 12,594.05 \$ 1,032.48 \$ 9,189.21 \$ 16,102.00 \$ 3,637.82	\$42,555.56	\$12,810.00	\$55,365.56	0.66%	\$8,392,559.06	0 0 0 0 0	0	0	400	9/19/2018
3	Approved by Executive Director Approved on 2/28/2018 CR No. 3 - Deletion of insulating flange kits CR No. 4 - Blow off assembly location adjustments	\$ (9,599.31) \$ (34,975.00)	\$ (44,574.31)	\$55,365.56	\$10,791.25	0.13%	\$8,347,984.75	0 0	0	0	400	9/19/2018
4	Approved by General Manager Approved on 3/28/2018 CR No. 10 - Beam and plate shoring for ILP in SCR CR No. 11 - Extra work tickets for unknown conditions	\$ 77,155.83 \$ 17,917.41	\$95,073.24	\$10,791.25	\$105,864.49	1.27%	\$8,443,057.99	0 0	0	0	400	9/19/2018
5	Approved by Executive Director Approved on 4/24/18 CR No. 13 - Traffic sign updates CR No. 16 - Pipeline realignment at Canyon View CR No. 17 - Steel elbow at reservoir site connection CR No. 18 - Deeper excavation per Delta 3 plan CR No. 19 - Add'l 54-inch loose flange	\$ 738.51 \$ 24,174.16 \$ 5,143.12 \$ 8,439.00 \$ 1,241.88	\$39,736.67	\$105,864.49	\$145,601.16	1.75%	\$8,482,794.66	0 0 0 0 0	0	0	400	9/19/2018
6	Approved by General Manager Approved on CR No. 8 - Unsuitable backfill material CR No. 14 - Unsuitable backfill material CR No. 15 - Unsuitable backfill material CR No. 20 - Sampling Station CR No. 21 - Extra Paving CR No. 22 - Piping Modifications (Mark 5) CR No. 24 - Piping Modifications (Mark 7) CR No. 25 - Reservoir Area Backfill and Piping CR No. 26 - Bottom Drain Relocation CR No. 27 - Concrete Pad Adjustments	\$ 7,251.39 \$ 3,035.28 \$ 4,741.29 \$ 5,300.00 \$ 13,782.18 \$ 13,642.98 \$ 9,324.28 \$ (20,777.73) \$ (15,323.74) \$ 5,143.12	\$26,119.05	\$145,601.16	\$171,720.21	2.06%	\$8,508,913.71	0 0 0 0 0 0 0 0 0 0	0	0	400	9/19/2018

**Offsite Pipelines for the ILP North Conversion Project  
PR 05823  
Construction Change Order Summary**

Contractor: CCL Contracting, Inc  
Design Engineer: MBI  
Award Date: 8/15/2017

		Contract Amount						Contract Days				Original Completion Date:
		Original Contract Amount: \$8,337,193.50						Original Days: 400				9/19/2018
Change Order	Description	Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Change Order Days	Previous Change Orders	Cum. Total C.O. days	Revised Total Contract Days	Revised Completion Date
7	Approved by Board of Directors Approved on CR No. 23 - Extra work on C+ pipeline alignment in Santiago Canyon Road due to adverse soil conditions and credit for alternative shoring performed in lieu of beam and plate shoring approved as part of Change Order No. 4	\$ 110,068.17	\$110,068.17	\$171,720.21	\$281,788.38	3.38%	\$8,618,981.88	0	0	0	400	9/19/2018

<b>TOTAL CHANGE ORDERS</b>	<b>281,788.38</b>	<b>3.38%</b>
<b>REVISED CONTRACT AMOUNT</b>	<b>8,618,981.88</b>	

July 23, 2018

Prepared by: J. Moeder/R. Mori

Submitted by: K. Burton *(KLB)*

Approved by: Paul A. Cook *[Signature]*

## CONSENT CALENDAR

### IRVINE LAKE PIPELINE NORTH CONVERSION RESERVOIR VARIANCE

#### SUMMARY:

Construction of the Irvine Lake Pipeline (ILP) North Conversion Reservoir began in October 2016 and is approximately 60% complete. Staff recommends that the Board authorize the General Manager to execute Variance No. 3 in the amount of \$64,491 with Kleinfelder for additional engineering services during construction for the ILP North Conversion Reservoir. The variance accounts for additional services not included in Kleinfelder's contract scope of work.

#### BACKGROUND:

As part of IRWD's strategic plan to increase recycled water usage and reduce reliance on imported water supplies, IRWD is converting a significant portion of the ILP from untreated water to recycled water. The project includes construction of a 2.4-million gallon buried prestressed concrete reservoir and associated improvements at the Rattlesnake Reservoir Complex and the Orchard Hills Strainer Facility. Construction of the project began in October 2016 and is approximately 60% complete. The project is scheduled for completion in February 2019.

#### Variance No. 3:

Construction of the reservoir, which originally included a 23-month construction duration, has experienced multiple issues that have delayed its completion. Issues that have impacted completion include a substantial redesign effort associated with the postponement of the Santiago Hills II development, additional design efforts and construction grading activities associated with unanticipated onsite soil and geologic conditions, and additional weather delays associated with the amount of time needed for the site to recover after rain events. These and other minor changes have resulted in the extension of the project schedule by an additional eight months. Kleinfelder's original scope of work and associated level of effort was based on the original 23-month construction duration, so additional budget is required to ensure Kleinfelder can continue supporting the project through its estimated completion in February 2019.

At staff's request, Kleinfelder submitted a variance in the amount of \$64,491 for additional engineering services during construction. Included in the variance is effort for additional construction support, responses to contractor requests for information, submittal reviews, and site visits. Staff reviewed the variance, which is attached as Exhibit "A", and recommends approval of Variance No. 3 in the amount of \$64,491 with Kleinfelder.

FISCAL IMPACTS:

The Irvine Lake Pipeline North Conversion Reservoir, Project 05407, is included in the FY 2018-19 Capital Budget. The existing budget is sufficient to fund Variance No. 3 in the amount of \$64,491.

The project is receiving grant funding from the Bureau of Reclamation and the State Water Resources Control Board. The Bureau of Reclamation funding in the amount of \$300,000 is being provided through the Drought Resiliency Grant program with 75 percent IRWD matching requirements. The State Board is providing Proposition 1 Recycled Water Program grant funds, which will contribute up to a 35 percent match on eligible construction costs up to a maximum of \$29,510,300 in project costs.

ENVIRONMENTAL COMPLIANCE:

This project is subject to the California Environmental Quality Act (CEQA) and in conformance with California Code of Regulations Title 14, Chapter 3, Article 6, a Notice of Intent to adopt a Mitigated Negative Declaration was filed with the County of Orange on November 3, 2015. Pursuant to State Guideline § 15073, the Initial Study/Mitigated Negative Declaration (IS/MND) was made available for public review for a period of 30 days from November 4, 2015 through December 3, 2015. The IS/MND was adopted by IRWD Board of Directors at its January 11, 2016 meeting. A Notice of Determination was filed with the Orange County Clerk/Recorder and the CA State Clearinghouse on January 12, 2016.

COMMITTEE STATUS:

This item was reviewed by the Engineering and Operations Committee on July 17, 2018.

RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE GENERAL MANAGER TO EXECUTE VARIANCE NO. 3 IN THE AMOUNT OF \$64,491 WITH KLEINFELDER FOR ADDITIONAL ENGINEERING SERVICES DURING CONSTRUCTION FOR THE IRVINE LAKE PIPELINE NORTH CONVERSION RESERVOIR, PROJECT 05407.

LIST OF EXHIBITS:

Exhibit "A" – Variance No. 3

**EXHIBIT "A"**

**IRVINE RANCH WATER DISTRICT  
PROFESSIONAL SERVICES VARIANCE**

Project Title: ILP North Conversion Reservoir

Project No.: 05407 Date: June 26, 2018  
Purchase Order No.: 600752 Variance No.: 3

Originator:  IRWD  ENGINEER/CONSULTANT  Other (Explain) combined

Description of Variance (*attach any back-up material*):  
Additional engineering services during construction due to extended construction schedule. See Attachment for more background information.

**Engineering & Management Cost Impact:**

Classification	Manhours	Billing Rate	Labor \$	Direct Costs	Subcon. \$	Total \$
SUBTASK B: Misc Construction Support	70	varies	\$4,214.32	\$0	\$6,321.47	\$10,525.79
SUBTASK C: RFIs	120	varies	\$7,252.09	\$0	\$10,878.13	\$18,130.22
SUBTASK E: Site Visits	70	varies	\$4,105.23	\$0	\$6,157.85	\$10,263.08
SUBTASK F: Shop Drawing Review	170	varies	\$10,224.89	\$0	\$15,337.33	\$25,562.22
<b>Total \$ =</b>						<b>64,491.30</b>

**Schedule Impact:**

Task No.	Task Description	Original Schedule	Schedule Variance	New Schedule
	Construction Phase Services	Contract Completion (Baseline): July 2018		Contract Completion: February 2019

**Required Approval Determination:**

Total Original Contract	\$ <u>250,470</u>	<input type="checkbox"/> Director: Cumulative total of Variances less than or equal to \$50,000. <input type="checkbox"/> Executive Director: Cumulative total of Variances less than or equal to \$75,000. <input type="checkbox"/> General Manager: Cumulative total of Variances less than or equal to \$100,000. <input checked="" type="checkbox"/> Board: Cumulative total of Variances greater than \$100,000.
Previous Variances \$	<u>75,000</u>	
This Variance \$	<u>64,491</u>	
Total Sum of Variances	\$ <u>139,491</u>	
New Contract Amount	\$ <u>389,961</u>	
Percentage of Total Variances to Original Contract	<u>56 %</u>	

ENGINEER/CONSULTANT: Kleinfelder  
Company Name

Lana Nolan June 26, 2018  
Project Engineer/Manager Date

IRVINE RANCH WATER DISTRICT

RKM Ken J. Burt 6/28/18  
Department Director Date

\_\_\_\_\_  
Engineer's/Consultant's Management Date

\_\_\_\_\_  
General Manager/Board Date

# IRVINE RANCH WATER DISTRICT

## PROFESSIONAL SERVICES VARIANCE REGISTER

Project Title: ILP North Conversion Reservoir

Project No.: 05407 Project Manager: Jacob Moeder

Variance No.	Description	Dates		Variance Amount
		Initiated	Approved	
1	Additional design work to accommodate revised ICDC Construction Schedule.	12/20/16	1/6/17	\$62,053
2	Additional design work to revise overflow/outfall design	3/20/17	3/29/17	\$12,947
3	Additional Engineering Services During Construction	6/26/18		\$64,491



**ILP N. Conversion Reservoir Project**  
**Variance No. 3**  
Updated June 26, 2018

**Task 4 – Construction Phase Services**

Subtask B: Miscellaneous Construction Support

Kleinfelder will continue to provide ongoing construction support to assist IRWD with answering contractor's questions, reviewing change orders as needed, and other support throughout the construction duration. Additional effort is required to support IRWD due to the extension of the contract duration and the nature of the questions received by the Contractor. This additional effort is estimated to support the project through the remaining duration and assumes approximately 10 hours per month.

Subtask C: Contractor's Request for Information (RFIs)

The level of effort required for individual RFI reviews has exceeded the original estimate. Kleinfelder has reviewed and responded to 56 RFIs to date and estimates an additional 30 RFIs for the remainder of the project. This additional effort assumes approximately 4 hours per RFI.

Subtask E: Site Visits

Additional site visits have been required that exceed the original estimate. Considering the remaining work to be completed by the Contractor, Kleinfelder expects to perform 7 additional site visits to observe the progress and quality of the executed work of the Contractor. The site visit effort includes coordination time as well time to prepare a summary of the site visit.

1. Structural site visit to observe the cracks in the roof
2. Piping site visit
3. Mechanical site visit
4. Civil site visit
5. Electrical site visit
6. Two Miscellaneous site visits

Subtask F: Shop Drawing Reviews

The level of effort required for individual shop drawing reviews has exceeded the original estimate. Kleinfelder has reviewed 146 submittals to date, including 40 resubmittals, 13 second resubmittals and several additional resubmittals. Kleinfelder estimates there will be approximately 30 additional submittals and 15 resubmittals.

July 23, 2018

Prepared by: C. Spangenberg/M. Cortez

Submitted by: K. Burton *KLB*

Approved by: Paul A. Cook *PAW*

## CONSENT CALENDAR

### REHABILITATION OF DYER ROAD WELLFIELD WELLS 10 AND 16 CONSULTANT SELECTION

#### SUMMARY:

Dyer Road Wellfield (DRWF) Wells 10 and 16 have experienced a reduction in production and specific capacity and need rehabilitation. Based on the District's current well rehabilitation matrix, the priority of wells needing rehabilitation next are Wells 14, 11, 12 and 4. Staff recommends that the Board authorize the General Manager to execute a Professional Services Agreement with Richard C. Slade & Associates, LLC in the amount of \$249,391 for the rehabilitation of DRWF Wells 10 and 16 and two additional wells to be selected at a later date.

#### BACKGROUND:

To establish a priority of wells needing rehabilitation, staff maintains a matrix based on the operational performance and maintenance activities of the wells. Several wells from the matrix have been rehabilitated within the last five years: DRWF Wells 3, 5, 18, 7, 2 and 17, and Irvine Desalter Wells 107 and El Toro 1 and 2. At this time, DRWF Wells 10 and 16 require rehabilitation in order to improve their hydraulic performance. Neither well has been rehabilitated since the wells were put into service. A location map showing the wells is attached as Exhibit "A".

DRWF Well 10 was constructed in 1994 with copper bearing steel as the casing material. The specific capacity has decreased from 112 gallons per minute per foot of drawdown (gpm/ft-dd) to the current specific capacity of 30 gpm/ft-dd. The decrease in specific capacity can be attributed to heavy biological fouling and encrustation buildup within the gravel pack and casing as verified by a recent downhole video of the well. The original pumping rate was 5,000 gpm; the latest recorded pumping rate in 2017 was 2,600 gpm.

DRWF Well 16 was constructed in 1996; the casing material is copper bearing steel. Like DRWF Well 10, the specific capacity of Well 16 has decreased over time from the well's original specific capacity of 49 gpm/ft-dd to 12 gpm/ft-dd in 2017. Similar to Well 10, the decrease in specific capacity can be attributed to heavy biological fouling and encrustation buildup within the gravel pack as verified by a recent downhole video of the well. The original pumping rate was 2,400 gpm; the average flow rate for Well 16 dropped to 1,700 gpm in the past year.

The wells needing rehabilitation next include DRWF Wells 14, 11, 12 and 4; two of these wells will be selected for rehabilitation subsequent to the design completion of Wells 10 and 16 and pending discussions regarding the District's system operating needs.

Consultant Selection:

On May 8, 2018, staff issued a Request for Proposal for hydrogeologist services for the rehabilitation of DRWF Wells 10 and 16 on to four consultants: Brown and Caldwell, Richard C. Slade & Associates LLC (RCS), Thomas Harder & Co., and Wood Rogers, Inc. Proposals were received from RCS and Wood Rogers, Inc. on June 14. Brown and Caldwell and Thomas Harder & Co. notified the District that due to their current workloads and schedules, they would not be pursuing the project. Staff completed its evaluation of the two proposals received. Based upon the strong project team, extensive knowledge and experience of the Orange County Groundwater Basin and DRWF wells, staff recommends awarding a Professional Services Agreement to RCS in the amount of \$249,391 to perform hydrogeological services for the rehabilitation of DRWF Wells 10 and 16, and two additional wells to be named at a later date. The consultant selection matrix is attached as Exhibit "B".

FISCAL IMPACTS:

DRWF Well 10 and Well 16 Rehabilitation, Projects 07087 and 07091, are included in the FY 2018-19 Capital Budget. The existing budgets are sufficient to fund the design and construction monitoring phases of the projects. The agreement provides sufficient funds for hydrogeologist services for the rehabilitation of two additional wells to be determined. A Notice to Proceed will be issued to the consultant for professional services required for Wells 10 and 16 only. Funds for the rehabilitation of the two additional wells will be released at a later date.

ENVIRONMENTAL COMPLIANCE:

This project is exempt from the California Environmental Quality Act (CEQA) as authorized under the California Code of Regulations, Title 14, Chapter 3, Section 15301 which provides exemption for minor alterations of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of use beyond that existing at the time of the lead agency's determination. A Notice of Exemption for the project was filed with the Orange County Clerk Recorder in on July 10, 2018.

COMMITTEE STATUS:

This item was reviewed by the Engineering and Operations Committee on July 17, 2018.

RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE GENERAL MANAGER TO EXECUTE A PROFESSIONAL SERVICES AGREEMENT WITH RICHARD C. SLADE ASSOCIATES LLC IN THE AMOUNT OF \$249,391 FOR REHABILITATION OF DYER ROAD WELLFIELD WELLS 10 AND 16, PROJECTS 07087 AND 07091, AND TWO ADDITIONAL WELLS TO BE SELECTED AT A LATER DATE.

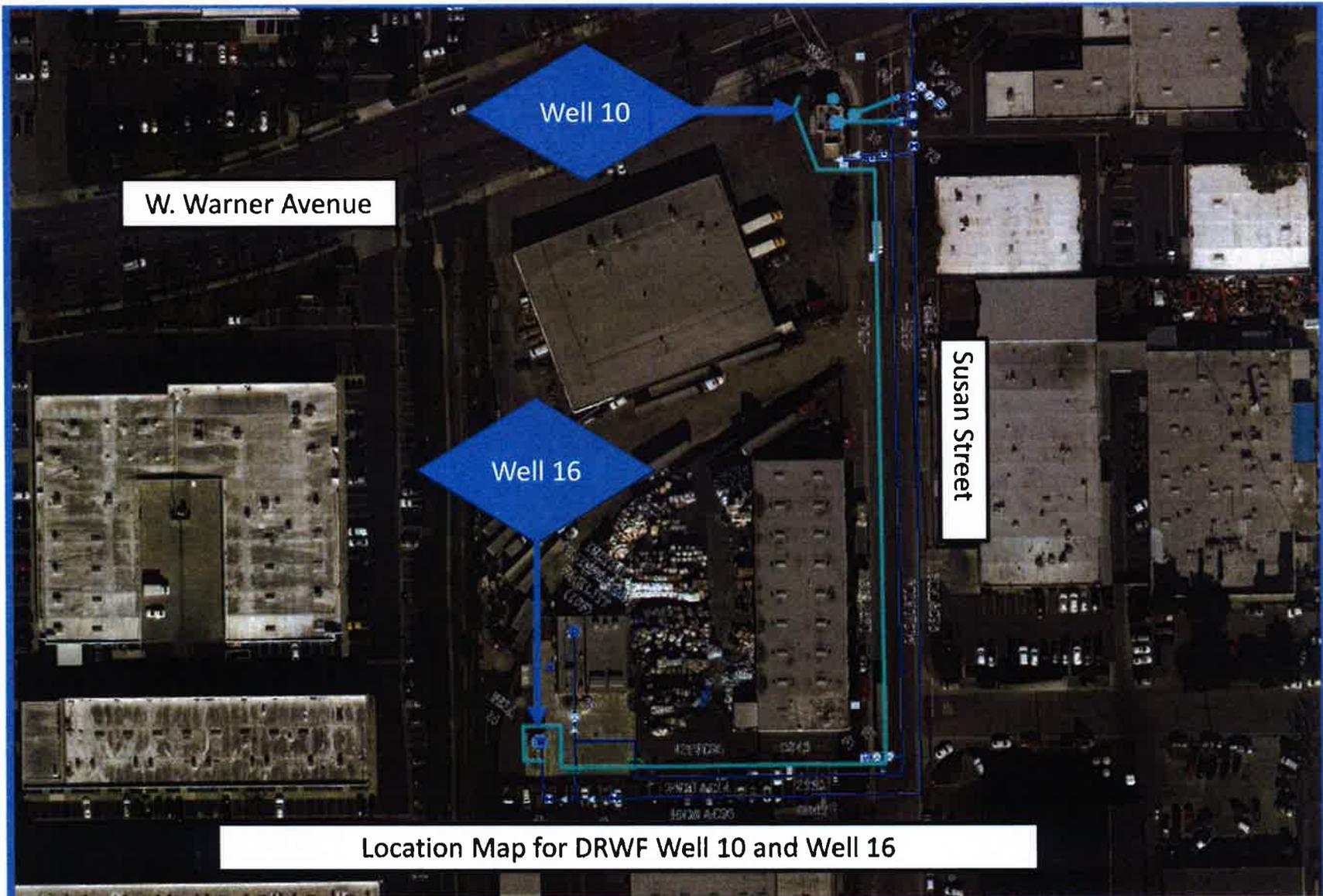
LIST OF EXHIBITS:

Exhibit "A" – Location Map

Exhibit "B" – Consultant Selection Matrix

Exhibit "C" – RCS Scope of Work and Fee Proposal

**EXHIBIT "A"**



## EXHIBIT "B"

**CONSULTANT SELECTION MATRIX**  
**DRWF Well 10 and Well 16 Rehabilitations**

Item	Description	Weights	Richard C. Slade & Associates		Wood Rogers	
A	<b>TECHNICAL APPROACH</b>	<b>40%</b>				
1	Overall Project Understanding / Approach	40%	1		2	
2	Scope of Proposal	60%	1		2	
	<b>Weighted Score (Technical Approach)</b>		1.0		2.0	
B	<b>QUALIFICATION AND EXPERIENCE</b>	<b>60%</b>				
1	Firm/Team	60%	1		2	
2	Project Manager	40%	Earl LaPensee-30 Years	1	Joseph Kingsbury 18 years	2
	<b>Weighted Score (Experience)</b>		1.0		2.0	
	<b>COMBINED WEIGHTED SCORE</b>		1.0		2.0	
	<b>Ranking of Consultants</b>					
C	<b>SCOPE OF WORK</b>					
TASK	<b>Well 10</b>		Task Hours	FEE	Task Hours	FEE
1	Review Video Surveys, Information, Condition Report		34	\$ 5,964	33	\$ 5,757
2	Prepare Technical Specifications and Project Manual		25	\$ 4,310	86	\$ 15,302
3	Provide Bid Phase Support		8	\$ 1,466	18	\$ 2,481
4	Construction Phase Services and Project Management		205	\$ 26,730	312	\$ 44,801
5	Preparation of Summary Report		52	\$ 8,992	76	\$ 12,666
6	Miscellaneous Services*-Wood Rogers					\$ 10,000
	<b>Subtotal Well 10</b>		324	\$ 47,462	525	\$ 91,006
	<b>Well 16</b>					
1	Review Video Surveys and Available		34	\$ 5,964	33	\$ 5,757
2	Prepare Technical Specifications and Project Manual		25	\$ 4,310	86	\$ 15,302
3	Provide Bid Phase Support		8	\$ 1,466	18	\$ 2,481
4	Construction Phase Services and Project		205	\$ 26,730	316	\$ 45,461
5	Preparation of Summary Reports		52	\$ 8,992	76	\$ 12,666
6	Miscellaneous Services*-Wood Rogers					\$ 10,000
	<b>Subtotal Well 16</b>		324	\$ 47,462	529	\$ 91,666
7	Hydrogeologist Design/Construction Phase Services for Two Communications Fee		1057	\$ 148,384	776	\$ 128,385
				\$ 6,083		
<b>Total</b>			<b>1704</b>	<b>\$ 249,391</b>	<b>1830</b>	<b>\$ 311,057</b>
D	<b>OTHER</b>					
	Sub Consultants		In-House		In-House	
	Exceptions taken to IRWD Std. Contract		None		None	
	Insurance (Professional & General Liability)		None		None	

8/18/2018

EXHIBIT "C"



**RICHARD C. SLADE & ASSOCIATES LLC**  
**CONSULTING GROUNDWATER GEOLOGISTS**

June 12, 2018

Mr. Carl Spangenberg  
Irvine Ranch Water District  
P.O. Box 57000  
Irvine, California 92619-2016

Job No. 382-OGE19

Re: Proposal for Hydrogeologic Services  
Rehabilitation of Dyer Road Wellfield Well Nos. 10 and 16  
Irvine Ranch Water District, California

Dear Mr. Spangenberg:

Richard C. Slade & Associates LLC, Consulting Groundwater Geologists (RCS), is pleased to submit this proposal for providing hydrogeologic office and field services for the rehabilitation of Irvine Ranch Water District (IRWD) Dyer Road Wellfield (DRWF) Well Nos. 10 and 16. As seen on Figure 1, "Well Location Map," both of these wells are located in the City of Santa Ana, Orange County, California. Appendix A of this proposal provides a statement of our qualifications and a summary of the various well rehabilitation, well construction, and well destruction projects for which RCS has provided groundwater services over the years on numerous municipal-supply wells in southern California and, more recently, for IRWD.

RCS has considerable experience in performing evaluations of existing municipal-supply wells and in providing office and field monitoring services during well rehabilitation operations. Indeed, our firm has evaluated, assisted in the preparation of Technical Specifications and Bid Documents, and provided field oversight services for rehabilitation of several other IRWD wells, including DRWF Well Nos. 2, 3, 5 and 7, 17 & 18 and Irvine Desalter Project (IDP) Well No. 107, Wells ET-1. Further, we also provided services for IRWD Well No. 52, with regard to the pumping redevelopment of that well in 2014 and again, more recently, in May 2018.

We trust that our experience in well rehabilitation activities, as documented herein in Appendix A, meets with your approval. We appreciate this opportunity to present our proposal for the rehabilitation of DRWF Well Nos. 10 & 16, and look forward to once again working with you and your staff on this groundwater-related project.

Respectfully submitted,  
RICHARD C. SLADE & ASSOCIATES LLC

A handwritten signature in black ink, appearing to read "Richard C. Slade", written over a horizontal line.

Richard C. Slade, President and  
Principal Groundwater Geologist

**CONFIDENTIAL & PROPRIETARY**

**UNDERSTANDING THE PROJECT AND APPROACH**

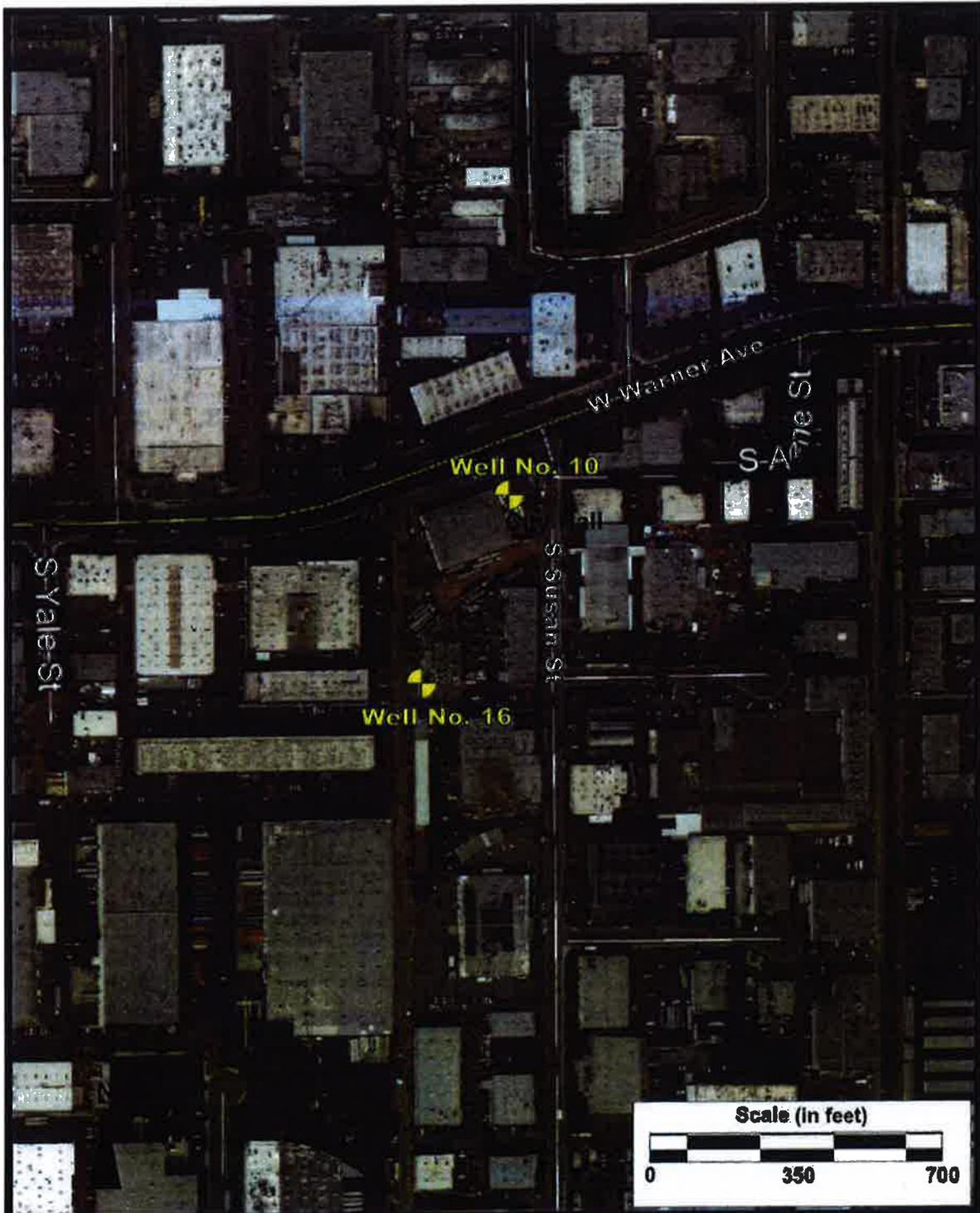
DRWF Well Nos. 10 and 16 were constructed in 1994 and 1998, respectively. Table 1, "Summary of Available Well Construction Data," provides the basic documented "as-built" construction parameters for each well. The wells were constructed to depths of 827 to 960 ft below ground surface (bgs), respectively, and perforations in each well consist of Roscoe Moss Company Ful-flo louvers with 0.050- to 0.055-inch slot widths, respectively.

The casings in these two wells are 20+ years old, and the casing walls and perforations have most likely become plugged and encrusted with significant amounts of biological growths. It is noted in the RFP that Well No. 10 was last rehabilitated in 2013 (although the exact rehabilitation methods are unknown), and that the specific capacity of this well has declined in the last few years. Specifically, the specific capacity of Well No. 10 has reportedly decreased from 70 gallons per minute per foot of drawdown (gpm/ft ddn) when the well was first constructed, to 30 gpm/ft ddn at a pumping rate of 2,500 gpm/ft ddn. Similarly, the specific capacity of Well No. 16 has reportedly decreased from 49 gpm/ft ddn at a pumping rate of 2,400 gpm when the well was first constructed in 1998, to 11 gpm/ft ddn at a pumping rate of 1,600 gpm in 2017. Thus, each well will likely need to undergo a complete suite of directed rehabilitation tasks that could encompass some or all of the following:

- Removal of the pumps and an initial video and Casing Inspection Thickness Measurement (CITM) surveys. The CITM is needed to check the current thickness of the casing walls. Based on the age of the wells, their casings are very likely either mild steel, or low carbon steel.
- Wire brushing and bailing of sediment fill.
- Mechanical redevelopment (AirBurst® or BoreBlast®, or similar method).
- Chemical treatment.
- Pumping redevelopment
- Step drawdown and constant rate production testing to determine the post-rehabilitation specific capacity.
- Dynamic flowmeter (spinner) and depth-specific sampling.
- Static spinner survey.
- Interim video surveys to check downwell conditions after selected rehabilitation tasks.

Currently, it is not anticipated that either well will require the installation of patches and/or casing liners. However, following initial cleaning and an initial video survey, it may be revealed that there could be holes in either well casing. As such, an assessment of whether swaged patches or casing liners will need to be installed will be made at that time.

The above basic tasks are needed to help increase the current specific capacity of each well. However, the degree to which this parameter will be improved is unknown; the results of the new constant rate testing will be compared to those from the original, post-construction pumping test in each well.



**RCS**  
 RICHARD C. SLADE & ASSOCIATES LLC  
 CONSULTING GROUNDWATER GEOLOGISTS  
 14051 Burbank Blvd Suite 300  
 Sherman Oaks CA 91401  
 Phone (818) 506-0418  
 Napa Phone (707) 963-3914  
 Fax (818) 506-1343  
 www.rcslade.com

**FIGURE 1**  
**WELL LOCATION MAP**  
 Job No. 382-OGE19 June 2018

**TABLE 1  
SUMMARY OF AVAILABLE WELL CONSTRUCTION DATA  
IRVINE RANCH WATER DISTRICT  
DYER ROAD WELLFIELD WELL NOS. 10 AND 16**

Well No.	Date Constructed & Driller	Method of Drilling	Conductor Casing Type, Diameter (in) & Depth (ft bgs)	Pilot Hole Depth (ft bgs)	Room Diameter (in) & Depths (ft bgs)	Casing Type, Diameters (in) and Depths (ft bgs)	Accessory Tubes	Sanitary Seal Depth (ft bgs)	Type of Screen	Screen Intervals Per Driller (ft bgs)	Slot Size of Screen (in)	Total Length of Screen Per Driller (ft)	Gravel Pack Type, Gradation, & Interval (ft bgs)
10	September 1994 Beylik Drilling	Reverse Circulation	LCS 36" OD X 3/8" wall to 52'	1,040	26" to 960'	LCS (?) 20" OD (?) X 3/8" wall to 380' Reducer: 20" X 16" OD (?) X 3/8" wall 380' to 382' (?) 68" OD (?) X 5/16" to 960'	ND	Cement to 380"	Roscoe Moss Ful-flo Louvers	420 to 940	0.050	520	8 X 16 380' to 960'
16	August 1998 Bakersfield Well & Pump Company	Reverse Circulation	LCS 38" OD X 5/16" wall to 56'	1,010	48" to 56' 36" to 398' 26" to 860'	CBS 22" ID X 3/8" wall to 355' Reducer: 22" X 16" ID X 3/8" wall 355 to 358' 16" ID X 5/16" wall to 827'	4" Sounding to 350' 4" Gravel feed to 370'	10-sack cement slurry to 380'	Roscoe Moss Ful-flo Louvers	406 to 426 446 to 476 542 to 556 572 to 596 612 to 636 726 to 746 786 to 806	0.055	152	Colorado Silica 8 X 16 360' to 831' cement seal 831' to 860'

NOTES: LCS = Low Carbon Steel, Data from Well 10 from copy of State Well Completion Report, type of steel or outside/inside diameter not detailed.  
CBS = Copper-bearing Steel  
OD = Outside Diameter  
ID = Inside Diameter  
bgs = below ground surface

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**SCOPE OF HYDROGEOLOGIC SERVICES**

Our proposed Scope of Hydrogeologic Services described herein is based on our previous experience in the rehabilitation of wells with IRWD, which consequently has allowed RCS to develop, in conjunction with IRWD staff, an efficient and cost effective approach to conducting a technically-sound program for well rehabilitation.

**Task 1 – Review Video Survey, Available Information, Field Investigation, Condition Assessment Report**

Under this task, RCS will prepare for and attend an initial, "kick-off" meeting with IRWD Staff with regard to discussing the goals and parameters of the well rehabilitation project. Following review of available video surveys and data on the two wells, an individual report will be prepared with regard to our assessment of current downwell conditions in each well. These reports will generally contain the following:

- Well construction details.
- Results of initial pumping tests on the wells.
- Trends in historic and pumping water levels and specific capacities, based on available data.
- Results of our review of initial video surveys.
- Site logistics and possible equipment layout.
- Summary of water quality conditions.
- Conclusions and Preliminary Recommendations.

These reports will include our preliminary recommendations as to what future rehabilitation options might be implemented in each of those two wells, and these will be used as guidance for our subsequent preparation of the Technical Specifications for rehabilitation.

**Task 2 – Prepare Technical Specifications**

Based on review of the available well data, on the results of the site visits, and on our review of the new downwell surveys, RCS shall prepare the Project Manual (PM) for the two wells. This document will include the Technical Specifications and Line Item Bid Sheets for well rehabilitation operations for each well. Only one PM set will be prepared for the rehabilitation of two wells. The work can then be bid out by IRWD and performed under a single contract. It is anticipated that IRWD will provide RCS with its recent and updated copy of the pertinent sections of the PM, other than the Technical Provisions sections.

The Technical Specifications portion of the PM will generally include the following well rehabilitation elements:

1. Equipment to be utilized and size of work area needed.
2. The possible need for additional site security fencing.
3. The type of site preparation work needed at each site before the contractor mobilizes is equipment.

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4. Sound/noise mitigation/security measures, if needed.
5. Video surveys to be performed during and following rehabilitation of the wells.
6. The depth intervals of well casing to be rehabilitated.
7. The type of mechanical well rehabilitation methods will be evaluated and included in the Technical Specifications, as needed. These methods could include the following:
  - o Wire brushing & bailing.
  - o CITM survey.
  - o Dual-swab airlifting and surging.
  - o "Air-Jetting", consisting of either the Airburst® or Bore Blast® methods.
8. The type of various chemicals and emplacement methods that might be needed during chemical rehabilitation. RCS has previously developed an effective chemical rehabilitation method for other IRWD wells using HercChemTec-formulated chemical mixes.
9. Discharge locations and treatment options/consideration for the discharge of all fluids generated from each well during all rehabilitation tasks.
10. Parameters for pumping development and final well tests.
11. Discharge requirements and NPDES permit compliance.
12. A bid item for repair/replacement of the permanent pump by the Contractor.

A line item estimate for the probable cost of the rehabilitation work will also be prepared for each well. This will be provided to IRWD to permit comparison of bids received. The Technical Specifications will be prepared to account for the rehabilitation of both wells under a single well rehabilitation contract. We assume that IRWD will be sending out the entire well rehabilitation package for competitive bidding. This task also includes a meeting between RCS and IRWD Staff to review and discuss the final PM.

**Task 3 – Provide Bid Phase Support**

RCS will provide bid phase support to IRWD. This support will consist of conducting a pre-bid meeting and the preparation of two bid addenda, as necessary. The purpose of the pre-bid meeting is to help potential bidders better understand site logistics such as access, available water supply, location of utilities, and fluids disposal options at each well site.

RCS will prepare for and attend a single pre-bid meeting for the two wells, provide pre-bid clarifications to the bidders and preparing the bid addenda, if necessary. We will also assist IRWD in the review and analysis of bids received. Also, prior to commencement of field activities, RCS will attend an initial pre-rehabilitation meeting with the Contractor (a single meeting for both wells). This will be to acquaint the Contractor selected by IRWD with the project goals and discuss final scheduling issues and lines of communication.

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**Task 4 – Field Monitoring of Well Rehabilitation Operations (IRWD Construction Phase Services)**

Once a contract has been awarded to the successful bidder by IRWD, RCS geologists will be available to provide field observation of Contractor activities at each well site. This observation is to provide the IRWD with a basic record of Contractor activities at the sites and to help document that the Contractor performed the work in compliance with the Technical Specifications. Tasks that RCS will perform during the rehabilitation project for the two wells could likely consist of the following:

- Subtask 4.1: Pump Removal. Observe the removal of the permanent pump from the two wells.
- Subtask 4.2: Brushing and Bailing. Observe the wire brushing of the two wells and removal of sediment fill via bailing. The RCS geologist will be present to measure the brush, to check if it is of the correct diameter, and observe the downwell brushing. It is anticipated, at this time, that two days of brushing and bailing will be performed in each well.
- Subtask 4.3: Downwell Surveys. Observe and initial video and CITM tool surveys in each of the two wells.
- Subtask 4.4: "Air-Jetting". Observe "Air-jetting" methods conducted by the Contractor, for each well. At the current time, it is anticipated that the AirBurst® or BoreBlast® methods will be utilized by the Contractors. An RCS geologist will be present onsite when the selected method is being performed.
- Subtask 4.5: Chemical Treatment. Performing chemical development of the well. This chemical development will involve the use of HerChemTec-formulated chemical mixtures to be injected into each well by the contractor selected by IRWD to perform the work. It is anticipated that chemical treatment will be initially performed using hydrogen peroxide to clean the casing and, thereby, render it visible for observation by video of any holes in the well. The onsite RCS geologist will record the volumes and types of chemicals used in the process and during use of a dual-swab tool for chemical emplacement.
- Subtask 4.6: Swabbing & Airlifting. Monitor dual swab airlifting and swabbing to removal the chemicals and to further help redevelop the wells.
- Subtask 4.7: Pumping Redevelopment. RCS will be present on a part-time basis, during startup and near the end of pumping development at each well. RCS will obtain the pumping development sheets from the pumper, on a daily basis (via FAX or email), during the development process.
- Subtask 4.8: Pumping Tests. Pumping tests will follow pumping redevelopment. This testing will consist of a 12-hour step drawdown test and a 24-hour constant rate pumping test. Near the end of testing, a dynamic spinner survey and depth specific sampling can be performed in each well. Thus, we are including time and costs for RCS field staff to be present for these end-of-test tasks.

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Further, Title 22 water samples will be collected by the onsite field geologist who will then deliver the samples to the IRWD laboratory. In addition, RCS will temporarily equip each well with an RCS downwell pressure transducer to record changes in water levels during the pumping tests. Further, the onsite field geologist will measure specific field water quality parameters while onsite (temperature, electrical conductivity, pH, turbidity and other key field parameters, such as dissolved oxygen, DO, and the oxidation-reduction potential, ORP). RCS assumes that the Contractor will obtain a National Pollutant Discharge Elimination System (NPDES) permit and will collect samples for analysis and fulfill the reporting requirements of the permit. Near the end of pumping, a final dynamic spinner survey will be performed in each well by the Contractor to help determine if any changes in downwell flow regime have occurred, as a result of the recent rehabilitation work.

- Subtask 4.9: Final Video and Static Spinner Surveys and Well Disinfection. Following test pump removal, a final video and static spinner survey of each rehabilitated well will be performed by the Contractor to help document the final post-rehabilitation condition of the wells. An RCS field geologist will be present at each well to observe these final surveys.

**Task 5 – Preparation of Summary of Report**

Prepare a separate Summary of Well Rehabilitation Operations report for each of the rehabilitated wells to help document rehabilitation operations performed on the wells. Each report will discuss rehabilitation operations and summarize our observations regarding the actual rehabilitation work performed on each well. Final recommendations regarding new production rates will also be provided in the report. This report will consist of the following:

- A basic chronology of well rehabilitation operations.
- A description of each method used and the results of those methods.
- Daily field reports by the onsite field geologist.
- An evaluation/analysis of the final pumping tests in each well and an assessment of new pumping capacities and specific capacities.
- Recommendations for the pump depth setting and pumping rate for the permanent pump in each well.
- Discussion of the water quality conditions based on the final Title 22 sampling results.
- Photographs to help document selected rehabilitation methods.
- Supporting documentation on well rehabilitation operations, including the types and volumes of chemicals, the Contractor's daily records, pumping development and testing sheets, and laboratory results of the testing of water samples, and/or bacteriological samples, and/or scale samples.
- The reports will also have attendant tables, figures and drawings to help document work conducted on the two wells.

A Draft report will be submitted to the IRWD Staff for their review and comment. Following that review, IRWD comments will be incorporated and five (5) bound copies of the Final report along

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with an electronic copy in an Adobe PDF file (On CD) of the document will be submitted to IRWD.

**Task 6 – Hydrogeologist “Design and Construction” Phase Services for Two Additional Wells**

RCS will perform similar rehabilitation services for two other water-supply wells to be determined at a later date by IRWD Staff. For the purposes of this proposal, it is assumed that the same level of services described herein for Well Nos. 10 and 16 will be performed on these two additional wells. However, it should be noted that if the two additional wells might need other work, such as installation of patches and/or casing liners, then RCS reserves the opportunity to provide extra costs to IRWD at that time for our field-related services during patch/liner installation.

**RFP ITEMS UNDER “PROPOSAL CONTENTS”**

**RFP Item No. 1: Scope**

The Scope of Services proposed to be provided by RCS on this project is described in the previous section.

**RFP Item Nos. 2 & 3: RCS Company and Its Experience**

RCS has provided similar rehabilitation services as those required herein on at least 50 other municipal-supply water wells in southern California over the past several decades. A relatively recent (last 5 years) listing of similar types of projects is provided in Appendix A.

**RFP Item No. 4: Budget**

An analysis of the estimated man-hours and costs, arranged by task and subtask, is provided in the Fee Proposal, which is submitted under separate cover per IRWD request.

**RFP Item No. 5: Joint Venture**

Office and field monitoring of contractors performed on this project will be conducted solely by RCS geologists. There is no joint venture associated with this project.

**RFP Item No. 6: Conflict of Interest**

The firm of RCS does not current have any conflict of interest associated with IRWD or any other firm that may be contracted with IRWD for work on this project.

**RFP Item No. 7: Insurance**

RCS carries both general and professional liability (errors and omissions) in the amount of \$1,000,000, each. Proof of these limits will be provided to IRWD when needed.

**RFP Item No. 8: Contract**

RCS has reviewed IRWD's Agreement for Professional Services contract and takes no exceptions to it.

**RFP Item No. 9: Public Work Requirements**

It is understood that if the “Engineer” or any tiered level of its subconsultant(s) or subcontractor(s) performs work on the project, including but not limited to “geotechnical,

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surveying or inspection work” or any other work determined by the California Department of Industrial Relations (DIR) to constitute “public work,” then the Engineer and its subconsultant(s) and subcontractor(s) must be registered with the DIR.

However, review of Senate Bill 854, which was enacted in June 2014, and other online information from the Department of Industrial Relations, with regard to Public Works Projects, reveals that there are no provisions for consultants on such projects. Rather, the regulations appear to apply solely to contractors and subcontractors that perform the actual construction activities.

As such, RCS is a consultant employing degreed and licensed geologists and professional groundwater geologists, who will not be involved directly with or assist in any construction activities, and will not employ any subcontractors to perform any work at the site. Further, as such, RCS does not use inspectors but, rather, licensed geologists to perform field monitoring of contractor activities, which is strictly observational in scope. RCS will observe and monitor the work with regard to compliance to the Technical Specifications for the project.



**APPENDIX A  
RCS QUALIFICATIONS**



### **RCS COMPANY BACKGROUND**

Mr. Richard C. Slade has over 51 years of hydrogeologic experience in California, the last 35 of which have been as Principal Hydrogeologist and owner of Richard C. Slade & Associates LLC (RCS), Consulting Groundwater Geologists. Mr. Slade maintains licenses as a Registered Geologist and Certified Engineering Geologist in California. The RCS firm has seven full-time professional groundwater geologists including:

- Two senior project-level hydrogeologists, Mr. Earl LaPensee and Mr. Anthony Hicke. Both are licensed Professional Geologists and Certified Hydrogeologists in California. Mr. LaPensee has been with RCS since 1989, whereas Mr. Anthony Hicke has been with RCS since 2001.
- Four staff/field-level geologists (Msrs. Chris Wick, Joe Amar, Sean Fulcher, and Geza Demeter) to provide as-needed field and office support services on groundwater projects. All four are degreed geologists; Mr. Wick and Mr. Amar have been with RCS for approximately 10 years and 5 years, respectively, while Mr. Fulcher and Mr. Demeter started with the firm in 2017. Messrs Wick, Amar, Fulcher, and Demeter are all licensed Professional Geologists.

Specific areas of expertise for RCS include:

- groundwater basin evaluations and basin management and water well feasibility studies;
- characterizing the water-bearing sediments and the base of fresh water in groundwater basins;
- conducting detailed studies of groundwater conditions in adjudicated and unadjudicated groundwater basins;
- preparing groundwater monitoring plans;
- conducting siting, specifying, designing and testing of new water wells for both municipal-supply and agricultural-supply;
- conducting analysis and correlations of the resistivity signatures on geophysical electric logs available from water wells, oil wells, and groundwater monitoring wells;
- providing independent, detailed E-log correlation networks and cross sections based on key marker beds;
- preparing Technical Specifications and detailed line item bid sheets for the preliminary design and cost analysis of new wells and monitoring wells;
- providing experienced geologists to field monitor the drilling, final design, construction and testing of new water wells and groundwater monitoring wells;
- conducting pumping tests and providing technical analyses of pumping test data
- evaluating groundwater contamination;
- assessing groundwater quality in individual wells and on a basin-wide basis;
- evaluating and monitoring of the rehabilitation of older wells;
- providing independent reviews of technical reports prepared by others; and
- providing expert witness services in hydrogeology.



Typical clients have included city water departments, county water agencies, water districts, various engineering firms, environmental and water rights attorneys, and numerous wineries and vineyards.

### **TYPICAL RCS HYDROGEOLOGIC SERVICES FOR MUNICIPAL-SUPPLY WATER WELLS**

The firm of Richard C. Slade and Associates LLC, Consulting Groundwater Geologists, has been retained by a large number of water agencies, cities, water districts and private water companies to develop their local groundwater resources; a number of these clients lie within the Central and West Coast basins. The types of services provided to these agencies have depended on the needs of the client but have tended to include such tasks as:

#### **New Wells**

##### **Hydrogeologic Evaluation and Well Siting**

- Research of published geologic maps and reports;
- Evaluate site geology and watershed conditions;
- Evaluate surface and subsurface geologic conditions;
- Identify groundwater flow directions;
- Perform site reconnaissance visits;
- Review driller's logs and casing records;
- Evaluate and correlate electric logs from well to well;
- Monitor water levels in wells;
- Assess potential water quality problems;
- Monitor field water quality parameters in existing wells;
- Conduct pumping (aquifer) tests in wells;
- Evaluate potential water level drawdown interference between pumping wells;
- Review down-hole videos of wells;
- Evaluate water quality in onsite and offsite wells;
- Locate nearby offsite wells;
- Determine feasibility of siting and constructing new water wells;
- Determine the feasibility of rehabilitating or destroying existing wells;
- Prepare preliminary design reports with conclusions and recommendations regarding feasibility of developing local groundwater supplies.
- Prepare for and make verbal or written presentations to City Councils, County Planning Commissions and/or Boards of Supervisors

##### **Prepare Technical Specifications**

- identify the location and depth for new onsite wells;
- assess site logistics for well construction;
- determine drilling methodology;
- evaluate conditions for discharge of fluids under NPDES permit regulations;
- prepare detailed technical specifications and line item estimates of the probable cost for drilling and constructing new wells;
- assist in bidding process.



#### Field Monitoring Services

- geologically log drill cuttings from pilot hole;
- evaluate the electric log of the pilot hole;
- select depth zones and monitor aquifer zone isolation testing for water quality in selected aquifers
- provide final recommendations for placement of all well casing, perforations, gravel pack and cement seals;
- monitor installation of the recommended casing, gravel pack, and cement seal;
- monitor well development by mechanical and pumping methods;
- conduct pumping (aquifer) tests;
- monitor water levels and utilize water level pressure transducers;
- identify sampling/laboratory protocol for groundwater sampling;
- monitor spinner log survey and depth discrete-sampling
- determine water quality parameters to test for in the laboratory;
- recommend pumping rate & depth setting for permanent pump;
- provide a final report to document well construction & testing activities.

#### Existing Wells

##### Well Evaluation for Rehabilitation/Destruction

- review driller's logs and previous well rehabilitation;
- review and analysis of water level, water quality and operational pumping data;
- view and assess downwell conditions via video surveys;
- perform site visit to assess onsite conditions for well rehabilitation/destruction equipment
- identify down-hole well problems and develop guidelines for rehabilitating existing wells;
- prepare recommendations for well rehabilitation/destruction.

##### Technical Specifications/Guidelines

- determine preliminary well rehabilitation/destruction tasks and options;
- evaluate conditions for discharge of fluids under NPDES permit regulations;
- prepare detailed technical specifications and line item estimates of the probable cost for rehabilitation/destruction of wells;
- assist in the bidding process.

#### Field Monitoring Services

- monitor/observe removal of pump;
- perform sampling of scale/biofilm on pump column and casing and submit to laboratory for scale identifications and speciation of biological growth;
- observe downwell video surveys and evaluate;
- recommend changes to preliminary well rehabilitation/destruction tasks based on video survey findings;
- observe contractor operations during well rehabilitation/destruction\
- prepare summary reports documenting well rehabilitation/destruction work on wells.



### RCS KEY STAFF/PROJECT TEAM



**Richard C. Slade**, PG, CEG, will serve as an overall project manager and lead for any groundwater projects. Slade is President and Principal Groundwater Geologist for Richard C. Slade & Associates LLC, Consulting Groundwater Geologist (RCS). RCS was founded by Mr. Slade in 1983 and the company has operated out of offices in the San Fernando Valley since that time. Mr. Slade has 47 years of groundwater experience in Southern California and has lived and/or worked in the San Fernando Valley as a groundwater geologist for his entire professional career. Mr. Slade has a BS and an MS degree in Geology from UCLA and USC, respectively, and maintains a professional license in geology in California. Mr. Slade has either conducted and/or managed/supervised more than 700 groundwater projects in a large number of groundwater basins throughout California, including virtually every recognized groundwater basin in Southern California that has active water wells. In December 2008, RCS was selected by the Superior Court to be the Watermaster for the Upper Los Angeles River Area (ULARA).

**Earl LaPensee**, PG, CHg, has been with RCS since 1989 and is Senior Groundwater Geologist and Project Manager. Since that time, Mr. LaPensee has conducted a large number of diverse groundwater projects including; the siting, design, construction monitoring and aquifer testing of over 300 municipal-supply and irrigation water wells; analyses of aquifer systems in numerous groundwater basins (involving the definition of geologic/hydrogeologic conditions, water level and water quality conditions, groundwater underflow, calculation of groundwater in storage and changes in storage). A primary focus in these projects has been on the characterization of aquifer systems (determination of physical parameters such as transmissivity and storativity) and spatial delineation of natural groundwater chemistry (especially with regard to trace element concentrations) and contaminant chemistry, evaluation of water level trends over time, definition of groundwater flow directions, and the use and correlation of geophysical electric logs from water wells and oil wells to help define aquifer continuity and extent.



**Anthony Hicke**, PG, CHg, began working with RCS in 2001, and is now a Senior Groundwater Geologist and Project Manager with the company. While at RCS, Mr. Hicke has participated in a number of basin-wide groundwater studies, in which tasks have included: review and analysis of geologic references and extensive electronic geologic databases; analysis of long-term water level data and their relation to precipitation data; review and analysis of water quality data; pumping data analysis, including the analysis of rates and volumes; and performing groundwater in storage calculations. In addition to his hydrogeologic work, Mr. Hicke functions as the in-house information technology manager. For previous basin study projects, Mr. Hicke has managed an FTP-based repository for electronic data transfer, and managed multiple large databases of water level data, geologic data, and GIS data. Further, Mr. Hicke has many years' experience with the MapInfo GIS software package, and is skilled at creating maps using GIS software, and facilitating the exchange of GIS data with clients.



**FEE PROPOSAL  
FOR HYDROGEOLOGIC SERVICES  
DYER ROAD WELLFIELD WELL NOS. 10 & 16  
IRVINE RANCH WATER DISTRICT**

This Fee Proposal provides an estimate of consulting costs prepared by Richard C. Slade & Associates LLC, Consulting Groundwater Geologists (RCS), for field and office services with regard to rehabilitation of Irvine Ranch Water District (IRWD) Dyer Road Wellfield (DRWF) Well Nos. 10 & 16, each in the City of Santa Ana, Orange County, California.

**COST ESTIMATE FOR HYDROGEOLOGIC SERVICES**

Attached Table F1 provides details of the RCS's costs for each of the tasks listed in our Scope of Services, whereas Tables F2 through F4 show the costs separately for Task 4 for each of the wells and for the two additional wells suggested by IRWD.

<b>Task</b>	<b>Description</b>	<b>Estimated RCS Costs</b>
Task 1	Review Video Survey, Available Information, Field Investigation, Condition Assessment Report	\$11,928
Task 2	Prepare Technical Specifications	\$8,620
Task 3	Provide Bid Phase Support	\$2,932
Task 4	Field Monitoring of Well Rehabilitation Operations (IRWD Construction Phase Services)	\$53,460
Task 5	Preparation of Summary Report	\$17,984
Task 6	Hydrogeologist Design and Construction Phase Services for Two Additional Wells	\$148,384
<b>RCS Subtotal Professional Services:</b>		<b>\$243,308</b>
<b>2.5% Communications Fee:</b>		<b>\$6,083</b>
<b>RCS Total Professional Services:</b>		<b>\$249,391</b>

Our services will be billed on a time-and materials basis, with the total estimated cost representing a not-to-exceed limit within the limits of our assumptions presented below. RCS and its geologists are committed to this project. RCS is a small company and our professional staff of seven degreed and licensed geologists are all experienced groundwater geologists. Our estimated fees are realistic and well considered, and are based on our long-term experience in providing the same types of services required for your project.



Our cost estimate for the above scope of work is virtually entirely dependent on third-party contractor operations for rehabilitation of the three wells. Indeed, past experience on IRWD well rehabilitation projects have shown that there have been significant delays by the Contractors on each well, requiring our field personnel to be onsite much longer than anticipated.

As you will note, we are using our current Schedule of Charges dated November 2017 for all of our personnel on this project. **Nonetheless, RCS is willing to negotiate the hourly rates and final costs presented herein for this entire project.**

Invoices for the project will be submitted to IRWD on a monthly basis for review and processing. In addition to this invoice, a monthly status update report will be included outlining the work conducted to date and the percentage of the budget expended.

**Key Assumptions & Contingencies for Well Rehabilitation**

The cost estimate is based on the following key assumptions for third-party operations:

1. The costs assume and reflect that rehabilitation of the two wells are to be performed sequentially. RCS will only be present at the full-time or part-time basis listed herein when actual rehabilitation work is being performed (i.e., not, for example, during setup or removal of the Contractor's equipment). Thus, RCS will keep in telephone or email communication with the Contractor during work on each well.
2. It is anticipated that the Contractor will apply for and obtain a National Pollutant Discharge Elimination System (NPDES) permit for discharges to the local storm drain system at each site. In addition, it is expected that the Contractor will provide for a laboratory, deliver the samples for laboratory analysis, and fulfill the monitoring and reporting requirements of the NPDES permit. RCS will assist the Contractor with the field sampling and monitoring.

Payment will be based on the hours worked and the hourly rates as described in the attached Tables F1 through F4, which lists the man-hour breakdown each listed task. Because the actual number of hours required to complete the different tasks for well rehabilitation are outside the direct control of RCS, we recommend that all field monitoring services be performed on a time and expense basis, and that if the periods required to complete these tasks are expected to exceed our estimates once well rehabilitation operations are underway, RCS will notify your office in a timely fashion.



### SCHEDULE OF CHARGES

November 2017

#### Professional Services

#### Hourly Rates

Principal Groundwater Geologist	\$284.00
Senior Groundwater Geologist	\$206.00
Staff Groundwater Geologist	\$166.00
Field Geologist/Geologic Logging	\$120.00
Clerical, Graphics and GIS Work	\$ 88.00

#### Field Equipment Charges

Pressure Transducers (water level & barometric pressure monitoring during pumping tests)	\$ 50.00/wk
Electric Tape Water Level Probe	\$ 25.00/day
Field Water Quality Probe (T, pH, EC)	\$ 50.00/day

#### Litigation, Depositions and Testimony

Depositions and trial testimony are charged at twice the hourly rate (4-hour minimum/day).

#### Travel Time and Mileage

Travel time for meetings and/or to job sites will be charged at our standard hourly rates.  
Mileage is charged at the rate of \$0.545 per mile as of January 2018.

#### Communications Fee

In-house costs for phone, e-mail, fax, regular postage, printing, copying, binding, and records retention, unless otherwise provided for in our project proposal Scope of Services.

Communications Fee = total project labor charges multiplied by 2.5%.

#### Outside Services

All services not ordinarily furnished by RCS, including subcontracted services (i.e., water quality laboratory testing), delivery services, reproduction and printing, etc., are billed at cost + 15%. Reproduction costs for large format printing, and/or high volume reproduction and binding of hard copy reports performed in-house by RCS staff, will be billed at rates similar to comparable outside services.

#### Conditions

RCS reserves the right to update this Schedule of Charges on November 1 of each year (the beginning of our Fiscal Year). Invoices are issued at our option on a monthly basis or when the work is completed. A service charge of 1½ % will be payable on any amount not paid within 30 days. Any attorney fees or other costs incurred in collecting delinquent charges shall be paid by the client.

Client will furnish rights-of-way to land as required for field visits and field operations, such as sampling or testing of water wells.

TABLE F1  
RCS MAN-HOUR AND COST ESTIMATE DETAIL  
REHABILITATION OF IRWD DRWF WELL NOS. 10 & 16 AND TWO ADDITIONAL WELLS  
JUNE 2018

TASK LISTING	PRINCIPAL GROUNDWATER GEOLOGIST		SENIOR GROUNDWATER GEOLOGIST		STAFF GROUNDWATER GEOLOGIST		FIELD GROUNDWATER GEOLOGIST		CLERICAL PERSONNEL		TOTAL MAN- HOURS	TOTAL TASK COST
	BILLING RATES, HOURS AND COSTS											
	\$284		\$205		\$166		\$120		\$88			
	HOURS	COST	HOURS	COST	HOURS	COST	HOURS	COST	HOURS	COST		
TASK 1	Review Video Surveys, Available Information, Field Investigation, Condition Assessment Report											
	4	\$1,136	12	\$2,472	48	\$7,968	0	\$0	4	\$352	68	\$11,928
TASK 2	Prepare Technical Specifications											
	2	\$568	6	\$1,236	40	\$6,640	0	\$0	2	\$176	50	\$8,620
TASK 3	Provide Bid Phase Support											
	1	\$284	12	\$2,472	0	\$0	0	\$0	2	\$176	15	\$2,932
TASK 4	Construction Phase Services											
	Well No. 10 Field Costs (See Table 2 for Man-hour Details)											
	3	\$852	13	\$2,678	12	\$1,992	176	\$21,120	1	\$88	205	\$26,730
	Well No. 16 Field Costs (See Table 3 for Man-hour Details)											
	3	\$852	13	\$2,678	12	\$1,992	176	\$21,120	1	\$88	205	\$26,730
	SUBTOTAL TASK 4 >>>											
	6	\$1,704	26	\$5,356	24	\$3,984	352	\$42,240	2	\$176	410	\$53,460
TASK 5	Preparation of Summary Reports											
	8	\$1,704	12	\$2,472	80	\$13,280	0	\$0	6	\$528	104	\$17,984
TASK 6	Hydrogeologist Design and Construction Phase Services for Two Additional Wells											
	25	\$7,100	94	\$19,364	216	\$35,856	704	\$84,480	18	\$1,584	1,057	\$148,384
SUBTOTAL ESTIMATED COSTS FOR RCS SERVICES:											\$243,308	
2.5% COMMUNICATIONS FEE:											\$6,083	
TOTAL ESTIMATED COSTS FOR RCS SERVICES:											\$249,391	

TABLE F2  
RCS MAN-HOUR AND COST ESTIMATE DETAIL  
TASK 4 FIELD SERVICES FOR IRWD DRWF WELL NO. 10 REHABILITATION  
JUNE 2018

TASK 4 SUBTASK LISTING	PRINCIPAL GROUNDWATER GEOLOGIST		SENIOR GROUNDWATER GEOLOGIST		STAFF GROUNDWATER GEOLOGIST		FIELD GROUNDWATER GEOLOGIST		CLERICAL PERSONNEL		TOTAL MAN- HOURS	TOTAL SUBTASK COST
	BILLING RATES, HOURS AND COSTS											
	\$284		\$206		\$166		\$120		\$88			
	HOURS	COST	HOURS	COST	HOURS	COST	HOURS	COST	HOURS	COST		
<b>TASK 4</b> Field Monitoring of Rehabilitation Operations												
Subtask 4.1 Pump Removal	0	\$0	1	\$206	1	\$166	16	\$1,920	1	\$88	19	\$2,380
Subtask 4.2 Brushing and Bailing	0	\$0	1	\$206	1	\$166	12	\$1,440	0	\$0	14	\$1,812
Subtask 4.3 Downwell Surveys (CITM, Initial & Interim Video Surveys)	0	\$0	1	\$206	1	\$166	24	\$2,880	0	\$0	26	\$3,252
Subtask 4.4 "Air-Jetting"	0	\$0	1	\$206	1	\$166	12	\$1,440	0	\$0	14	\$1,812
Subtask 4.5 Chemical Treatment	1	\$284	1	\$206	2	\$332	32	\$3,840	0	\$0	36	\$4,662
Subtask 4.6 Swabbing & Airlifting	1	\$284	2	\$412	1	\$166	32	\$3,840	0	\$0	36	\$4,702
Subtask 4.7 Pumping Redevelopment	0	\$0	2	\$412	1	\$166	12	\$1,440	0	\$0	15	\$2,018
Subtask 4.8 Pumping Tests	0	\$0	2	\$412	2	\$332	24	\$2,880	0	\$0	28	\$3,624
Subtask 4.9 Final Video & Static Spinner Surveys & Well Disinfection	1	\$284	2	\$412	2	\$332	12	\$1,440	0	\$0	17	\$2,468
<b>Task 4 Subtotals:</b>	<b>3</b>	<b>\$852</b>	<b>13</b>	<b>\$2,678</b>	<b>12</b>	<b>\$1,992</b>	<b>176</b>	<b>\$21,120</b>	<b>1</b>	<b>\$88</b>	<b>205</b>	<b>\$26,730</b>
<b>ESTIMATED COSTS FOR RCS SERVICES, DRWF WELL NO.</b>											<b>\$26,730</b>	

**TABLE F3  
RCS MAN-HOUR AND COST ESTIMATE DETAIL  
TASK 4 FIELD SERVICES FOR IRWD DRWF WELL NO. 16 REHABILITATION  
JUNE 2018**

TASK 4 SUBTASK LISTING	PRINCIPAL GROUNDWATER GEOLOGIST		SENIOR GROUNDWATER GEOLOGIST		STAFF GROUNDWATER GEOLOGIST		FIELD GROUNDWATER GEOLOGIST		CLERICAL PERSONNEL		TOTAL MAN- HOURS	TOTAL SUBTASK COST
	BILLING RATES, HOURS AND COSTS											
	\$284		\$206		\$166		\$120		\$88			
	HOURS	COST	HOURS	COST	HOURS	COST	HOURS	COST	HOURS	COST		
Subtask 4.1 Pump Removal	0	\$0	1	\$206	1	\$166	16	\$1,920	1	\$88	19	\$2,380
Subtask 4.2 Brushing and Bailing	0	\$0	1	\$206	1	\$166	12	\$1,440	0	\$0	14	\$1,812
Subtask 4.3 Downwell Surveys (CITM, Initial & Interim Video Surveys)	0	\$0	1	\$206	1	\$166	24	\$2,880	0	\$0	26	\$3,252
Subtask 4.4 "Air-Jetting"	0	\$0	1	\$206	1	\$166	12	\$1,440	0	\$0	14	\$1,812
Subtask 4.5 Chemical Treatment	1	\$284	1	\$206	2	\$332	32	\$3,840	0	\$0	36	\$4,662
Subtask 4.6 Swabbing & Airlifting	1	\$284	2	\$412	1	\$166	32	\$3,840	0	\$0	36	\$4,702
Subtask 4.7 Pumping Redevelopment	0	\$0	2	\$412	1	\$166	12	\$1,440	0	\$0	15	\$2,018
Subtask 4.8 Pumping Tests	0	\$0	2	\$412	2	\$332	24	\$2,880	0	\$0	28	\$3,624
Subtask 4.9 Final Video & Static Spinner Surveys & Well Disinfection	1	\$284	2	\$412	2	\$332	12	\$1,440	0	\$0	17	\$2,468
<b>Task 4 Subtotals:</b>	<b>3</b>	<b>\$852</b>	<b>13</b>	<b>\$2,678</b>	<b>12</b>	<b>\$1,992</b>	<b>176</b>	<b>\$21,120</b>	<b>1</b>	<b>\$88</b>	<b>205</b>	<b>\$26,730</b>
<b>ESTIMATED COSTS FOR RCS SERVICES, DRWF WELL NO.</b>											<b>\$26,730</b>	

Irvine Ranch Water District  
RCS Job No. 382-OGE19  
DRWF Well Nos. 10 and 16 Rehabilitation

**TABLE F4  
RCS MAN-HOUR AND COST ESTIMATE DETAIL  
TASK 4 FIELD SERVICES FOR TWO ADDITIONAL IRWD WELL REHABILITATIONS  
JUNE 2018**

TASK 4 SUBTASK LISTING	PRINCIPAL GROUNDWATER GEOLOGIST		SENIOR GROUNDWATER GEOLOGIST		STAFF GROUNDWATER GEOLOGIST		FIELD GROUNDWATER GEOLOGIST		CLERICAL PERSONNEL		TOTAL MAN- HOURS	TOTAL SUBTASK COST
	BILLING RATES, HOURS AND COSTS											
	\$284		\$296		\$166		\$120		\$88			
	HOURS	COST	HOURS	COST	HOURS	COST	HOURS	COST	HOURS	COST		
Subtask 4.1 Pump Removal	0	\$0	2	\$412	2	\$332	32	\$3,840	2	\$176	38	\$4,760
Subtask 4.2 Brushing and Bailing	0	\$0	2	\$412	2	\$332	24	\$2,880	0	\$0	28	\$3,624
Subtask 4.3 Downwell Surveys (CITM, Initial & Interim Video Surveys)	0	\$0	2	\$412	2	\$332	48	\$5,760	0	\$0	52	\$6,504
Subtask 4.4 "Air-Jetting"	0	\$0	2	\$412	2	\$332	24	\$2,880	0	\$0	28	\$3,624
Subtask 4.5 Chemical Treatment	2	\$568	2	\$412	4	\$664	64	\$7,680	0	\$0	72	\$9,324
Subtask 4.6 Swabbing & Airlifting	2	\$568	4	\$824	2	\$332	64	\$7,680	0	\$0	72	\$9,404
Subtask 4.7 Pumping Redevelopment	0	\$0	4	\$824	2	\$332	24	\$2,880	0	\$0	30	\$4,036
Subtask 4.8 Pumping Tests	0	\$0	4	\$824	4	\$664	48	\$5,760	0	\$0	56	\$7,248
Subtask 4.9 Final Video & Static Spinner Surveys & Well Disinfection	2	\$568	4	\$824	4	\$664	24	\$2,880	0	\$0	34	\$4,936
<b>Task 4 Subtotals:</b>	<b>6</b>	<b>\$1,704</b>	<b>26</b>	<b>\$5,356</b>	<b>24</b>	<b>\$3,984</b>	<b>352</b>	<b>\$42,240</b>	<b>2</b>	<b>\$176</b>	<b>410</b>	<b>\$53,460</b>
<b>ESTIMATED COSTS FOR RCS SERVICES, DRWF WELL NO.</b>											<b>\$53,460</b>	

Irvine Ranch Water District  
RCS Job No. 382-OGE19  
DRWF Well Nos. 10 and 16 Rehabilitation

July 23, 2018

Prepared by: J. Smyth/M. Cortez

Submitted by: K. Burton *KLB*

Approved by: Paul A. Cook *P. Cook*

## CONSENT CALENDAR

### TURTLE RIDGE PIPELINES CATHODIC PROTECTION CONSULTANT SELECTION

#### SUMMARY:

There have been corrosion-related leaks on the 10-inch ductile iron recycled water and 16-inch ductile iron domestic water mains in Turtle Ridge in 2014 and 2016, respectively, due to severely corrosive soil conditions. This project will design cathodic protection for the pipelines. Staff recommends that the Board authorize the General Manager to execute a Professional Services Agreement with V&A Engineering in the amount of \$138,909 for the Turtle Ridge Pipelines Cathodic Protection.

#### BACKGROUND:

In August 2016, there was a corrosion leak on the 16-inch ductile iron domestic water main in Turtle Ridge. A similar corrosion-related leak was repaired on the parallel 10-inch ductile iron recycled water main in 2014. The cause of the corrosion was investigated by HDR and determined to be due to severely corrosive soil conditions.

Staff retained Psomas/V&A Engineering (V&A) to prepare a Preliminary Design Report (PDR) with conceptual designs for the rehabilitation, replacement, or cathodic protection of the 16-inch domestic and 10-inch recycled water pipes in Turtle Ridge Drive from Bonita Canyon Drive to Summit Park Drive. The PDR recommended installing cathodic protection on the pipelines.

Staff retained V&A to complete a PDR to determine cathodic protection current requirements, evaluate system options, test pipeline electrical continuity, and test isolation from other pipelines. The Final PDR was submitted in June and V&A is recommending installation of an impressed current cathodic protection system with one rectifier, insulating flanges, joint bonding, and test stations.

#### Consultant Selection:

At staff's request, V&A submitted a proposal in the amount of \$138,909 to design the cathodic protection system and provide construction phase services during installation. Locating discontinuous joints for bonding and finding buried insulating flanges, which were not indicated on as-built documents, to confirm effectiveness is an iterative process requiring extensive investigation and potholing. Over one-third of the design cost, \$55,000, is budgeted for these prerequisite items of work for the final design of the cathodic protection system.

Staff reviewed V&A's proposal, attached as Exhibit "A", and finds the costs to be fair and reasonable. Based on V&A's responsive performance and its background knowledge on the cathodic issues in Turtle Ridge gained through completing the PDR, staff recommends awarding a Professional Services Agreement to V&A to complete the final design.

FISCAL IMPACTS:

Projects 07888 and 07889 are included in the FY 2018-19 Capital Budget. The existing budgets are sufficient to fund the work.

ENVIRONMENTAL COMPLIANCE:

This project is exempt from the California Environmental Quality Act (CEQA) as authorized under the California Code of Regulations, Title 14, Chapter 3, Section 15301 which provides exemption for minor alterations of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of use beyond that existing at the time of the lead agency's determination. A Notice of Exemption for the project was filed with the County of Orange on May 18, 2017.

COMMITTEE STATUS:

This item was reviewed by the Engineering and Operations Committee on July 17, 2018.

RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE GENERAL MANAGER TO EXECUTE A PROFESSIONAL SERVICES AGREEMENT WITH V&A ENGINEERING IN THE AMOUNT OF \$138,909 FOR THE TURTLE RIDGE PIPELINES CATHODIC PROTECTION, PROJECTS 07888 AND 07889.

LIST OF EXHIBITS:

Exhibit "A" – V&A Engineering's Proposal



## EXHIBIT "A"

11011 Via Frontera  
Suite C  
San Diego, CA 92127

858.578.0228 Tel  
510.903.6601 Fax  
vaengineering.com

V&A Project No. 17-0350B Rev02

July 10, 2018

Jeff Smyth, P.E.  
Project Manager  
Irvine Ranch Water District  
3512 Michelson Drive  
Irvine, CA 92612

**Subject:** Turtle Ridge Drive Cathodic Protection System Design and Construction Phase Services  
Proposal for Corrosion Engineering Services

Dear Mr. Smyth:

Thank you for requesting a proposal from V&A Consulting Engineers, Inc. (V&A) for design and engineering services during the construction phase of a cathodic protection (CP) system to provide corrosion control to Irvine Ranch Water District's (IRWD) domestic waterline (DW) and recycled waterline (RW) installed along Turtle Ridge Drive located in Irvine, CA. The DW consists of 1,780-feet of 16-inch diameter ductile iron pipe (DIP) and the RW consists of 1,870-feet of 10-inch diameter DIP. Based on information provided by IRWD, both pipelines have short segments that are cement mortar lined and coated (CML&C) steel pipe (exact locations are unknown at this time). Both pipelines have experienced a blowout due to corrosion within the last 36 months.

V&A performed a corrosion investigation of the pipelines in March 2018. The investigation consisted of performing soil corrosivity testing, current requirement testing, electrical isolation testing, and electrical continuity testing. During the field investigation, it was determined that the pipelines are electrically isolated between Bonita Canyon Drive and Station 15+00.00. The location of the discontinuities must be determined and the discontinuities repaired prior to the installation of an effective cathodic protection system.

It is V&A's understanding that the pipelines change material from CML&C steel pipe to ductile iron pipe south of Bonita Canyon Drive; the pipe materials are intended to be electrically isolated at the connection point via an insulating flange kit. V&A will review available documents pertaining to the installation of the insulating flange kits in preparation to performing potholing in order to determine the location of the insulating flange kits. At the completion of the additional field investigations, V&A is prepared to design a CP system for the project pipelines and provide engineering services during the construction phase of the project.

Per your request, the following is our proposal and detailed scope of work for the subject services:

### Scope of Work

#### Task | Description

1. **Project Management:** The objective of this task is to track and execute the project in accordance with the schedule, budget, and quality expectations that are established. This task includes the following project management work activities:
  - a. Monitor project progress, including work completed, work remaining, budget expended, schedule, estimated cost of work remaining, and estimated cost at completion; manage activities within total project budget.

- b. Monitor project activities for potential changes and anticipate changes whenever possible; with approval, modify project tasks, task budgets, and approach to keep the overall project within budget and on schedule.
  - c. Manage the quality of all work activities and project deliverables.
  - d. Attend one (1) kickoff meeting.
2. **Insulating Flange Kit and Discontinuity Investigation:** Identify locations of all discontinuities for future repair. Review available IRWD documents (including as-built drawings, pipe lay drawings, and contractor daily work logs) pertaining to the location of the insulating flange kits and transition of pipe materials south of Bonita Canyon Drive. Submit a potholing plan to IRWD for approval. A maximum of 20 potholes will be performed over a four-day period to determine the location of the insulating flange kits and other discontinuities for future repair. Potholing will be performed by Cardno; a representative from V&A will be on-site during the potholing to observe the work. The project Preliminary Design Report will be revised to include the results of the document review and potholing.

3. **CP System Drawings, Specifications, Project Manual and Engineering Opinion of Probable Cost:** Prepare drawings, technical specification Section 16640 "Cathodic Protection," project manual, and an engineering opinion of probable cost for the CP system. Plans will be prepared in AutoCAD and will include civil details for the installation of isolation flanges. Plans, specifications and cost estimates will be prepared for the 70%, 90%, and 100% submittals. Five (5) copies of 24-inch x 36-inch bonded hard copies will be provided at each submittal and one (1) copy of 24-inch x 36-inch mylar drawings will be provided at the final submittal. One round of comments will be addressed at each submittal (70%, 90%, and 100%). V&A will attend a workshop following each submittal to review District comments. If more submittals are requested, submittals will be invoiced on a time and materials basis at the rates shown on the attached Resource Allocation Estimate.

Prepare a Project Manual in standard IRWD format. A set of bidding documents will be provided in 8.5-inch x 11-inch format. Computer files of the Project Manual shall be submitted to IRWD in the latest version of Microsoft Word. The Project Manual shall also be submitted to IRWD as a single PDF file.

The bid package will be prepared by V&A and advertised by IRWD.

4. **Construction Phase Services:** Attend up to four project meetings of one hour each and conduct five site visits of two hours each during the construction phase of the project. Meeting minutes for the conference calls shall be submitted. The construction window for the installation of CP system components shall be reviewed with IRWD Systems Operations and Construction Services staff to discuss the procedures for installation.

Review and respond to up to 10 contractor submittals (including re-submittals) and three RFIs for the CP system. The review of additional contractor submittals and RFIs will be invoiced on a time and materials basis at the rates shown on the attached Resource Allocation Estimate.

Prepare base maps in AutoCAD using the CAD base maps provided by IRWD to show existing piping, pertinent above grade features identified during the field testing, pertinent below grade features identified during the potholing, and the recommended locations of CP system components. The Engineer shall provide up to 30 hours to perform minor plan revisions to the construction drawings.

Apply for and obtain encroachment permits from the related jurisdictional agencies for the installation of the CP system and its associated components. This includes attending up to two conference calls with the agencies as needed to resolve items throughout the permit approval process. V&A will prepare the Traffic Control Plans that are deemed necessary by the requirements of the Permit for inclusion into the Drawings and Specifications of the Project. V&A will pay for permit application fees; the cost of the permits will be paid directly by IRWD to the permitting agency.

Prepare record drawings on 24-inch by 36-inch mylars at the completion of construction using the Contractor's and District Inspector's red-lines. Final record drawing mylars, AutoCAD electronic files, and a single-color PDF of the Final as-built mylars shall be submitted to IRWD at the completion of construction. Certificates of integrity and functionality of test stations, insulators, and the CP system shall be submitted upon completion of construction. The certificate shall include a list of all verified test stations, insulators, and cathodic protection systems.

V&A proposes to complete this work on a time and materials basis at a total cost not to exceed **\$138,909** with terms of net 60 days. This fee is valid for 90 days from the date of this proposal. The scope of work was developed as a result of our discussions and represents our mutual understanding.

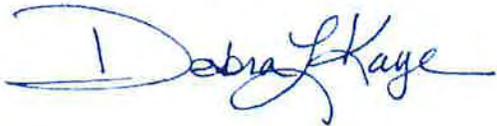
Estimated costs for the above project scope are itemized in the attached Resource Allocation Estimate. These costs represent our best estimate at this time and may change subject to future developments during the project. It is possible that some of the estimated manpower requirements for specific task items may increase while others may not require the entire anticipated effort. This provides us a greater degree of confidence in the overall project estimate, rather than in any given particular task.

If unforeseen circumstances should arise which indicate that more time is required, V&A will provide a written estimate of additional required time and cost. V&A will not proceed with work beyond the not-to-exceed figure without a written authorization from your office. Charges to this project will be made for actual time spent on the project and will be charged as per the attached Resource Allocation Estimate. We request that you carefully review this proposal to assure full understanding of the scope of the work. Our Fee Schedule is adjusted annually in January. Fees will be adjusted at that time and a new Fee Schedule will be sent. Charges on the remainder of the project will be based on the new schedule.

We are prepared to begin work on your project upon receiving written approval, a notice to proceed (NTP), or a purchase order from your office.

On behalf of our staff and myself, I would like to thank you for the opportunity to be of service to you and Irvine Ranch Water District. We look forward to working with you.

Sincerely,  
V&A Consulting Engineers, Inc.



Debra Kaye, P.E.  
President

Accepted: \_\_\_\_\_  
Irvine Ranch Water District

Date: \_\_\_\_\_



11011 Via Frontera  
Suite C  
San Diego, CA 92127

858.578.0228 Tel  
510.903.6601 Fax  
vaengineering.com

## RESOURCE ALLOCATION ESTIMATE

JOB NO: 17-0350B Rev02

Date: 7/10/2018

CLIENT: Irvine Ranch Water District

JOB TITLE: Turtle Ridge Drive Design and Construction Phase Services

Task	Description	Principal-In-Charge	Sr. Project Manager	Project Manager	Associate Engineer	CADD Designer	Engineering Assistant	Project Admin/Clerical	Total
1	Project Management	2	6	24	2			20	54
2	Insulating Flange Kit Investigation	4	4	16	56		68		148
3	CP System Drawings, Specifications, Project Manual and Engineering Opinion of Probable Cost	4	4	40	60	40			148
4	Construction Phase Services	8	8	56	80	30	84		266
Subtotal		18	22	136	198	70	152	20	616
Hourly		\$297	\$259	\$232	\$173	\$141	\$130	\$86	
Total Direct Labor		\$5,346	\$5,698	\$31,552	\$34,254	\$9,870	\$19,760	\$1,720	\$108,200
Other Direct Costs								Amount	
Truck			\$85 per Day			17 Days		\$1,445	
Mileage			\$0.535 per Mile			2,550 Miles		\$1,364	
Potholing			\$24,000 At Cost + 10%					\$26,400	
Office Expenses/Printing/Reproduction								\$1,500	
Subtotal Other Direct Costs									\$30,709
<b>GRAND TOTAL ESTIMATED COST</b>									<b>\$138,909</b>



July 23, 2018

Prepared by: M. Tetteimer/M. Cortez

Submitted by: K. Burton

Approved by: Paul A. Cook 

## CONSENT CALENDAR

### LAKE FOREST RECYCLED WATER SERVICES ON BAKE PARKWAY AND TOLEDO WAY CONSTRUCTION AWARD

#### SUMMARY:

As part of the District's ongoing efforts to expand the use of recycled water, this project will convert the City of Lake Forest's irrigation of medians and parkways on portions of Bake Parkway, Toledo Way, and Jeronimo Road from potable water to recycled water, saving approximately 12 acre-feet of potable water annually. Staff recommends that the Board authorize the General Manager to execute a construction contract with T. E. Roberts in the amount of \$183,700 for the Lake Forest Recycled Water Services on Bake Parkway and Toledo Way.

#### BACKGROUND:

The City of Lake Forest's irrigation system for the center median and parkways on portions of Bake Parkway, Toledo Way, and Jeronimo Road consists of five two-inch domestic water services. This project will convert the existing irrigation system to recycled water, saving approximately 12 acre-feet per year of potable water. This will be accomplished by constructing three new recycled water services and combining two irrigation areas resulting in fewer meter charges. The extent of the project is shown in Exhibit "A". The City of Lake Forest will complete plumbing modifications downstream of the new meters and install beautification improvements to the area in a collaborative effort on this high-profile project; the City's costs exceed \$50,000.

#### Construction Award:

The District retained JIG Consultants in March 2018 for the design of the required improvements. The design was completed in May 2018 and the project was advertised for construction bidding to a select list of nine pipeline contractors. Three contractors attended the pre-bid meeting and submitted bids on June 28, 2018. T. E. Roberts was the apparent low bidder with a bid amount of \$183,700; the bid summary is attached as Exhibit "B". The engineer's estimate was \$124,300. Staff attributes the cost difference between the engineer's estimate and the bids received to the current peak period of construction activity and believes the low bid represents the true cost of the project. To help defray some of the higher than expected project costs for IRWD, the City has agreed to contribute approximately \$30,000 toward construction of the new recycled water services.

#### FISCAL IMPACTS:

Project 07159 is included in the FY 2018-19 Capital Budget and is funded by Conservation Funds. The existing budget and expenditure authorization are sufficient to fund the construction of the project.

ENVIRONMENTAL COMPLIANCE:

This project is exempt from the California Environmental Quality Act (CEQA) and in conformance with California Code of Regulations Title 14, Chapter 3, 15301. Section 15301 provides exemption for minor alterations of existing structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of use beyond that existing at the time of the lead agency's determination. Additionally, State Guideline 15282 provides exemptions for projects that involve the installation of new pipeline or maintenance, repair, restoration, removal, or demolition of an existing pipeline as set forth in Section 21080.21 of the Public Resources Code, as long as the project does not exceed one mile (or 5,280 feet) in length. A Notice of Exemption for the project will be filed in July 2018.

COMMITTEE STATUS:

Construction awards are not routinely taken to Committee prior to submittal to the Board.

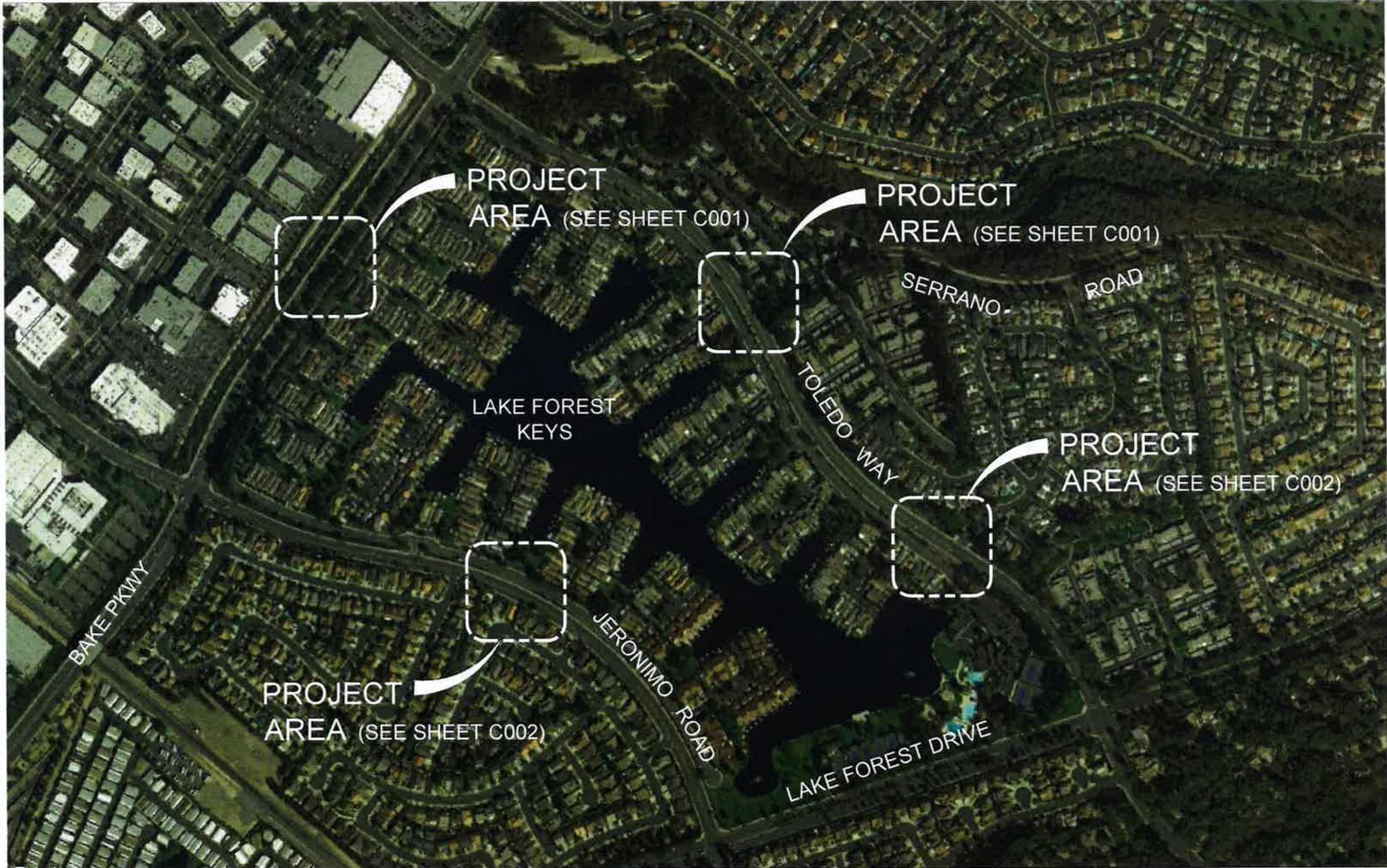
RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE GENERAL MANAGER TO EXECUTE A CONSTRUCTION CONTRACT WITH T. E. ROBERTS IN THE AMOUNT OF \$183,700 FOR THE LAKE FOREST RECYCLED WATER SERVICES ON BAKE PARKWAY AND TOLEDO WAY, PROJECT 07159.

LIST OF EXHIBITS:

Exhibit "A" – Location Map  
Exhibit "B" – Bid Summary

**EXHIBIT "A"**



# EXHIBIT "B"

Bid Opening: Thursday, June 28, 2018 @ 2:00 p.m.

Irvine Ranch Water District Bid Summary For  
Lake Forest  
Recycled Water Services on  
Bake Parkway and Toledo Way  
PR 07159, Code 7220

Entered By: L. Gates

Item No.	Description	Qty	Unit	Engineer's Estimate		1 T.E. Roberts, Inc. Orange, CA		2 Paulus Engineering, Inc. Anaheim, CA		3 GCI Construction, Inc. San Clemente, CA	
				Unit Price	Total Amount	Unit Price	Total Amount	Unit Price	Total Amount	Unit Price	Total Amount
1	Mobilization/Demobilization	1	LS	\$12,150.00	\$12,150.00	\$13,200.00	\$13,200.00	\$18,200.00	\$18,200.00	\$54,000.00	\$54,000.00
2	Recycled Water Service at Bake Parkway	1	LS	\$35,450.00	\$35,450.00	\$40,000.00	\$40,000.00	\$68,000.00	\$68,000.00	\$102,000.00	\$102,000.00
3	Recycled Water Service at Toledo Way	1	LS	\$25,000.00	\$25,000.00	\$41,400.00	\$41,400.00	\$72,000.00	\$72,000.00	\$72,000.00	\$72,000.00
4	Disconnection of Existing Domestic Water Irrigation Services	6	EA	\$5,000.00	\$30,000.00	\$6,300.00	\$37,800.00	\$13,900.00	\$83,400.00	\$7,500.00	\$45,000.00
5	Slurry Seal Pavement	3,700	SF	\$2.00	\$7,400.00	\$8.00	\$29,600.00	\$2.52	\$9,324.00	\$3.00	\$11,100.00
6	Traffic Control	1	LS	\$10,000.00	\$10,000.00	\$6,000.00	\$6,000.00	\$7,295.00	\$7,295.00	\$8,000.00	\$8,000.00
7	Trench Safety Measures	1	EA	\$2,100.00	\$2,100.00	\$13,200.00	\$13,200.00	\$750.00	\$750.00	\$5,000.00	\$5,000.00
8	Final Record Drawings	1	LS	\$2,200.00	\$2,200.00	\$2,500.00	\$2,500.00	\$400.00	\$400.00	\$2,000.00	\$2,000.00
Subtotal, Base Bid Items and Additive/Deductive Bid Items					\$124,300.00		\$183,700.00		\$259,369.00		\$299,100.00
Adjustment (+ or -)					\$0.00		\$0.00		\$0.00		
<b>TOTAL AMOUNT OF BID</b>					<b>\$124,300.00</b>		<b>\$183,700.00</b>		<b>\$259,369.00</b>		<b>\$299,100.00</b>
<b>NOTES:</b>				<b>Item</b>		<b>Manufacturers:</b>		<b>Manufacturers:</b>		<b>Manufacturers:</b>	
				Tapping Sleeve		Mueller Co.		Mueller Co.		VCM	
				Tapping Valve		Mueller Co.		Mueller Co.		Mueller Co.	
						<b>Subcontractors:</b>		<b>Subcontractors:</b>		<b>Subcontractors:</b>	
						Slurry Seal: All American Asphalt		Slurry Seal: Roy Allan Slurry Seal, Inc.		Slurry Seal: Roy Allan Slurry Seal, Inc.	
										Grind & Cap: Hardy & Harper, Inc.	
										Striping: Superior Pavement Markings	

July 23, 2018

Prepared by: C. Spangenberg/M. Cortez

Submitted by: K. Burton *(KLB)*

Approved by: Paul A. Cook *(Paul A. Cook)*

CONSENT CALENDAR

MICHELSON WATER RECYCLING PLANT MISCELLANEOUS REPAIRS  
FINAL ACCEPTANCE

SUMMARY:

Construction of the Michelson Water Recycling Plant (MWRP) Miscellaneous Repairs project is complete. The contractor, Pacific Hydrotech Corporation, has completed the required work and all punch list items. The project has received final inspection and acceptance of construction is recommended.

BACKGROUND:

Cho Design Associates completed the repair project design in December 2017. Pacific Hydrotech Corporation was awarded the construction contract on February 12, 2018 and completed construction of the improvements on June 7, 2018. Staff recommends that the Board accept the construction of MWRP Miscellaneous Repairs.

Project Title:	MWRP Miscellaneous Repairs
Project No.:	04467
Design Engineer:	Cho Design Associates, Inc.
Construction Management by:	IRWD Staff
Contractor:	Pacific Hydrotech Corporation
Original Contract Cost:	\$398,021
Final Contract Cost:	\$430,261
Original Contract Days:	90
Final Contract Days:	114
Final Change Order Approved On:	June 21, 2018

FISCAL IMPACTS:

Project 04467 is included in the FY 2018-19 Capital Budget. The existing budget is sufficient to fund the final payment for these projects.

ENVIRONMENTAL COMPLIANCE:

This project is exempt from the California Environmental Quality Act (CEQA) as authorized under the California Code of Regulations, Title 14, Chapter 3, Section 15301 which provides exemption for minor alterations of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of use beyond that existing at the time of the lead agency's determination, and Section 15302 which provides exemption for the replacement or reconstruction of existing facilities where the new structure will be located on the same site as the structure replaced and will have substantially the same purpose and capacity as the structure replaced. A Notice of Exemption for the project was filed with the Orange County Clerk Recorder on December 12, 2017.

COMMITTEE STATUS:

This item was not reviewed by a Committee.

RECOMMENDATION:

THAT THE BOARD ACCEPT CONSTRUCTION OF MICHELSON WATER RECYCLING PLANT MISCELLANEOUS REPAIRS, PROJECT 04467; AUTHORIZE THE GENERAL MANAGER TO FILE A NOTICE OF COMPLETION; AND AUTHORIZE THE RELEASE OF RETENTION 35 DAYS AFTER FILING OF THE NOTICE OF COMPLETION.

LIST OF EXHIBITS:

None.

July 23, 2018

Prepared by: C. Kessler/K Lew

Submitted by: K. Burton *(KB)*

Approved by: Paul A. Cook *(PAC)*

## CONSENT CALENDAR

### REIMBURSEMENT AGREEMENTS BETWEEN IRWD AND THE CITY OF IRVINE FOR THE ANNUAL SLURRY SEAL AND PAVEMENT REHABILITATION PROJECT AND THE CULVER DRIVE AND UNIVERSITY DRIVE INTERSECTION IMPROVEMENTS

#### SUMMARY:

The City of Irvine (City) is proceeding with its annual slurry seal and pavement rehabilitation project and the Culver Drive and University Drive Intersection Improvements project. These projects require individual Reimbursement Agreements (RAs) since the estimated construction cost for each project is over \$100,000. Staff recommends that the Board:

- Authorize the General Manager to execute an RA with the City for the Annual Slurry Seal and Pavement Rehabilitation project, and
- Authorize the General Manager to execute an RA with the City for the Culver Drive and University Drive Intersection Improvements project, subject to non-substantive changes.

#### BACKGROUND:

IRWD has had an RA in place with the City since 1995 for managing various street rehabilitation projects. Typically included in the City's Capital Improvement projects are alternate bid items for raising existing IRWD sewer manhole covers, sewer cleanouts, and water valve frames and lids to the new pavement grade. Any project up to \$100,000 in reimbursable costs can be authorized by the General Manager as an addendum to this "umbrella" RA.

IRWD and the City have also agreed that any City street improvement project that involves the construction, modification or relocation of IRWD facilities with an estimated construction cost over \$100,000 will be administered through a separate RA. The City's Annual Slurry Seal and Street Rehabilitation project has an estimated construction cost of \$962,200 and the Culver Drive and University Drive Intersection project has an estimated construction cost of \$262,000. Therefore, both of these projects require a project-specific RA.

#### Annual Slurry Seal and Street Rehabilitation Project:

This project focuses on the Irvine village of Northwood. Approximately 673 domestic and 43 recycled water valve frames and lids, 121 sewer cleanouts, and 295 sewer manholes will be installed or adjusted to new pavement grade. The estimated construction cost is \$962,200 plus a city administrative fee equal to 4% of the actual construction cost per the terms of the RA. A Vicinity Map is attached as Exhibit "A", the Engineer's Estimate as Exhibit "B", and the RA as Exhibit "C". The RA has been reviewed by IRWD's legal counsel.

Culver Drive and University Drive Intersection Improvements Project:

This project involves the widening of the intersection resulting in impacts to IRWD's facilities. Approximately seven water valve frames and lids and two sewer manholes will be installed or adjusted to new pavement grade. In addition, one backflow assembly, two vault vents, one domestic water meter, one fire hydrant, one cathodic protection test station, one blowoff assembly, and two gate valves will be removed and relocated. The City received six bids and recommends awarding the project to the low bidder for the City's portion of the work, Beador Construction Company. The bids for IRWD's portion of the work ranged from \$102,621 to \$262,000. Although Beador Construction Company's bid of \$262,000 for IRWD's portion of the work was the highest, the overall cost is reasonable considering the complexity of working in a busy intersection and the extensive traffic control that is required. The RA includes a city administrative fee equal to 4% of the actual cost of construction. A Vicinity Map is attached as Exhibit "D", the Bid Summary as Exhibit "E", and the RA as Exhibit "F". The RA has been reviewed by IRWD's legal counsel.

FISCAL IMPACTS:

Projects 07128, 07130, and 07132 are included in the FY 2018-19 Capital Budget and have adequate budgets to fund these projects.

ENVIRONMENTAL COMPLIANCE:

Annual Slurry Seal and Street Rehabilitation Project:

This project is exempt from the California Environmental Quality Act (CEQA) as authorized under the California Code of Regulations, Title 14, Chapter 3, Section 15061 (b) (3). The activity is covered by the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment. Where it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA.

Culver Drive and University Drive Intersection Improvements Project:

This project is subject to the California Environmental Quality Act (CEQA). In compliance with CEQA, the California Public Resources Code Section 21000 et. seq., and per the California CEQA Guidelines in the Code of Regulations, Title 14, Division 6, Chapter 3, the City of Irvine, as lead agency, is responsible for the required environmental compliance.

COMMITTEE STATUS:

This item was reviewed by the Engineering and Operations Committee on July 17, 2018.

Consent Calendar: Reimbursement Agreements between IRWD and the City of Irvine for the Annual Slurry Seal and Pavement Rehabilitation Project and the Culver Drive and University Drive Intersection Improvements  
July 23, 2018  
Page 3

RECOMMENDATION:

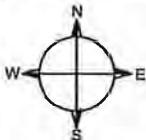
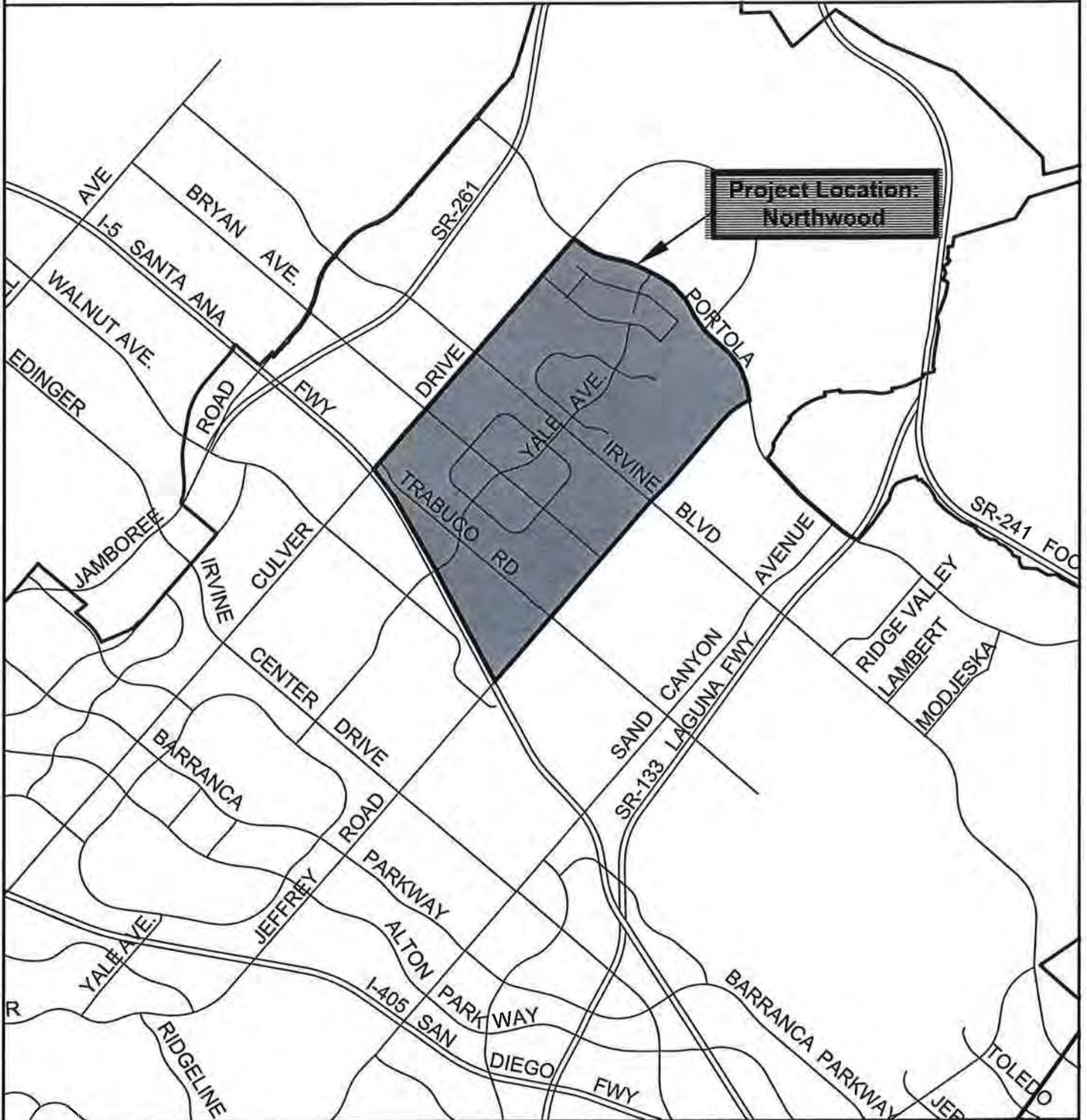
THAT THE BOARD AUTHORIZE THE GENERAL MANAGER TO EXECUTE REIMBURSEMENT AGREEMENTS WITH THE CITY OF IRVINE FOR THE ANNUAL SLURRY SEAL AND PAVEMENT REHABILITATION PROJECT AND THE CULVER DRIVE AND UNIVERSITY DRIVE INTERSECTION IMPROVEMENTS PROJECT SUBJECT TO NON-SUBSTANTIVE CHANGES.

LIST OF EXHIBITS:

- Exhibit "A" – Annual Slurry Seal and Pavement Rehabilitation Vicinity Map
- Exhibit "B" – Annual Slurry Seal and Pavement Rehabilitation Engineer's Estimate
- Exhibit "C" – Annual Slurry Seal and Pavement Rehabilitation Reimbursement Agreement
- Exhibit "D" – Culver Drive and University Drive Intersection Vicinity Map
- Exhibit "E" – Culver Drive and University Drive Intersection Bid Summary
- Exhibit "F" – Culver Drive and University Drive Intersection Reimbursement Agreement

**EXHIBIT "A"**

**ANNUAL STREET REHABILITATION AND SLURRY SEAL PROJECT  
FY 2018-19**



**VICINITY MAP**



## EXHIBIT "B"

REIMBURSEMENT AGREEMENT BETWEEN IRVINE RANCH WATER DISTRICT (IRWD)  
AND THE CITY OF IRVINE  
FOR  
ANNUAL STREET REHABILITATION AND SLURRY SEAL PROJECT, BID NO. 19-XXXX

### ENGINEER'S ESTIMATE

ITEM NO.	DESCRIPTION	QUANTITY	UNITS	UNIT COST	EXTENDED AMOUNT
A-1	INSTALL NEW IRWD WATER VALVE FRAME AND COVER TO GRADE	673	EA	\$ 850.00	\$ 572,050.00
A-2	INSTALL NEW IRWD RECLAIM WATER VALVE FRAME AND COVER TO GRADE	43	EA	\$ 850.00	\$ 36,550.00
A-3	INSTALL NEW IRWD SEWER CLEANOUT FRAME AND COVER TO GRADE	121	EA	\$ 850.00	\$ 102,850.00
A-4	ADJUST EXISTING IRWD SEWER MANHOLE FRAME AND COVER TO GRADE	295	EA	\$ 850.00	\$ 250,750.00
<b>TOTAL CONSTRUCTION ESTIMATE</b>					<b>\$ 962,200.00</b>
<b>4% ADMINISTRATION FEE PER SECTION 5 OF AGREEMENT</b>					<b>\$ 38,488.00</b>
<b>TOTAL COSTS</b>					<b>\$ 1,000,688.00</b>

**EXHIBIT "C"**

File No.

REIMBURSEMENT AGREEMENT BETWEEN  
IRVINE RANCH WATER DISTRICT  
AND THE CITY OF IRVINE  
FOR  
INSTALLATION AND ADJUSTMENT OF STREET UTILITIES TO GRADE FOR  
ANNUAL STREET REHABILITATION AND SLURRY SEAL  
BID NO. 19-XXXX

This Agreement is made and entered into as of this \_\_\_\_ day of \_\_\_\_\_, 2018, by and between IRVINE RANCH WATER DISTRICT, a California water district formed and existing pursuant to the California Water District Law, hereinafter referred to as "DISTRICT," and the CITY OF IRVINE, a municipal corporation, hereinafter referred to as "CITY."

W I T N E S S E T H:

WHEREAS, CITY proposes to construct street and utility improvements within the Northwood communities for the ANNUAL STREET REHABILITATION AND SLURRY SEAL, Bid No. 19-XXXX (the "Project"), within the jurisdictional boundaries of DISTRICT and the City of Irvine; and

WHEREAS, such construction will necessitate the installation or adjustment to grade of approximately 673 Water Valves, approximately 43 Recycled Water Valves, approximately 121 Sewer Cleanouts and approximately 295 Sewer Manholes, as depicted on Exhibit "A" attached hereto incorporated by reference herein (hereinafter referred to as the "IRWD FACILITIES"); and

WHEREAS, the parties have determined that it would be more expedient for CITY to construct the IRWD FACILITIES rather than for DISTRICT to do so; and

WHEREAS, DISTRICT is amenable to the CITY constructing the IRWD FACILITIES with the CITY agreeing to advance the costs; and

WHEREAS, DISTRICT agrees to fully reimburse the CITY through payments billed by the CITY and approved by DISTRICT for the entire cost of the IRWD FACILITIES; and

WHEREAS, except as otherwise provided herein, upon the completion of the IRWD FACILITIES, the IRWD FACILITIES shall become the property of DISTRICT in accordance with the terms and conditions hereinafter set forth.

NOW, THEREFORE, in consideration of the mutual promises and covenants hereinafter set forth, the parties hereto agree as follows:

SECTION 1. IRWD FACILITIES. In conjunction with the Project, CITY agrees to initiate and pursue to completion the design and construction of the IRWD FACILITIES.

SECTION 2. PLANS. CITY agrees that the IRWD FACILITIES shall be completed pursuant to approved project plans and specifications (the "Plans and Specifications") which shall be approved by DISTRICT and used in awarding the construction contract. Prior to commencement of preparation of the Plans and Specifications, CITY shall submit its design engineer's proposal for the design of the IRWD FACILITIES to DISTRICT. DISTRICT will have a period of five (5) calendar days from its receipt of such design proposal to review and either indicate its approval or request changes. CITY shall cause its design engineer to review and respond to any requested changes. The Plans and Specifications shall be deemed to incorporate the applicable portions of DISTRICT's latest edition of "Construction Manual for the Construction of Water, Sewer, and Reclaimed Water Facilities" (the "Construction Manual"). The IRWD FACILITIES shall be contracted by CITY together with non-reimbursable work to be completed by CITY within the Project pursuant to plans prepared by CITY's design engineer.

SECTION 3. BIDDING AND AWARD. The parties agree that the construction of the IRWD FACILITIES shall be included in CITY's contract(s) awarded for the Project and that the IRWD FACILITIES shall be bid as a separate item or items that can be deleted. During the bidding process, CITY shall deliver to IRWD one (1) complete set of the bid documents that include the IRWD FACILITIES, including all related addenda concurrently with the distribution thereof to prospective bidders. Upon opening of bids by CITY, CITY will submit the bids or a spread sheet summary of the bids to DISTRICT. DISTRICT will have a period of ten (10) calendar days from its receipt of the bid results for review and approval of the IRWD FACILITIES bid item(s) submitted by the bidder identified to DISTRICT by CITY as CITY's proposed successful bidder. CITY agrees that bids received for the construction of the IRWD

FACILITIES bid item(s) shall be subject to the approval of DISTRICT prior to award of the Project construction contract(s) that include the IRWD FACILITIES; and further agrees that in the event DISTRICT does not approve such bids, either party may terminate this Agreement upon twenty-four (24) hours' prior written notice, in which event CITY shall have no further obligation to construct the IRWD FACILITIES, and DISTRICT may elect to install the IRWD FACILITIES with its own contractor. If DISTRICT approves of the IRWD FACILITIES bid item(s) of CITY's successful bidder, CITY agrees to cause the IRWD FACILITIES to be constructed as part of the contract awarded to such bidder. The total estimated construction cost for the IRWD FACILITIES is \$962,200 provided, however, the amount to be reimbursed by DISTRICT shall be based on the actual costs of construction. Upon award of the construction contract, CITY shall provide DISTRICT with one (1) original copy of the fully executed contract documents and one (1) copy of the bid package relating to the IRWD FACILITIES received from the successful bidder.

SECTION 4. DESIGN REVISIONS AND CHANGE ORDERS. DISTRICT agrees to reimburse CITY for any change order(s) for revision(s) requested by DISTRICT or otherwise required to construct the IRWD FACILITIES. CITY shall promptly furnish DISTRICT with copies of any proposed change order(s) to such contract within five (5) working days of the initiation of the changed conditions to such contract, which shall be subject to DISTRICT approval if and to the extent the IRWD FACILITIES are affected therefrom.

DISTRICT shall promptly review proposed change order(s) and provide CITY with a response within five (5) working days or sooner of receiving proposed change order(s) information from CITY. DISTRICT agrees not to unreasonably cause delay(s) to the construction schedule of the Project in reviewing proposed change order(s) for the IRWD FACILITIES. Notwithstanding any other provision herein, any approval required to be given by the DISTRICT under this Section shall be deemed given if no response to the CITY's request for such approval is received by the CITY within eight (8) working days following the written request for such approval unless the parties agree otherwise in a writing executed by both parties.

SECTION 5. REIMBURSEMENT. DISTRICT agrees to reimburse CITY for the following costs (collectively, the "Costs"): (1) the actual costs of design, construction, permits, bonds, and legal fees (excluding the costs of preparation of this Agreement) incurred by CITY in connection with the design and construction of the IRWD FACILITIES, plus (2) an administration fee which shall be equal to four percent (4%) of the actual cost of construction (costs paid directly to CITY's contractor for construction, only, excluding any cost for design,

surveying, geotechnical or other work) of the IRWD FACILITIES and which shall be deemed to cover all costs of project administration, including, but not limited to, accounting, inspection, surveying, compaction testing, geotechnical services and engineering. CITY shall keep a separate accounting of all Costs incurred by CITY in relation to the IRWD FACILITIES.

Within sixty (60) days of DISTRICT's acceptance of the IRWD FACILITIES as provided in Section 8, a final accounting of the Costs shall be made by CITY and submitted to DISTRICT along with an invoice for the Costs and any supporting documentation necessary to show the amounts which represent Costs of IRWD FACILITIES. Amounts paid pursuant to progress payment invoices shall be subject to adjustment in the final accounting. Within thirty (30) days of said final accounting, DISTRICT agrees to pay to CITY the total amount of the Costs.

SECTION 6. LAWS, ORDINANCES, RULES AND REGULATIONS. CITY shall require in its contract for the construction of the IRWD FACILITIES that its contractor be fully informed of and comply with all laws, ordinances, rules and regulations, including, but not limited to, all applicable requirements of the California Labor Code, prevailing wage laws, the Construction Manual, and the Rules and Regulations of DISTRICT, in connection with the construction of the IRWD FACILITIES.

SECTION 7. INSPECTION. DISTRICT shall have sole and absolute discretion as to all aspects of design and construction of the IRWD FACILITIES, and DISTRICT shall be entitled to inspect the construction of IRWD FACILITIES as it deems necessary to assure compliance with the Plans and Specifications, including shop drawing review and material inspection thereof. DISTRICT shall have access to all phases of the Project work to be performed by CITY for the purpose of such inspection; provided, however, all questions regarding the work being performed will be directed to CITY's resident engineer. DISTRICT will promptly notify CITY of any portion of the work on the IRWD FACILITIES which appears not to conform to the Plans and Specifications. The determination of DISTRICT as to conformity of the IRWD FACILITIES with the Plans and Specifications shall be made in DISTRICT's sole and absolute discretion. DISTRICT agrees not to unreasonably withhold its approval as to such conformity of the IRWD FACILITIES with the Plans and Specifications. CITY shall require its contractor to construct the IRWD FACILITIES so that the IRWD FACILITIES conform to the Plans and Specifications. CITY agrees to assume full responsibility for certifying or obtaining certification of the compaction of backfill material over the IRWD FACILITIES.

SECTION 8. ACCEPTANCE. DISTRICT agrees to accept the IRWD FACILITIES when the IRWD FACILITIES have been completed by CITY in accordance with all requirements of the Plans and Specifications, including any change orders approved by DISTRICT as provided in Section 3 hereof. At the time of completion and acceptance of the IRWD FACILITIES, CITY agrees to furnish DISTRICT with one (1) copy of the contractor's redlined set of blue-line "record" drawings (showing all revisions, manufacturer and type of valves, pipe and fittings as required by DISTRICT) and one (1) copy of the compaction reports and certificate, survey notes and cut sheets.

SECTION 9. OWNERSHIP. It is mutually agreed between the parties hereto that notwithstanding the fact that CITY shall accomplish the construction of the IRWD FACILITIES subject to reimbursement, the IRWD FACILITIES to be completed hereunder, together with the necessary franchises, licenses, easements, rights-of-way, and other privileges, shall at all times be subject to the applicable rates, rules and regulations of DISTRICT, as modified or amended from time to time. CITY hereby disclaims any interest in the IRWD FACILITIES and does hereby transfer and assign to DISTRICT any and all right, title, and interest it may have in the IRWD FACILITIES. DISTRICT shall own, operate and maintain the IRWD FACILITIES following acceptance thereof.

SECTION 10. GUARANTEES. CITY will, pursuant to the requirement(s) of the Plans and Specifications, cause its contractor(s) for the IRWD FACILITIES to guarantee the IRWD FACILITIES against defects in workmanship and materials for a period of one (1) year from the date of acceptance by CITY, which acceptance shall be given only after acceptance by DISTRICT as provided in Section 8. It is further agreed that CITY shall cause the IRWD FACILITIES to be brought or restored to full compliance with the requirements of the Plans and Specifications, including any test requirements, for any portions of the IRWD FACILITIES which during said one (1) year period are found not to be in conformance with the provisions of the Plans and Specifications. This guarantee is in addition to any and all other warranties, express or implied, from CITY's contractors or material manufacturers, with respect to the IRWD FACILITIES. The guarantee and obligations under this section shall in no way be relieved by DISTRICT's inspection and/or acceptance of the IRWD FACILITIES. This section sets forth the entire guarantee and warranty of CITY with respect to the IRWD FACILITIES. The express or implied warranties of other persons with respect to IRWD FACILITIES shall in no way be limited by the guarantee and warranty of CITY contained in this section. If requested by DISTRICT, CITY agrees to assign to DISTRICT the contractor's guarantee and/or any other guarantees or warranties relating to the IRWD FACILITIES.

SECTION 11. INDEMNIFICATION. CITY shall indemnify, defend and hold DISTRICT, its officers, agents, employees, and engineers harmless from any expense, liability or claim for death, injury, loss, damage or expense to persons or property which may arise or is claimed to have arisen during construction of the IRWD FACILITIES as a result of any work or action performed by CITY or on behalf of CITY, save and except to the extent such expense, liability or claim is proximately caused in whole or in part by any act, omission, or negligence of DISTRICT, its officers, agents, employees or engineers or by any act or omission for which DISTRICT, its officers, agents, employees or engineers are liable without fault.

DISTRICT shall indemnify, defend and hold CITY, its officers, agents, and employees, harmless from any expense, liability or claim for death, injury, loss, damage or expense to persons or property which may arise or is claimed to have arisen either (i) as a result of any acts performed by DISTRICT, its officers, agents, or employees, with respect to the IRWD FACILITIES construction; or (ii) following DISTRICT acceptance of the IRWD FACILITIES, with respect to maintenance and operation of the IRWD FACILITIES, save and except to the extent such expense, liability or claim is proximately caused in whole or in part by any negligence of CITY, its officers, agents, employees or engineers, or by any act or omission for which CITY, its officers, agents, employees or engineers are liable without fault.

SECTION 12. INSURANCE AND BONDING. CITY shall cause its contractor(s) to provide performance and payment bonds for the construction of the Project including the IRWD FACILITIES and to obtain insurance coverage sufficiently broad to insure the matters set forth in this Agreement and to include DISTRICT, its officers, agents, employees and engineers, as additional insureds on all insurance policies that CITY requires its contractor(s) to provide. As evidence of such insurance coverage, CITY shall, prior to commencement of construction of the IRWD FACILITIES, provide DISTRICT with certificates of insurance and insurance endorsements from CITY's contractor(s) in a form acceptable to DISTRICT.

SECTION 13. TERMINATION. DISTRICT shall have the right to terminate this Agreement at any time, subject to the provisions of this section, by providing five (5) business days' prior written notice to CITY, except as noted in Section 3. If at the request or direction of a party other than CITY, the construction of the IRWD FACILITIES is not accomplished or completed, DISTRICT shall remain obligated for the actual amount of the Costs incurred by CITY to the date of termination.

If CITY's Project is canceled or modified so as to eliminate the necessity of the construction of the IRWD FACILITIES, CITY shall have the right to terminate this Agreement and thereby terminate its obligation to construct the IRWD FACILITIES, by providing five (5) business days' prior written notice to DISTRICT. In such case, DISTRICT will not be obligated for any design or any other Costs incurred by CITY. If IRWD elects to construct the IRWD FACILITIES, DISTRICT may, but shall not be obligated to, acquire the design or other work from CITY by separate agreement.

SECTION 14. NOTICE. Any notice or other written instrument required or permitted by this Agreement to be given to either party shall be deemed received when personally served or twenty-four (24) hours after being deposited in the U.S. Mail, postage prepaid, registered or certified and addressed as follows:

DISTRICT: Irvine Ranch Water District  
15600 Sand Canyon Avenue  
P.O. Box 57000  
Irvine, CA 92619-7000  
Attn: General Manager

CITY: City of Irvine  
6427 Oak Canyon, Bldg. 1  
Irvine, CA 92618  
Attn: Allison Tran, Associate Engineer

SECTION 15. SUCCESSORS AND ASSIGNS; INTEGRATION; AMENDMENT.  
This Agreement shall be binding upon and inure to the benefit of the successor and assigns of CITY and DISTRICT. This Agreement constitutes the entire Agreement between CITY and DISTRICT and supersedes all prior understandings and agreements between the parties with respect to the subjects hereof. This Agreement may be modified only in writing signed by both parties hereto.

SECTION 16. LEGAL FEES. In the event of any declaratory or other legal or equitable action instituted between CITY and DISTRICT in connection with this Agreement, the prevailing party shall be entitled to recover from the losing party all of its costs and expenses, including court costs and reasonable attorneys' fees.

SECTION 17. DEEMED APPROVAL. Any approval required to be given by either party pursuant to this Agreement shall be deemed given if no response to the party's request for

such approval is received by the requesting party within fifteen (15) days following the written request for such approval.

SECTION 18. SEVERABILITY. If any term, provision, covenant or condition of this Agreement is held to be invalid, void or other unenforceable, to any extent, by any court of competent jurisdiction, the remainder of this Agreement shall not be affected thereby, and each term provision, covenant or condition of this Agreement shall be valid and enforceable to the fullest extent permitted by law.

SECTION 19. APPLICABLE LAW. This Agreement shall be construed and enforced in accordance with the laws of the State of California.

SECTION 20. WAIVER. The waiver of any provision of this Agreement by either party shall not be deemed to be a waiver of any other provision or of any preceding or subsequent breach hereunder.

IN WITNESS WHEREOF, the parties to the Agreement have executed this Agreement on the date herein above written.

IRVINE RANCH WATER DISTRICT

By \_\_\_\_\_  
Paul Cook, General Manager

Dated \_\_\_\_\_

ATTEST:

By \_\_\_\_\_  
Secretary/Assistant Secretary

Dated \_\_\_\_\_

APPROVED AS TO FORM:

By \_\_\_\_\_  
Legal Counsel, IRWD

Dated \_\_\_\_\_

CITY OF IRVINE  
A Municipal Corporation

By \_\_\_\_\_  
Grace Leung  
Acting City Manager of the City of Irvine

Dated \_\_\_\_\_

By \_\_\_\_\_  
Manuel Gomez  
Director of Public Works

Dated \_\_\_\_\_

ATTEST:

By \_\_\_\_\_  
Molly McLaughlin  
City Clerk of the City of Irvine

Dated \_\_\_\_\_

APPROVED AS TO FORM:

By \_\_\_\_\_  
Jeffrey Melching, RUTAN & TUCKER, LLP  
City Attorney of the City of Irvine

Dated \_\_\_\_\_

## EXHIBIT "A"

REIMBURSEMENT AGREEMENT BETWEEN IRVINE RANCH WATER DISTRICT (IRWD)  
AND THE CITY OF IRVINE  
FOR  
ANNUAL STREET REHABILITATION AND SLURRY SEAL PROJECT, BID NO. 19-XXXX

### ENGINEER'S ESTIMATE

ITEM NO.	DESCRIPTION	QUANTITY	UNITS	UNIT COST	EXTENDED AMOUNT
A-1	INSTALL NEW IRWD WATER VALVE FRAME AND COVER TO GRADE	673	EA	\$ 850.00	\$ 572,050.00
A-2	INSTALL NEW IRWD RECLAIM WATER VALVE FRAME AND COVER TO GRADE	43	EA	\$ 850.00	\$ 36,550.00
A-3	INSTALL NEW IRWD SEWER CLEANOUT FRAME AND COVER TO GRADE	121	EA	\$ 850.00	\$ 102,850.00
A-4	ADJUST EXISTING IRWD SEWER MANHOLE FRAME AND COVER TO GRADE	295	EA	\$ 850.00	\$ 250,750.00
<b>TOTAL CONSTRUCTION ESTIMATE</b>					<b>\$ 962,200.00</b>
<b>4% ADMINISTRATION FEE PER SECTION 5 OF AGREEMENT</b>					<b>\$ 38,488.00</b>
<b>TOTAL COSTS</b>					<b>\$ 1,000,688.00</b>

# EXHIBIT "D"



Aerial Photograph

*Culver Dr. at University Dr. Intersection Improvement Project*

Exhibit 3

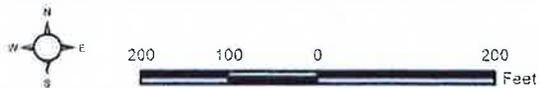


EXHIBIT "E"

BID SUMMARY

Culver/University Intersection Improvements, CIP 318030, Bid No. 18-1336

Bid Opening: Tuesday, May 1, 2018 10:00 AM (Pacific)

WITHDREW BID ON 5/2/18

ITEM	WORK DESCRIPTION	UNIT	QUANTITY	Klasic Engineering		Beador Construction Company, Inc.		Los Angeles Engineering		PUB Construction Inc.		Excel Paving Co.		All American Asphalt	
				UNIT PRICE	TOTAL	UNIT PRICE	TOTAL	UNIT PRICE	TOTAL	UNIT PRICE	TOTAL	UNIT PRICE	TOTAL	UNIT PRICE	TOTAL
1	MOBILIZATION	LS	1	\$213,000.00	\$213,000.00	\$208,668.00	\$208,668.00	\$201,468.00	\$201,468.00	\$453,500.00	\$453,500.00	\$45,000.00	\$45,000.00	\$190,000.00	\$190,000.00
2	PREPARE AND IMPLEMENT STORM WATER POLLUTION AND CONTROL PLANS	LS	1	\$44,000.00	\$44,000.00	\$58,000.00	\$58,000.00	\$27,000.00	\$27,000.00	\$30,000.00	\$30,000.00	\$24,000.00	\$24,000.00	\$25,000.00	\$25,000.00
3	SWPPP AND EROSION CONTROL PLAN	LS	1	\$44,000.00	\$44,000.00	\$58,000.00	\$58,000.00	\$27,000.00	\$27,000.00	\$30,000.00	\$30,000.00	\$24,000.00	\$24,000.00	\$25,000.00	\$25,000.00
4	CONSTRUCTION SCHEDULE (CRITICAL PATH METHOD)	LS	1	\$34,000.00	\$34,000.00	\$5,500.00	\$5,500.00	\$8,000.00	\$8,000.00	\$10,000.00	\$10,000.00	\$17,999.25	\$17,999.25	\$5,000.00	\$5,000.00
5	Specialty Item - TRAFFIC CONTROL	LS	1	\$62,000.00	\$62,000.00	\$115,000.00	\$115,000.00	\$133,000.00	\$133,000.00	\$130,000.00	\$130,000.00	\$90,000.00	\$90,000.00	\$269,268.00	\$269,268.00
6	CLEARING AND GRUBBING (INCLUDING FOR LANDSCAPING)	LS	1	\$43,000.00	\$43,000.00	\$125,000.00	\$125,000.00	\$123,000.00	\$123,000.00	\$123,000.00	\$123,000.00	\$75,000.00	\$75,000.00	\$230,000.00	\$230,000.00
7	REMOVE CURB AND GUTTER	LF	2,420	\$8.34	\$20,149.20	\$19,849.20	\$19,849.20	\$12.00	\$29,040.00	\$8.00	\$19,360.00	\$6.50	\$15,730.00	\$28.00	\$67,760.00
8	REMOVE AND DISPOSE CONCRETE PATHWAY	CY	10	\$25.00	\$250.00	\$11.00	\$110.00	\$7.00	\$70.00	\$10.00	\$100.00	\$10.00	\$100.00	\$11.00	\$110.00
9	REMOVE AND DISPOSE MEDIUM CURB AND GUTTER	CY	1,800	\$71.23	\$128,214.00	\$92,210.00	\$92,210.00	\$68.00	\$122,400.00	\$68.00	\$122,400.00	\$68.00	\$122,400.00	\$68.00	\$122,400.00
10	REMOVE AND DISPOSE OF SIGN	EA	2	\$100.00	\$200.00	\$2.00	\$2.00	\$2.00	\$4.00	\$2.00	\$4.00	\$2.00	\$4.00	\$2.00	\$4.00
11	REMOVE AND DISPOSE 18" RCP	LF	13	\$330.77	\$4,300.21	\$305.00	\$3,965.00	\$300.00	\$3,900.00	\$300.00	\$3,900.00	\$200.00	\$2,600.00	\$277.00	\$3,621.00
12	REMOVE AND DISPOSE CATCH BASIN	EA	1	\$5,000.00	\$5,000.00	\$2,750.00	\$2,750.00	\$1,000.00	\$1,000.00	\$1,000.00	\$1,000.00	\$8,000.00	\$8,000.00	\$277.00	\$277.00
13	REMOVE AND DISPOSE PAVEMENT DRAIN	LS	1	\$5,500.00	\$5,500.00	\$500.00	\$500.00	\$500.00	\$500.00	\$500.00	\$500.00	\$500.00	\$500.00	\$1,300.00	\$1,300.00
14	REMOVE AND DISPOSE DOUBLE RCP PARAPET	LS	1	\$30,000.00	\$30,000.00	\$10,750.00	\$10,750.00	\$13,300.00	\$13,300.00	\$3,500.00	\$3,500.00	\$18,000.00	\$18,000.00	\$1,700.00	\$1,700.00
15	REMOVE AND DISPOSE DOUBLE RCP WINGWALL	LS	1	\$30,000.00	\$30,000.00	\$10,750.00	\$10,750.00	\$13,300.00	\$13,300.00	\$3,500.00	\$3,500.00	\$18,000.00	\$18,000.00	\$1,700.00	\$1,700.00
16	REMOVE AND DISPOSE R/R/RAP SLOPE PROTECTION	CY	41	\$127.31	\$5,228.71	\$145.00	\$5,945.00	\$100.00	\$4,100.00	\$100.00	\$4,100.00	\$450.00	\$18,450.00	\$15.00	\$615.00
17	REMOVE AND DISPOSE GROUTED R/R/RAP SLOPE PROTECTION	CY	81	\$138.73	\$11,237.13	\$145.00	\$11,745.00	\$100.00	\$8,100.00	\$100.00	\$8,100.00	\$500.00	\$40,500.00	\$55.00	\$4,455.00
18	REMOVE AND DISPOSE ABANDONED STREAM GAUGING STATION	EA	1	\$1,000.00	\$1,000.00	\$1,000.00	\$1,000.00	\$1,000.00	\$1,000.00	\$1,000.00	\$1,000.00	\$1,000.00	\$1,000.00	\$1,000.00	\$1,000.00
19	ENCLOSURE & FOUNDATION, AND ANTERIOR POLE AND FOUNDATION	LS	1	\$12,500.00	\$12,500.00	\$2,700.00	\$2,700.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$2,300.00	\$2,300.00	\$2,300.00	\$2,300.00
20	REMOVE AND DISPOSE CHAIN LINK FENCE AND GATE	LF	185	\$1.82	\$335.70	\$1.80	\$333.00	\$1.80	\$333.00	\$1.80	\$333.00	\$1.80	\$333.00	\$1.80	\$333.00
21	REMOVE AND DISPOSE SIDEWALK	SF	13,013	\$3.00	\$39,039.00	\$2.20	\$28,628.60	\$1.00	\$13,013.00	\$1.00	\$13,013.00	\$4.50	\$58,561.50	\$1.10	\$14,314.30
22	REMOVE AND DISPOSE CONCRETE RAMP	EA	1	\$2,000.00	\$2,000.00	\$1,825.00	\$1,825.00	\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$1,100.00	\$1,100.00	\$2,500.00	\$2,500.00
23	REMOVE AND DISPOSE OF 4" THICK STAMPED CONCRETE	SF	1,515	\$2.17	\$3,277.35	\$4,514.70	\$4,514.70	\$5.50	\$8,332.50	\$1.89	\$2,863.35	\$8.50	\$12,877.50	\$9.00	\$13,635.00
24	REMOVE, SALVAGE AND INSTALL BUS SHELTER	EA	1	\$5,500.00	\$5,500.00	\$2,700.00	\$2,700.00	\$2,700.00	\$2,700.00	\$7,000.00	\$7,000.00	\$30,000.00	\$30,000.00	\$4,700.00	\$4,700.00
25	REMOVE AND RELOCATE SIGN	EA	7	\$1,000.00	\$7,000.00	\$270.00	\$2,270.00	\$270.00	\$2,270.00	\$1,400.00	\$10,000.00	\$1,600.00	\$11,200.00	\$1,600.00	\$11,200.00
26	CONSTRUCT ASPHALT CONCRETE (8" THICK)	TON	1,858	\$107.14	\$199,001.12	\$94.00	\$174,796.00	\$114.00	\$212,208.00	\$92.50	\$171,912.50	\$180.125	\$334,250.00	\$75.00	\$139,125.00
27	CONSTRUCT CLASS 2 AGGREGATE BASE (12" THICK)	TON	2,800	\$22.85	\$64,000.00	\$48.00	\$134,400.00	\$38.00	\$106,400.00	\$30.00	\$84,000.00	\$43.00	\$120,400.00	\$18.00	\$50,160.00
28	CONSTRUCT TYPE A-2 CURB AND GUTTER PER CCI STD PLAN 200	LF	2,430	\$45.00	\$109,350.00	\$30.00	\$72,900.00	\$30.00	\$72,900.00	\$30.00	\$72,900.00	\$30.00	\$72,900.00	\$42.50	\$103,275.00
29	CONSTRUCT TYPE B-2 MEDIAN CURB PER CCI STD PLAN 200	LF	2,470	\$45.00	\$111,150.00	\$27.50	\$67,925.00	\$22.00	\$54,340.00	\$22.00	\$54,340.00	\$29.00	\$71,670.00	\$38.00	\$93,780.00
30	CONSTRUCT CURB TRANSITION FROM 6" CURB TO 8" CURB	LF	20	\$400.00	\$8,000.00	\$45.00	\$900.00	\$38.00	\$760.00	\$1,000.00	\$20,000.00	\$410.00	\$8,200.00	\$41.00	\$820.00
31	REMOVE AND INSTALL 6" CHAIN LINK FENCE WITH BLACK VINYL COATING	LF	200	\$65.00	\$13,000.00	\$80.00	\$16,000.00	\$58.00	\$11,600.00	\$87.00	\$17,400.00	\$130.00	\$26,000.00	\$75.00	\$15,000.00
32	CONSTRUCT 4" THICK PCC SIDEWALK PER CCI STD PLAN 202	SF	12,102	\$8.43	\$102,028.86	\$5.00	\$60,510.00	\$7.00	\$84,714.00	\$10.25	\$123,825.00	\$9.00	\$108,918.00	\$7.00	\$84,714.00
33	CONSTRUCT CURB ACCESS RAMP (CCR TO RCR) PER CCI STD PLAN 202	EA	4	\$4,000.00	\$16,000.00	\$8,000.00	\$32,000.00	\$8,400.00	\$33,600.00	\$12,000.00	\$48,000.00	\$4,500.00	\$18,000.00	\$18,000.00	\$72,000.00
34	CONSTRUCT DRIVEWAY APPROACH TYPE 1 PER CCI STD PLAN 204	SF	260	\$10.00	\$2,600.00	\$9.00	\$2,340.00	\$5.00	\$1,300.00	\$8.00	\$2,080.00	\$8.00	\$2,080.00	\$21.00	\$5,460.00
35	CONSTRUCT BUS PAD PER OCTA FIGURES 22A & 23 AND CCI STD PLAN 208	SF	1,010	\$12.00	\$12,120.00	\$18.00	\$18,180.00	\$13.00	\$13,130.00	\$19.00	\$19,190.00	\$23.00	\$23,230.00	\$23.00	\$23,230.00
36	CONSTRUCT 6" THICK PCC PATHWAY	SF	2,510	\$8.00	\$20,080.00	\$8.00	\$20,080.00	\$7.00	\$17,570.00	\$16.50	\$41,415.00	\$13.50	\$33,885.00	\$11.00	\$27,610.00
37	CONSTRUCT FULL DEPTH AC PAVEMENT SECTION (17" THICK)	TON	136	\$242.47	\$32,975.92	\$100.00	\$13,600.00	\$240.00	\$32,640.00	\$213.00	\$28,968.00	\$170.00	\$23,100.00	\$235.00	\$32,140.00
38	COLD PLANE EXISTING PAVEMENT (VARYING DEPTH, 0.12" MIN)	SF	106,620	\$6.75	\$717,765.00	\$6.50	\$693,300.00	\$6.25	\$665,625.00	\$7.00	\$746,340.00	\$5.00	\$533,100.00	\$6.00	\$639,720.00
39	CONSTRUCT 0.12" MIN ASPHALT SURFACE COURSE	TON	1,000	\$100.00	\$100,000.00	\$94.00	\$94,000.00	\$101.98	\$101,980.00	\$101.98	\$101,980.00	\$101.98	\$101,980.00	\$101.98	\$101,980.00
40	UNCLASSIFIED FILL	CY	730	\$1.33	\$966.90	\$1.00	\$730.00	\$1.00	\$730.00	\$1.00	\$730.00	\$1.00	\$730.00	\$1.00	\$730.00
41	CONSTRUCT RETAINING WALL TYPE 6 PER SPWVC STD PLAN 613-4	LF	195	\$1,800.00	\$351,000.00	\$800.00	\$156,000.00	\$800.00	\$156,000.00	\$800.00	\$156,000.00	\$1,600.00	\$312,000.00	\$1,500.00	\$292,500.00
42	CONSTRUCT 6" RETAINING CURB TYPE "B-6" PER CCI STD PLAN NO 200	LF	66	\$45.00	\$2,970.00	\$45.00	\$2,970.00	\$45.00	\$2,970.00	\$45.00	\$2,970.00	\$45.00	\$2,970.00	\$45.00	\$2,970.00
43	CONSTRUCT 18" RCP PER CCI STD PLAN NO. 318	LF	25	\$30.00	\$750.00	\$30.00	\$750.00	\$30.00	\$750.00	\$30.00	\$750.00	\$30.00	\$750.00	\$30.00	\$750.00
44	CONSTRUCT CATCH BASIN TYPE I (W=3.5') WITH LOCAL DEPRESSION, PER CCI STD PLAN 300	EA	1	\$2,000.00	\$2,000.00	\$7,000.00	\$7,000.00	\$4,500.00	\$4,500.00	\$4,500.00	\$4,500.00	\$14,570.00	\$14,570.00	\$7,000.00	\$7,000.00
45	CONSTRUCT CATCH BASIN TYPE II (W=14.0') WITH LOCAL DEPRESSION, PER CCI STD PLAN 301 (W=14.0')	EA	1	\$1,000.00	\$1,000.00	\$11,825.00	\$11,825.00	\$13,500.00	\$13,500.00	\$18,420.00	\$18,420.00	\$9,700.00	\$9,700.00	\$13,300.00	\$13,300.00
46	Specialty Item - INSTALL FILTERBA BIOPFILTRATION SYSTEM (MODEL: FT1606)	EA	2	\$1,000.00	\$2,000.00	\$62,000.00	\$124,000.00	\$55,000.00	\$110,000.00	\$110,000.00	\$220,000.00	\$60,000.00	\$120,000.00	\$66,666.00	\$133,332.00
47	CONSTRUCT CONCRETE COLLAR PER BIVRVE STD PLAN NO. 310	EA	1	\$120.00	\$120.00	\$1,875.00	\$1,875.00	\$900.00	\$900.00	\$900.00	\$900.00	\$1,100.00	\$1,100.00	\$1,085.00	\$1,085.00
48	Final Pay Item - CONSTRUCT DOUBLE 15" RCP EXTENSION	CY	180	\$100.00	\$18,000.00	\$112.15	\$20,187.00	\$100.00	\$18,000.00	\$110.00	\$19,800.00	\$90.00	\$16,200.00	\$100.00	\$18,000.00
49	Final Pay Item - CONSTRUCT WARPED WINGWALL TYPE B, PER SPWVC STD PLAN 611-3	CY	75	\$120.00	\$9,000.00	\$2,500.00	\$1,875.00	\$1,000.00	\$750.00	\$1,975.00	\$1,975.00	\$1,487.25	\$1,115.44	\$1,000.00	\$750.00
50	Final Pay Item - PLACE 1/4" TON RCP SLOPE PROTECTION	CY	50	\$200.00	\$10,000.00	\$225.00	\$11,250.00	\$145.00	\$7,250.00	\$80.00	\$4,000.00	\$12,900.00	\$2,580.00	\$12,900.00	\$16,000.00
51	CONSTRUCT CHAIN LINK GATE PER DCPW STD PLAN 600-3	EA	1	\$2,500.00	\$2,500.00	\$4,000.00	\$4,000.00	\$2,000.00	\$2,000.00	\$2,000.00	\$2,000.00	\$2,700.00	\$2,700.00	\$2,700.00	\$2,700.00
52	CONSTRUCT JUNCTION STRUCTURE TYPE V PER DCPW STD PLAN 333-2-OC	EA	1	\$3,500.00	\$3,500.00	\$1,540.00	\$1,540.00	\$5,100.00	\$5,100.00	\$5,100.00	\$5,100.00	\$4,200.00	\$4,200.00	\$8,000.00	\$8,000.00
53	Specialty Item - MODIFY EXISTING & INSTALL NEW IRRIGATION SYSTEM	SF	21,600	\$4.40	\$95,040.00	\$4.40	\$95,040.00	\$4.50	\$97,200.00	\$4.50	\$97,200.00	\$4.50	\$97,200.00	\$4.50	\$97,200.00
54	Specialty Item - REMOVE AND DISPOSE OF IRRIGATION CONTROL VALVE	EA	3	\$100.00	\$300.00	\$1.00	\$3.00	\$800.00	\$2,400.00	\$4,000.00	\$12,000.00	\$1,600.00	\$4,800.00	\$1,600.00	\$4,800.00
55	Specialty Item - 24" BOX TREES	EA	33	\$364.00	\$12,013.20	\$325.00	\$10,725.00	\$320.00	\$10,560.00	\$360.00	\$11,880.00	\$360.00	\$11,880.00	\$360.00	\$11,880.00
56	Specialty Item - 36" BOX TREES	EA	12	\$1,000.00	\$12,000.00	\$900.00	\$10,800.00	\$820.00	\$9,840.00	\$820.0					

BID SUMMARY  
 Culver/University Intersection Improvements, CIP 318030, Bid No. 18-1336  
 Bid Opening: Tuesday, May 1, 2018 10:00 AM (Pacific)

WITHDREW BID ON 5/2/18

			#1	#2	#3	#4	#5	#6							
			Klassic Engineering	Beador Construction Company, Inc.	Los Angeles Engineering	PUB Construction Inc.	Excel Paving Co.	All American Asphalt							
57	Specialty Item - 15 GALLON TREE	EA	11	\$750.00	\$1,650.00	\$195.00	\$2,245.00	\$200.00	\$2,200.00	\$800.00	\$8,800.00	\$133.00	\$1,468.00	\$227.00	\$4,397.00
58	Specialty Item - 5 GALLON SHRUB	EA	1,863	\$26.00	\$48,238.00	\$22.00	\$296,586.00	\$18.00	\$29,834.00	\$50.00	\$81,150.00	\$30.00	\$13,240.00	\$20.00	\$33,200.00
59	Specialty Item - 1 GALLON SHRUB	EA	1,853	\$23.00	\$42,816.00	\$11.00	\$40,184.00	\$8.00	\$28,224.00	\$13.00	\$47,489.00	\$17.00	\$40,183.00	\$11.00	\$48,183.00
60	Specialty Item - ROOT BARRIER	LF	2,702	\$9.00	\$24,318.00	\$8.00	\$21,616.00	\$9.00	\$24,300.00	\$6.00	\$16,200.00	\$8.50	\$22,950.00	\$8.24	\$22,248.00
61	Specialty Item - MULCH - 2" THICK	SF	16,402	\$0.55	\$9,021.10	\$0.50	\$9,840.00	\$0.40	\$6,560.00	\$2.00	\$32,809.00	\$0.55	\$9,020.00	\$0.53	\$8,692.70
62	Specialty Item - INSTALL LAWN SOIL - MATCH EXISTING	SF	2,100	\$1.00	\$4,200.00	\$2.30	\$4,830.00	\$3.00	\$6,300.00	\$6.00	\$12,600.00	\$1.50	\$3,150.00	\$1.38	\$2,888.00
63	4" THICK DISINTEGRATED GRANITE	SF	375	\$10.00	\$1,725.00	\$4.30	\$1,612.50	\$9.00	\$3,375.00	\$26.00	\$9,750.00	\$4.50	\$1,687.50	\$5.00	\$3,875.00
64	Specialty Item - SOIL PREPARATION & FINE GRADING	SF	16,400	\$0.55	\$9,020.00	\$0.50	\$8,200.00	\$0.85	\$13,940.00	\$1.00	\$16,400.00	\$0.75	\$12,300.00	\$0.69	\$11,116.00
65	Specialty Item - PLACE NON-IRRIGATED HYDROSEED MIX	SF	23,850	\$0.20	\$4,770.00	\$0.30	\$7,155.00	\$0.15	\$1,547.50	\$0.70	\$16,555.00	\$0.20	\$4,770.00	\$0.16	\$4,784.00
66	Specialty Item - 90 WORKING DAY PLANT ESTABLISHMENT AND LANDSCAPE MAINTENANCE PERIOD	LS	1	\$6,000.00	\$4,000.00	\$3,225.00	\$3,225.00	\$15,000.00	\$15,000.00	\$30,000.00	\$3,800.00	\$3,800.00	\$3,725.00	\$3,725.00	\$3,725.00
67	Specialty Item - FURNISH AND INSTALL CONDUIT, 3" DB 60	LF	1,445	\$53.00	\$77,385.00	\$30.00	\$43,350.00	\$32.00	\$25,140.00	\$42.00	\$60,690.00	\$61.00	\$88,143.00	\$80.00	\$96,700.00
68	Specialty Item - FURNISH AND INSTALL CONDUIT, 1.5" DB 60	LF	153	\$32.00	\$4,896.00	\$28.00	\$4,284.00	\$30.00	\$4,590.00	\$38.00	\$5,804.00	\$30.00	\$4,890.00	\$27.00	\$4,131.00
69	Specialty Item - FURNISH AND INSTALL "INTERCEPT" 13x24x24 STREET LIGHT HAND HOLE	EA	2	\$1,300.00	\$3,000.00	\$1,075.00	\$2,150.00	\$1,150.00	\$2,300.00	\$1,780.00	\$7,560.00	\$1,300.00	\$2,200.00	\$1,050.00	\$2,300.00
70	Specialty Item - FURNISH AND INSTALL 13x24x24 STREET LIGHT HAND HOLE	EA	8	\$83.00	\$6,496.00	\$805.00	\$6,440.00	\$650.00	\$5,200.00	\$1,425.00	\$11,400.00	\$832.00	\$6,636.00	\$800.00	\$6,400.00
71	WRING FOR EXISTING TRAFFIC SIGNAL SYSTEM & TEMPORARY OVERHEAD	LS	1	\$416,000.00	\$416,000.00	\$296,800.00	\$296,800.00	\$346,500.00	\$346,500.00	\$155,820.00	\$255,820.00	\$348,000.00	\$348,000.00	\$316,425.42	\$316,425.42
72	Specialty Item - TRAFFIC SIGNAL INTERCONNECT SYSTEM	LS	1	\$158,000.00	\$416,000.00	\$385,000.00	\$385,000.00	\$168,000.00	\$168,000.00	\$150,000.00	\$161,000.00	\$161,000.00	\$161,000.00	\$149,736.00	\$149,736.00
73	Specialty Item - TRAFFIC SIGNAL, STRIPPING, MARKINGS, AND MARKERS	LS	1	\$20,000.00	\$20,000.00	\$30,000.00	\$30,000.00	\$45,000.00	\$45,000.00	\$36,820.00	\$36,820.00	\$36,820.00	\$36,820.00	\$30,000.00	\$30,000.00
74	PROTECT IN PLACE EXISTING GAS LINES	LS	1	\$6,000.00	\$6,000.00	\$16,000.00	\$16,000.00	\$3,000.00	\$3,000.00	\$8,000.00	\$12,000.00	\$12,000.00	\$1,000.00	\$1,000.00	\$1,000.00
75	FURNISH AND INSTALL "ORANGE" CONSTRUCTION FENCING	LF	2,300	\$4.00	\$9,200.00	\$3.00	\$11,500.00	\$3.00	\$6,900.00	\$4.00	\$9,200.00	\$3.00	\$30,300.00	\$3.00	\$52,900.00
<b>Total Base Bid Price</b>				<b>\$2,643,165.37</b>	<b>\$3,287,300.00</b>	<b>\$3,488,241.00</b>	<b>\$2,841,280.00</b>	<b>\$3,874,874.00</b>	<b>\$3,874,874.00</b>	<b>\$2,067,306.13</b>					
<b>Additive Bid Items</b>															
76	REMOVE AND DISPOSE OF WATER METER	EA	3	\$2,000.00	\$2,000.00	\$5,000.00	\$10,000.00	\$500.00	\$1,000.00	\$3,000.00	\$5,600.00	\$300.00	\$600.00	\$1,313.00	\$2,626.00
77	REMOVE AND DISPOSE OF FIRE HYDRANT	EA	1	\$2,000.00	\$2,000.00	\$7,500.00	\$7,500.00	\$3,600.00	\$3,600.00	\$5,500.00	\$5,500.00	\$3,000.00	\$3,000.00	\$3,900.00	\$3,900.00
78	REMOVE AND DISPOSE OF BLOW-OFF	EA	1	\$800.00	\$800.00	\$6,500.00	\$6,500.00	\$2,000.00	\$2,000.00	\$8,900.00	\$3,000.00	\$3,000.00	\$5,600.00	\$5,600.00	\$5,600.00
79	ADJUST WATER METER TO GRADE	EA	1	\$2,000.00	\$2,000.00	\$1,000.00	\$1,000.00	\$600.00	\$600.00	\$4,000.00	\$4,000.00	\$600.00	\$600.00	\$365.00	\$365.00
80	REMOVE AND REPLACE ALL IRWD WATER VALVE CAN TO GRADE PER IRWD	EA	2	\$929.00	\$6,508.00	\$1,800.00	\$7,000.00	\$350.00	\$2,450.00	\$4,200.00	\$29,400.00	\$700.00	\$4,900.00	\$1,500.00	\$10,500.00
81	ADJUST W-22 (CANS TO BE SUPPLIED BY IRWD)	EA	1	\$3,000.00	\$3,000.00	\$4,500.00	\$4,500.00	\$600.00	\$600.00	\$4,700.00	\$4,700.00	\$1,200.00	\$1,200.00	\$1,400.00	\$1,400.00
82	ADJUST IRWD SEWER MANHOLE COVER TO GRADE	EA	1	\$4,150.00	\$4,150.00	\$4,500.00	\$4,500.00	\$600.00	\$600.00	\$4,700.00	\$4,700.00	\$1,300.00	\$1,300.00	\$1,400.00	\$1,400.00
83	REMOVE AND DISPOSE OF BACKFLOW ASSEMBLY PER IRWD STD W-2	EA	1	\$7,800.00	\$18,800.00	\$7,800.00	\$7,800.00	\$1,300.00	\$1,300.00	\$5,200.00	\$5,200.00	\$700.00	\$700.00	\$1,400.00	\$1,400.00
84	REMOVE AND DISPOSE OF IRWD VENTS	EA	2	\$2,000.00	\$4,000.00	\$5,000.00	\$5,000.00	\$5,300.00	\$5,300.00	\$10,600.00	\$3,350.00	\$6,700.00	\$2,222.00	\$4,444.00	\$2,800.00
85	FURNISH AND INSTALL FIRE HYDRANT ASSEMBLY PER IRWD STD W-8	EA	1	\$16,000.00	\$18,800.00	\$18,500.00	\$18,500.00	\$10,000.00	\$10,000.00	\$18,550.00	\$10,550.00	\$11,760.00	\$11,760.00	\$18,000.00	\$18,000.00
86	FURNISH AND INSTALL 2" REDUCE PRESSURE PRINCIPAL BACK FLOW ASSEMBLY PER IRWD STD W-7	EA	1	\$1,950.00	\$18,850.00	\$18,500.00	\$18,500.00	\$1,250.00	\$1,250.00	\$13,850.00	\$13,850.00	\$3,900.00	\$3,900.00	\$10,389.87	\$10,389.87
87	FURNISH AND INSTALL 2" SERVICE AND METER PER IRWD STD W-2	EA	1	\$1,800.00	\$1,800.00	\$15,000.00	\$15,000.00	\$5,250.00	\$5,250.00	\$5,780.00	\$5,780.00	\$7,350.00	\$7,350.00	\$17,000.00	\$17,000.00
88	FURNISH AND INSTALL 2" TWO WIRE CATHODIC PROTECTION TEST STATION PER IRWD STD CP-1	EA	1	\$2,300.00	\$2,300.00	\$10,000.00	\$10,000.00	\$10,000.00	\$8,211.00	\$8,211.00	\$6,800.00	\$6,800.00	\$8,500.00	\$8,500.00	\$8,500.00
89	FURNISH AND INSTALL VAULT VENT ASSEMBLY PER IRWD STD G-7	EA	2	\$1,800.00	\$3,600.00	\$10,000.00	\$10,000.00	\$14,000.00	\$14,000.00	\$28,000.00	\$28,000.00	\$11,000.00	\$11,000.00	\$10,500.00	\$10,500.00
90	FURNISH AND INSTALL 4" BLOWOFF/BOTTOM DRAIN ASSEMBLY PER IRWD STD W-14	EA	1	\$6,500.00	\$6,500.00	\$14,000.00	\$14,000.00	\$26,600.00	\$26,600.00	\$30,000.00	\$30,000.00	\$19,000.00	\$19,000.00	\$26,500.00	\$26,500.00
91	FURNISH AND INSTALL 12" PVC C 900 WITH COUPLING PER IRWD STD W-10	LF	19	\$292.00	\$5,548.00	\$5,000.00	\$95,000.00	\$1,200.00	\$22,800.00	\$350.00	\$10,450.00	\$435.00	\$8,265.00	\$1,063.00	\$20,197.00
92	FURNISH AND INSTALL 6" RESILIENT WEDGE GATE VALVE ASSEMBLY PER IRWD STD W-22	EA	2	\$2,500.00	\$5,000.00	\$6,000.00	\$12,000.00	\$9,600.00	\$19,200.00	\$14,900.00	\$29,800.00	\$2,111.00	\$4,222.00	\$12,600.00	\$25,200.00
<b>Total Additive Bid Items</b>				<b>\$105,201.00</b>	<b>\$262,000.00</b>	<b>\$145,650.00</b>	<b>\$196,125.00</b>	<b>\$196,125.00</b>	<b>\$182,621.00</b>	<b>\$176,577.87</b>					

**EXHIBIT "F"**

File No.

REIMBURSEMENT AGREEMENT BETWEEN  
IRVINE RANCH WATER DISTRICT  
AND THE CITY OF IRVINE  
FOR  
CULVER DRIVE AND UNIVERSITY DRIVE INTERSECTION IMPROVEMENTS  
CIP NO. 318030

This Agreement is made and entered into as of this \_\_\_\_ day of \_\_\_\_\_, 2018, by and between IRVINE RANCH WATER DISTRICT, a California water district formed and existing pursuant to the California Water District Law, hereinafter referred to as "DISTRICT," and the CITY OF IRVINE, a municipal corporation, hereinafter referred to as "CITY."

W I T N E S S E T H:

WHEREAS, CITY proposes to construct the Culver Drive and University Drive Intersection Improvements, CIP 318030 (the "Project"), within the jurisdictional boundaries of DISTRICT and the City of Irvine; and

WHEREAS, such construction will necessitate the adjustment to grade of 2 Manholes, and removal and installation of 1 Fire Hydrant, 7 Water Valve Cans, 1 Backflow Assembly, 2 Vault Vents, 1 Domestic Water Meter, 1 Cathodic Protection Test Station, , 1 Blowoff Assembly, and 2 Gate Valves as depicted on Exhibit "A" attached hereto incorporated by reference herein (hereinafter referred to as the "IRWD FACILITIES"); and

WHEREAS, the parties have determined that it would be more expedient for CITY to construct the IRWD FACILITIES rather than for DISTRICT to do so; and

WHEREAS, DISTRICT is amenable to the CITY constructing the IRWD FACILITIES with the CITY agreeing to advance the costs; and

WHEREAS, DISTRICT agrees to fully reimburse the CITY through payments billed by the CITY and approved by DISTRICT for the entire cost of the IRWD FACILITIES; and

WHEREAS, except as otherwise provided herein, upon the completion of the IRWD FACILITIES, the IRWD FACILITIES shall become the property of DISTRICT in accordance with the terms and conditions hereinafter set forth.

NOW, THEREFORE, in consideration of the mutual promises and covenants hereinafter set forth, the parties hereto agree as follows:

SECTION 1. IRWD FACILITIES. In conjunction with the Project, CITY agrees to initiate and pursue to completion the design and construction of the IRWD FACILITIES.

SECTION 2. PLANS. CITY agrees that the IRWD FACILITIES shall be completed pursuant to approved project plans and specifications (the "Plans and Specifications") which shall be approved by DISTRICT and used in awarding the construction contract. Prior to commencement of preparation of the Plans and Specifications, CITY shall submit its design engineer's proposal for the design of the IRWD FACILITIES to DISTRICT. DISTRICT will have a period of five (5) calendar days from its receipt of such design proposal to review and either indicate its approval or request changes. CITY shall cause its design engineer to review and respond to any requested changes. The Plans and Specifications shall be deemed to incorporate the applicable portions of DISTRICT's latest edition of "Construction Manual for the Construction of Water, Sewer, and Reclaimed Water Facilities" (the "Construction Manual"). The IRWD FACILITIES shall be contracted by CITY together with non-reimbursable work to be completed by CITY within the Project pursuant to plans prepared by CITY's design engineer.

SECTION 3. BIDDING AND AWARD. The parties agree that the construction of the IRWD FACILITIES shall be included in CITY's contract(s) awarded for the Project and that the IRWD FACILITIES shall be bid as a separate item or items that can be deleted. During the bidding process, CITY shall deliver to IRWD one (1) complete set of the bid documents that include the IRWD FACILITIES, including all related addenda concurrently with the distribution thereof to prospective bidders. Upon opening of bids by CITY, CITY will submit the bids or a spread sheet summary of the bids to DISTRICT. DISTRICT will have a period of ten (10) calendar days from its receipt of the bid results for review and approval of the IRWD FACILITIES bid item(s) submitted by the bidder identified to DISTRICT by CITY as CITY's proposed successful bidder. CITY agrees that bids received for the construction of the IRWD FACILITIES bid item(s) shall be subject to the approval of DISTRICT prior to award of the Project construction contract(s) that include the IRWD FACILITIES; and further agrees that in the event DISTRICT does not approve such bids, either party may terminate this Agreement

upon twenty-four (24) hours' prior written notice, in which event CITY shall have no further obligation to construct the IRWD FACILITIES, and DISTRICT may elect to install the IRWD FACILITIES with its own contractor. If DISTRICT approves of the IRWD FACILITIES bid item(s) of CITY's successful bidder, CITY agrees to cause the IRWD FACILITIES to be constructed as part of the contract awarded to such bidder. The total estimated construction cost for the IRWD FACILITIES is \$272,480.00, provided, however, the amount to be reimbursed by DISTRICT shall be based on the actual costs of construction. Upon award of the construction contract, CITY shall provide DISTRICT with one (1) original copy of the fully executed contract documents and one (1) copy of the bid package relating to the IRWD FACILITIES received from the successful bidder.

SECTION 4. DESIGN REVISIONS AND CHANGE ORDERS. DISTRICT agrees to reimburse CITY for any change order(s) for revision(s) requested by DISTRICT or otherwise required to construct the IRWD FACILITIES. CITY shall promptly furnish DISTRICT with copies of any proposed change order(s) to such contract within five (5) working days of the initiation of the changed conditions to such contract, which shall be subject to DISTRICT approval if and to the extent the IRWD FACILITIES are affected therefrom.

DISTRICT shall promptly review proposed change order(s) and provide CITY with a response within five (5) working days or sooner of receiving proposed change order(s) information from CITY. DISTRICT agrees not to unreasonably cause delay(s) to the construction schedule of the Project in reviewing proposed change order(s) for the IRWD FACILITIES. Notwithstanding any other provision herein, any approval required to be given by the DISTRICT under this Section shall be deemed given if no response to the CITY's request for such approval is received by the CITY within eight (8) working days following the written request for such approval unless the parties agree otherwise in a writing executed by both parties.

SECTION 5. REIMBURSEMENT. DISTRICT agrees to reimburse CITY for the following costs (collectively, the "Costs"): (1) the actual costs of design, construction, permits, bonds, and legal fees (excluding the costs of preparation of this Agreement) incurred by CITY in connection with the design and construction of the IRWD FACILITIES, plus (2) an administration fee which shall be equal to four percent (4%) of the actual cost of construction (costs paid directly to CITY's contractor for construction, only, excluding any cost for design, surveying, geotechnical or other work) of the IRWD FACILITIES and which shall be deemed to cover all costs of project administration, including, but not limited to, accounting, inspection,

surveying, compaction testing, geotechnical services and engineering. CITY shall keep a separate accounting of all Costs incurred by CITY in relation to the IRWD FACILITIES.

Within sixty (60) days of DISTRICT's acceptance of the IRWD FACILITIES as provided in Section 8, a final accounting of the Costs shall be made by CITY and submitted to DISTRICT along with an invoice for the Costs and any supporting documentation necessary to show the amounts which represent Costs of IRWD FACILITIES. Amounts paid pursuant to progress payment invoices shall be subject to adjustment in the final accounting. Within thirty (30) days of said final accounting, DISTRICT agrees to pay to CITY the total amount of the Costs.

SECTION 6. LAWS, ORDINANCES, RULES AND REGULATIONS. CITY shall require in its contract for the construction of the IRWD FACILITIES that its contractor be fully informed of and comply with all laws, ordinances, rules and regulations, including, but not limited to, all applicable requirements of the California Labor Code, prevailing wage laws, the Construction Manual, and the Rules and Regulations of DISTRICT, in connection with the construction of the IRWD FACILITIES.

SECTION 7. INSPECTION. DISTRICT shall have sole and absolute discretion as to all aspects of design and construction of the IRWD FACILITIES, and DISTRICT shall be entitled to inspect the construction of IRWD FACILITIES as it deems necessary to assure compliance with the Plans and Specifications, including shop drawing review and material inspection thereof. DISTRICT shall have access to all phases of the Project work to be performed by CITY for the purpose of such inspection; provided, however, all questions regarding the work being performed will be directed to CITY's resident engineer. DISTRICT will promptly notify CITY of any portion of the work on the IRWD FACILITIES which appears not to conform to the Plans and Specifications. The determination of DISTRICT as to conformity of the IRWD FACILITIES with the Plans and Specifications shall be made in DISTRICT's sole and absolute discretion. DISTRICT agrees not to unreasonably withhold its approval as to such conformity of the IRWD FACILITIES with the Plans and Specifications. CITY shall require its contractor to construct the IRWD FACILITIES so that the IRWD FACILITIES conform to the Plans and Specifications. CITY agrees to assume full responsibility for certifying or obtaining certification of the compaction of backfill material over the IRWD FACILITIES.

SECTION 8. ACCEPTANCE. DISTRICT agrees to accept the IRWD FACILITIES when the IRWD FACILITIES have been completed by CITY in accordance with all

requirements of the Plans and Specifications, including any change orders approved by DISTRICT as provided in Section 3 hereof. At the time of completion and acceptance of the IRWD FACILITIES, CITY agrees to furnish DISTRICT with one (1) copy of the contractor's redlined set of "record" drawings (showing all revisions, manufacturer and type of valves, pipe and fittings as required by DISTRICT) and one (1) copy of the compaction reports and certificate, survey notes and cut sheets.

SECTION 9. OWNERSHIP. It is mutually agreed between the parties hereto that notwithstanding the fact that CITY shall accomplish the construction of the IRWD FACILITIES subject to reimbursement, the IRWD FACILITIES to be completed hereunder, together with the necessary franchises, licenses, easements, rights-of-way, and other privileges, shall at all times be subject to the applicable rates, rules and regulations of DISTRICT, as modified or amended from time to time. CITY hereby disclaims any interest in the IRWD FACILITIES and does hereby transfer and assign to DISTRICT any and all right, title, and interest it may have in the IRWD FACILITIES. DISTRICT shall own, operate and maintain the IRWD FACILITIES following acceptance thereof.

SECTION 10. GUARANTEES. CITY will, pursuant to the requirement(s) of the Plans and Specifications, cause its contractor(s) for the IRWD FACILITIES to guarantee the IRWD FACILITIES against defects in workmanship and materials for a period of one (1) year from the date of acceptance by CITY, which acceptance shall be given only after acceptance by DISTRICT as provided in Section 8. It is further agreed that CITY shall cause the IRWD FACILITIES to be brought or restored to full compliance with the requirements of the Plans and Specifications, including any test requirements, for any portions of the IRWD FACILITIES which during said one (1) year period are found not to be in conformance with the provisions of the Plans and Specifications. This guarantee is in addition to any and all other warranties, express or implied, from CITY's contractors or material manufacturers, with respect to the IRWD FACILITIES. The guarantee and obligations under this section shall in no way be relieved by DISTRICT's inspection and/or acceptance of the IRWD FACILITIES. This section sets forth the entire guarantee and warranty of CITY with respect to the IRWD FACILITIES. The express or implied warranties of other persons with respect to IRWD FACILITIES shall in no way be limited by the guarantee and warranty of CITY contained in this section. If requested by DISTRICT, CITY agrees to assign to DISTRICT the contractor's guarantee and/or any other guarantees or warranties relating to the IRWD FACILITIES.

SECTION 11. INDEMNIFICATION. CITY shall indemnify, defend and hold DISTRICT, its officers, agents, employees, and engineers harmless from any expense, liability or claim for death, injury, loss, damage or expense to persons or property which may arise or is claimed to have arisen during construction of the IRWD FACILITIES as a result of any work or action performed by CITY or on behalf of CITY, save and except to the extent such expense, liability or claim is proximately caused in whole or in part by any act, omission, or negligence of DISTRICT, its officers, agents, employees or engineers or by any act or omission for which DISTRICT, its officers, agents, employees or engineers are liable without fault.

DISTRICT shall indemnify, defend and hold CITY, its officers, agents, and employees, harmless from any expense, liability or claim for death, injury, loss, damage or expense to persons or property which may arise or is claimed to have arisen either (i) as a result of any acts performed by DISTRICT, its officers, agents, or employees, with respect to the IRWD FACILITIES construction; or (ii) following DISTRICT acceptance of the IRWD FACILITIES, with respect to maintenance and operation of the IRWD FACILITIES, save and except to the extent such expense, liability or claim is proximately caused in whole or in part by any negligence of CITY, its officers, agents, employees or engineers, or by any act or omission for which CITY, its officers, agents, employees or engineers are liable without fault.

SECTION 12. INSURANCE AND BONDING. CITY shall cause its contractor(s) to provide performance and payment bonds for the construction of the Project including the IRWD FACILITIES and to obtain insurance coverage sufficiently broad to insure the matters set forth in this Agreement and to include DISTRICT, its officers, agents, employees and engineers, as additional insureds on all insurance policies that CITY requires its contractor(s) to provide. As evidence of such insurance coverage, CITY shall, prior to commencement of construction of the IRWD FACILITIES, provide DISTRICT with certificates of insurance and insurance endorsements from CITY's contractor(s) in a form acceptable to DISTRICT.

SECTION 13. TERMINATION. DISTRICT shall have the right to terminate this Agreement at any time, subject to the provisions of this section, by providing five (5) business days' prior written notice to CITY, except as noted in Section 3. If at the request or direction of a party other than CITY, the construction of the IRWD FACILITIES is not accomplished or completed, DISTRICT shall remain obligated for the actual amount of the Costs incurred by CITY to the date of termination.

If CITY's Project is canceled or modified so as to eliminate the necessity of the construction of the IRWD FACILITIES, CITY shall have the right to terminate this Agreement and thereby terminate its obligation to construct the IRWD FACILITIES, by providing five (5) business days' prior written notice to DISTRICT. In such case, DISTRICT will not be obligated for any design or any other Costs incurred by CITY. If IRWD elects to construct the IRWD FACILITIES, DISTRICT may, but shall not be obligated to, acquire the design or other work from CITY by separate agreement.

SECTION 14. NOTICE. Any notice or other written instrument required or permitted by this Agreement to be given to either party shall be deemed received when personally served or twenty-four (24) hours after being deposited in the U.S. Mail, postage prepaid, registered or certified and addressed as follows:

DISTRICT: Irvine Ranch Water District  
15600 Sand Canyon Avenue  
P.O. Box 57000  
Irvine, CA 92619-7000  
Attn: General Manager

CITY: City of Irvine  
Public Works Department  
6427 Oak Canyon  
Irvine, CA 92618  
Attn: Steve Ollo, Senior Civil Engineer

SECTION 15. SUCCESSORS AND ASSIGNS; INTEGRATION; AMENDMENT. This Agreement shall be binding upon and inure to the benefit of the successor and assigns of CITY and DISTRICT. This Agreement constitutes the entire Agreement between CITY and DISTRICT and supersedes all prior understandings and agreements between the parties with respect to the subjects hereof. This Agreement may be modified only in writing signed by both parties hereto.

SECTION 16. LEGAL FEES. In the event of any declaratory or other legal or equitable action instituted between CITY and DISTRICT in connection with this Agreement, the prevailing party shall be entitled to recover from the losing party all of its costs and expenses, including court costs and reasonable attorneys' fees.

SECTION 17. DEEMED APPROVAL. Any approval required to be given by either party pursuant to this Agreement shall be deemed given if no response to the party's request for

such approval is received by the requesting party within fifteen (15) days following the written request for such approval.

SECTION 18. SEVERABILITY. If any term, provision, covenant or condition of this Agreement is held to be invalid, void or other unenforceable, to any extent, by any court of competent jurisdiction, the remainder of this Agreement shall not be affected thereby, and each term provision, covenant or condition of this Agreement shall be valid and enforceable to the fullest extent permitted by law.

SECTION 19. APPLICABLE LAW. This Agreement shall be construed and enforced in accordance with the laws of the State of California.

SECTION 20. WAIVER. The waiver of any provision of this Agreement by either party shall not be deemed to be a waiver of any other provision or of any preceding or subsequent breach hereunder.

IN WITNESS WHEREOF, the parties to the Agreement have executed this Agreement on the date herein above written.

IRVINE RANCH WATER DISTRICT

By \_\_\_\_\_  
Paul Cook, General Manager

Dated \_\_\_\_\_

ATTEST:

By \_\_\_\_\_  
Secretary/Assistant Secretary

Dated \_\_\_\_\_

APPROVED AS TO FORM:

By \_\_\_\_\_  
Legal Counsel, IRWD

Dated \_\_\_\_\_

CITY OF IRVINE  
A Municipal Corporation

By \_\_\_\_\_  
Grace Leung  
Acting City Manager of the City of Irvine

Dated \_\_\_\_\_

By \_\_\_\_\_  
Manuel Gomez  
Director of Public Works

Dated \_\_\_\_\_

ATTEST:

By \_\_\_\_\_  
Molly McLaughlin  
City Clerk of the City of Irvine

Dated \_\_\_\_\_

APPROVED AS TO FORM:

By \_\_\_\_\_  
Jeffrey Melching, RUTAN & TUCKER, LLP  
City Attorney of the City of Irvine

Dated \_\_\_\_\_

EXHIBIT "A"

REIMBURSEMENT AGREEMENT BETWEEN IRVINE RANCH WATER DISTRICT (IRWD)  
AND THE CITY OF IRVINE

FOR

CULVER DRIVE AND UNIVERSITY DRIVE INTERSECTION IMPROVEMENTS

CIP NO. 318030

ENGINEERS ESTIMATE

ITEM NO.	DESCRIPTION	QUANTITY	UNITS	UNIT COST	EXTENDED AMOUNT
76	REMOVE AND DISPOSE OF WATER METER	2	EA	\$ 5,000.00	\$ 10,000.00
77	REMOVE AND DISPOSE OF FIRE HYDRANT	1	EA	\$ 7,500.00	\$ 7,500.00
78	REMOVE AND DISPOSE OF BLOW-OFF	1	EA	\$ 6,500.00	\$ 6,500.00
79	ADJUST WATER METER TO GRADE	1	EA	\$ 1,000.00	\$ 1,000.00
80	REMOVE AND REPLACE ALL IRWD WATER VALVE CANS TO GRADE PER IRWD SRD W-22 (CANS TO BE SUPPLIED BY IRWD)	7	EA	\$ 1,000.00	\$ 7,000.00
81	ADJUST IRWD SEWER MANHOLE COVER TO GRADE	1	EA	\$ 4,500.00	\$ 4,500.00
82	ADJUST IRWD RECYCLED WATER MANHOLE TO GRADE	1	EA	\$ 4,500.00	\$ 4,500.00
83	REMOVE AND DISPOSE OF BACKFLOW ASSEMBLY PER IRWD STD W-2	1	EA	\$ 7,000.00	\$ 7,000.00
84	REMOVE AND DISPOSE OF IRWD VENTS	2	EA	\$ 5,500.00	\$ 11,000.00
85	FURNISH AND INSTALL FIRE HYDRANT ASSEMBLY PER IRWD STD W-8	1	EA	\$18,500.00	\$ 18,500.00
86	FURNISH AND INSTALL 2" REDUCE PRESSURE PRINCIPAL BACK FLOW ASSEMBLY PER IRWD STD W-7	1	EA	\$18,500.00	\$ 18,500.00
87	FURNISH AND INSTALL 2" SERVICE AND METER PER IRWD STD W-2	1	EA	\$15,000.00	\$ 15,000.00
88	FURNISH AND INSTALL 2" TWO WIRE CATHODIC PROTECTION TEST STATION PER IRWD STD CP-1	1	EA	\$10,000.00	\$ 10,000.00
89	FURNISH AND INSTALL VAULT VENT ASSEMBLY IRWD STD G-7	2	EA	\$10,000.00	\$ 20,000.00
90	FURNISH AND INSTALL 4" BLOWOFF/BOTTOM DRAIN ASSEMBLY PER IRWD STD W-14	1	EA	\$14,000.00	\$ 14,000.00
91	FURNISH AND INSTALL 12" PVC C 900 WITH COUPLING PER IRWD STD W-19	19	LF	\$ 5,000.00	\$ 95,000.00
92	FURNISH AND INSTALL 6" RESILIENT WEDGE GATE VALVE ASSEMBLY PER IRWD STD W-22	2	EA	\$ 6,000.00	\$ 12,000.00
TOTAL CONSTRUCTION ESTIMATE					\$ 262,000.00
4% ADMINISTRATION FEE PER SECTION 5 OF AGREEMENT					\$ 10,480.00
TOTAL COSTS					\$ 272,480.00

July 23, 2018

Prepared by: J. Moeder/R. Mori

Submitted by: K. Burton *(KLB)*

Approved by: Paul A. Cook *(PAC)*

## ACTION CALENDAR

### SEWAGE TREATMENT MASTER PLAN BUDGET INCREASE AND CONSULTANT SELECTION

#### SUMMARY:

IRWD prepared a Wastewater Treatment Master Plan in 2003 to identify conveyance and treatment facility improvements to meet capacity and regulatory requirements through 2025. IRWD's sewage and recycled water systems have changed significantly since then, and the service area is approaching buildout. Staff solicited proposals to develop a new master plan that will identify optimal locations and methods for conveying, treating, and distributing sewage and recycled water in the service area through buildout. Staff recommends that the Board approve a budget increase in the amount of \$209,000, from \$921,300 to \$1,130,300, for Project 05427 and in the amount of \$104,500, from \$454,300 to \$558,800, for Project 07141, and authorize the General Manager to execute a Professional Services Agreement with HDR in the amount of \$1,070,600 for engineering services for the Sewage Treatment Master Plan.

#### BACKGROUND:

In 2003, IRWD prepared a Wastewater Treatment Master Plan that defined a logical, cost effective program to upgrade and expand the District's recycling treatment plants to handle projected sewage flows, meet effluent quality requirements, and satisfy recycled water demands through 2025. Staff has since proceeded with the implementation of many of the recommendations in the 2003 master plan including the Michelson Water Recycling Plant (MWRP) Phase 1 and Phase 2 Upgrades, Los Alisos Water Recycling Plant (LAWRP) 2005 Upgrades, and the Harvard Avenue Trunk Sewer Diversion to MWRP. The service area and water recycling plants have experienced a number of changes since completion of the master plan, which is prompting staff to prepare a new master plan that will evaluate the sewer system through buildout.

The new Sewage Treatment Master Plan (STMP) will:

- Characterize sewage for such constituents as organic content and nutrients;
- Evaluate and account for impacts associated with increased loadings as a result of conservation;
- Determine future sewage conveyance requirements to MWRP and LAWRP;
- Identify future treatment processes and their associated capacities at MWRP and LAWRP;
- Identify beneficial uses of sewage;
- Evaluate alternatives for minimizing sewage diversion to Orange County Sanitation District; and
- Identify ways of managing the sewage collection and treatment systems in the most cost effective manner.

The STMP will utilize the District’s recently updated sewage and recycled water supply and demand projections to determine the optimal locations and methods for conveying, treating, and distributing the District’s sewage and recycled water. A core component of the master plan will include the development of a long-term plan for LAWRP relative to its ultimate treatment processes and capacity. The STMP will result in the identification of capital improvement projects necessary to implement the recommendations and a corresponding implementation program for those improvements.

Consultant Selection:

Staff received proposals for the STMP from AECOM, Black & Veatch, HDR, and Jacobs (formerly CH2M). The HDR proposal far exceeded the other proposals in all aspects including project team, project understanding, and project approach. HDR’s proposal provided a clear, concise methodology for completing the work and included a comprehensive and fully detailed scope of work that defined its approach to performing each step of the project. After reviewing the proposals, staff met with HDR to discuss and negotiate the final scope, schedule, fee, and hourly billing rates. Since the proposal reviewers unanimously agreed that HDR’s proposal far exceeded the other proposals, the reviewers did not rank the other three proposals. HDR’s scope of work and fee proposal are attached as Exhibit “A”.

Staff recommends that the Board authorize the General Manager to execute a Professional Services Agreement in the amount of \$1,070,600 with HDR since its project understanding, approach, team, and experience are consistent with the project goals and objectives. HDR’s fee is in the range of the other three proposals received, which ranged from \$836,735 to \$1,089,530. HDR has extensive experience providing engineering services for the District including the 2003 Wastewater Treatment Master Plan, LAWRP 2005 Upgrades, Recycled Water Salt Management Plan, and several other studies and evaluations.

Staff anticipates initiating the project in August; project completion is estimated in March 2020.

FISCAL IMPACTS:

Projects 05427 and 07141 for the Sewage Treatment Master Plan are included in the FY 2018-19 Capital Budget. A budget increase is required to fund the engineering services as shown in the table below. Project 05427 will fund 67% of the project through regional sewer funds, and Project 07141 will fund 33% of the project through regional recycled water funds.

Project No.	Current Budget	Addition <Reduction>	Total Budget
05427	\$ 921,300	\$ 209,000	\$ 1,130,300
07141	\$ 454,300	\$ 104,500	\$ 558,800
Total	\$ 1,375,600	\$ 313,500	\$ 1,689,100

ENVIRONMENTAL COMPLIANCE:

This study is exempt from the California Environmental Quality Act (CEQA) as authorized under the California Code of Regulations, Title 14, Chapter 3, Section 15262 which provides exemption for planning studies.

COMMITTEE STATUS:

This item was reviewed by the Engineering and Operations Committee on July 17, 2018.

RECOMMENDATION:

THAT THE BOARD APPROVE A BUDGET INCREASE IN THE AMOUNT OF \$209,000, FROM \$921,300 TO \$1,130,300, FOR PROJECT 05427 AND IN THE AMOUNT OF \$104,500, FROM \$454,300 TO \$558,800, FOR PROJECT 07141; AND AUTHORIZE THE GENERAL MANAGER TO EXECUTE A PROFESSIONAL SERVICES AGREEMENT WITH HDR IN THE AMOUNT OF \$1,070,600 FOR ENGINEERING SERVICES FOR THE SEWAGE TREATMENT MASTER PLAN, PROJECTS 05427 AND 07141.

LIST OF EXHIBITS:

Exhibit "A" – HDR Scope of Work and Fee Proposal

## Scope of Work

Based on our review of the project requirements and discussions with IRWD staff, we have developed a scope of work for the Sewage Treatment Plant Master Plan. The scope of work is organized and detailed to provide a clear understanding of the project work and so that progress can be monitored and verified. We will be pleased to add, delete or modify any of the individual scope items during negotiations with the District.

In developing our scope, we have modified the work plan outlined in the RFP to facilitate an efficient flow of the required analyses, evaluations, decisions and documentation:

- We have organized the tasks into five work areas:
  - A. Project Management and Meetings
  - B. Basis of Planning
  - C. Alternatives Development and Evaluation
  - D. Design Criteria and Implementation Plan
  - E. Project Report
- For each task, we have organized the scope into four topics: 1) services to be performed by HDR, 2) responsibilities of IRWD, 3) assumptions that impact the level of effort or extent of the work, and 4) work products.
- We have added optional tasks for IRWD's consideration. The scope for this work is shown in green font. The cost for this work has been identified separately in the proposed budget and is not included in the budget for the baseline scope.
- While we have included all work elements addressed in the RFP, in some cases, we have shifted specific work among the tasks to align with the overall work flow. For example:
  - For the Sewer Collection Model, we become familiar with the model in Task B3 and use the model to size and evaluate conveyance system modifications in Tasks C1 and D2.
  - We have separated discussion of treatment goals and treatment alternatives, with treatment goals addressed in Task B5 and treatment alternatives addressed in Tasks C1 and C2.
- The changes listed above have resulted in different task numbering from those listed in the RFP.

### **WORK AREA A – PROJECT MANAGEMENT AND MEETINGS**

#### **Objectives:**

- Organize, plan and manage resources and activities to meet the District's goals.
- Conduct effective workshops and meetings throughout the project.

#### **Task A1 – Project Management**

HDR shall conduct project management activities to ensure adherence to the scope, schedule and budget; promote efficient communication with IRWD staff and others as required; and implement an effective quality assurance/quality control (QA/QC) program.

#### **HDR Services**

- 1. Project Management Plan.** Prepare a project management plan identifying project scope, individual work elements, budget for each element, responsible individuals for each work element, staffing plan and schedule. The Project Management Plan will be for HDR use only but will be submitted to IRWD for their records.
- 2. QA/QC and Technical Review.** Organize and develop an effective QA/QC program specific to the project to ensure project success and accuracy. Conduct technical reviews throughout the project for the various deliverables. Provide a qualified technical review team and adequate budget for its participation.
- 3. Cost Control/Progress Reporting.** Prepare weekly and monthly status reports. Each weekly status report will be a brief (one or two paragraph) e-mail, summarizing the activities completed the previous week, the activities planned for the upcoming week, and critical decisions that need to be made. The monthly status reports shall provide more detail, summarizing the work completed and reviewing work status relative to budget and schedule. The project schedule shall be updated monthly for inclusion in the monthly report. All monthly reports shall be submitted to IRWD's Project Manager with the monthly invoices.
- 4. Management of Subconsultants.** Prepare agreements with all subconsultants participating on the project, and monitor their work in terms of product, quality, schedule and budget.

### **IRWD's Responsibilities**

1. Coordination with other consulting teams performing concurrent, related projects.
2. Prompt review of project submittals and coordination of all review comments.
3. Prompt processing and payment of compliant invoices.

### **Assumptions**

1. The project duration will be in accordance with the project schedule enclosed herein.

### **Work Products**

1. Weekly status reports.
2. Monthly reports and invoices.

### **Task A2 – Meetings and Workshops**

HDR will organize, prepare for, facilitate and document effective meetings to communicate with District staff and stakeholders. The estimated number of workshops is based on our experience working with IRWD on the 2003 Wastewater Treatment Facility Master Plan, the 2011 Biosolids Master Plan, and the Salt Management Plan.

### **HDR Services**

Meeting Summary Table summarizes the workshops and meetings anticipated during the project. This table lists all meetings and workshop by task, and identifies the meeting topic or function, the estimated meeting duration and the number of consultant team participants.

### **IRWD's Responsibilities**

1. Attendance at meetings by Project Manager and technical staff as appropriate.
2. Provide and arrange for meeting rooms.

### **Assumptions**

1. Although meetings may be discussed in the scopes for other tasks, all costs for meeting attendance and documentation are included in this task. Costs for preparing technical materials for the meetings are covered in other tasks.
2. Project management meetings will be held immediately prior to or following other meetings or workshops.
3. HDR will not provide meals at meetings and workshops.

### **Work Products**

1. Agenda and handouts for 59 meetings and workshops, submitted for IRWD review and concurrence at least

five days prior to the meeting.

2. PowerPoint presentations for 15 workshops.

3. Minutes for 59 meetings and workshops, submitted within one week of the meeting.

### **WORK AREA B – BASIS OF PLANNING**

#### **Objective:**

- Research, analyze and document key technical and planning information needed for the subsequent development and evaluation of sewage and recycled water management alternatives.

#### **Task B1 – Review Previous Studies**

HDR will review prior studies pertinent to the Sewage Treatment Plant Master Plan to understand previous evaluations and recommendations.

#### **HDR Services**

1. Review prior studies identified by IRWD.
2. Prepare brief summaries of each study that includes scope, key findings, recommendations and unresolved issues (if any).
3. Compile and distribute summaries to the project team.

#### **IRWD's Responsibilities**

1. Identify and provide access to prior studies relevant to the Master Plan.
2. Provide access to District staff familiar with the studies.

#### **Assumptions**

1. Anticipated studies to review include the 20 reports listed in the District's "Summary of Existing Reports Related to LAW RP and MW RP".

#### **Work Products**

1. Compilation of brief summaries of the prior work. This compilation will be an appendix to the Final Report.
2. Provide 10 hard copies and one electronic copy (PDF).

#### **Task B2 – Review Interagency Agreements**

HDR will review interagency agreements that govern the transfer, treatment and use of sewage, recycled water and biosolids.

#### **HDR Services**

1. Review agreements with OCSD, OCWD, SMWD, ETWD, SOCWA and other jurisdictions that potentially

impact the Sewage Treatment Master Plan.

2. Discuss with IRWD staff anticipated or potential changes to the agreements that may occur during the planning period.

#### **IRWD's Responsibilities**

1. Identify and provide access to interagency agreements relevant to the Master Plan.
2. Provide access to District staff familiar with the agreements.

#### **Assumptions**

1. None

#### **Work Products**

1. Provide matrix of agreements that includes potential impacts to the STMP and assumptions to be made.

#### **Task B3 – Sewer Collection Model**

HDR will review the Sewer Collection Model, become familiar with its use, and identify potential sewage transfer scenarios.

#### **HDR Services**

1. Review available documentation associated with the collection system model development, including sewage flow generation methodologies and assumptions.
2. Develop and run test scenarios to become familiar with the model's use.
3. Meet with District staff to discuss unique aspects of the model and identify any known issues, limitations or idiosyncrasies associated with the tool.
4. Preliminarily identify logical places in the collection system to redirect flows to and from wastewater treatment plants operated by IRWD and other jurisdictions.

#### **IRWD's Responsibilities**

1. Provide the InfoSWMM model and associated documentation and reports.
2. Meet with HDR staff to review the model.
3. Make staff available to answer questions.

#### **Assumptions**

1. In this task, the effort associated with redirection of flows is limited to a preliminary determination of likely

diversion locations. This information will be useful in developing system-wide alternatives. More detailed analysis of potential collection system modifications is included in Task C1 and D2.

#### **Work Products**

1. Brief memorandum summarizing potential locations to redirect flows to the various treatment plants. This summary will be an appendix to the Final Report.
2. Provide 10 hard copies and one electronic copy (PDF).

#### **Task B4 – Sewage Flow Characterization and Flow Projections**

This task will project sewage flow and loads from sewer tributary areas, including sewage that could be directed to or from neighboring jurisdictions. The information developed will be used in the subsequent development of "system-wide wastewater management strategies".

#### **HDR Services**

1. Flow Projections
  - a. Meet with IRWD to discuss the flow projections incorporated in the SCSMP and collection system model.
    - i. Determine whether changes or updates to the flow projections are needed due to changes in land use projections, sewer flow generation factors, or other reasons.
    - ii. Discuss any concerns or issues associated with flow monitoring conducted during the SCSMP and development of hydrographs and peaking factors.
    - iii. Discuss the potential for per capita flows to further decrease in the future due to water conservation, lowered groundwater levels and other factors. Jointly decide how to handle this variable through sensitivity analyses, scenario planning or other approaches.
    - iv. Discuss the potential for changes in interagency flow routing.
    - v. Discuss the potential for diverting urban runoff to IRWD's collection system and treatment plants.
  - b. Collect and statistically analyze influent flow data for MWRP and LAWRP to determine key peaking factors needed for permit compliance evaluations, treatment sizing and cost estimates (annual average,

maximum month, maximum day and peak hour). In particular, review the influent data during recent wet years to see if the wet weather peaking factors used in the SCSMP are sufficiently conservative.

- c. Review hydrographs from key locations in the service area to determine if significant variations in peaking factors occur.
- d. Define month-by-month variations of influent flows to allow determination of the seasonal variation in recycled water production.
- e. Based on the above information, update current and future flow projections and peaking factors for the designated sewer tributary areas.
- f. For each major sewershed, summarize projected annual flows in 5-year increments through the planning horizon and at buildout.

## 2. Wastewater Characteristics and Loadings

- a. Collect and statistically analyze influent concentration and loading data for MWRP and LAWRP.
  - i. Based on current population and land use data, determine per dwelling unit loading rates for key constituents such as BOD, TSS and nutrients. Discuss with IRWD how anticipated development and land use changes could impact future per dwelling unit loading rates. Develop and implement a methodology to quantify current and projected loadings from industrial and commercial sources.
  - ii. Determine key peaking factors needed for permit compliance evaluations, treatment sizing and cost estimates (annual average, maximum month, maximum day and peak hour).
  - iii. Update trends in influent and effluent TDS concentrations (based on prior work in the Salt Management Plan).
  - iv. Review and analyze data on Priority Pollutants, focusing on constituents that may be listed in future NPDES Permits (e.g., mercury) or constituents that may impact effluent use options such as IPR/DPR.
  - v. Review IRWD's Local Limits Study and summarize key requirements.

- b. Collect and statistically analyze available wastewater concentration and loading data from 1) tributary areas routed to other jurisdictions (e.g., IBC) or 2) within smaller segments of the MWRP and LAWRP service areas.
- c. Based on the above information, coupled with population and land use projections, update current and future load projections, wastewater characteristics and peaking factors for the designated sewer tributary areas.
- d. Summarize projected annual loadings in 5-year increments through the planning horizon and at buildout.

## 3. Additional Data Collection

- a. Identify data gaps and develop recommended sampling needed to better evaluate wastewater management and treatment alternatives. Potential sampling may include:
  - i. Wastewater characterization of critical sewersheds.
  - ii. Constituents important to pretreatment for IPR/DPR systems.

## 4. Results Workshop

- a. Hold a workshop with IRWD staff to summarize flow and loading findings.

## 5. Technical Memorandum

- a. Prepare and submit a draft memorandum summarizing findings. Meet with IRWD to discuss review comments. Prepare a final memorandum incorporating review comments.

### **IRWD's Responsibilities**

1. Update land use and sewer generation factors (if needed) and provide revised sewage flow input values to HDR.
2. Provide appropriate data from IRWD's water quality database.
3. Conduct supplemental sampling and analyses, if needed.

### **Assumptions**

1. The flow analysis will be based on the 15 sewersheds

identified in the SCSMP.

2. Information on wastewater characteristics for the major interceptors is readily available in IRWD's water quality database.
3. The analysis is limited to IRWD's sewer tributary areas. Flow and load projections from areas served by adjacent jurisdictions will be developed by others and made available to HDR.
4. Supplemental sampling requirements will be low (if any), and will not impede the project schedule.

#### **Work Products**

1. Draft and final technical memoranda. This memorandum will be converted to a chapter in the Final Report.
2. Provide 10 hard copies and one electronic copy (PDF).

#### **Task B5 – Treatment Goals and Objectives**

This task will define treatment goals to meet anticipated regulatory limits, satisfy end user requirements, permit effective management of water quality in distribution systems and reservoirs, and provide appropriate pretreatment for potential IPR/DPR advanced treatment systems. It also will review the ability of the District's treatment plants to meet these limits and goals.

#### **HDR Services**

1. Identify Water Quality Driving Forces and Effluent Requirements
  - a. Meet with IRWD to 1) identify all potential uses of the effluent from IRWD's treatment plants, and 2) discuss issues of concern regarding current and future permit compliance, water quality degradation in distribution systems, water quality management in reservoirs, etc.
  - b. Interview appropriate IRWD staff to define specific water quality requirements and issues for major categories of end users. For end user groups with stringent or unusual water quality requirements, define approximate quantity of demand associated with this use.
  - c. Interview appropriate regulatory personnel to identify the potential for future changes to IRWD's permit requirements and to identify the likely timing of the changes.
  - d. Review regulatory developments for IPR/DPR

systems and define best practices for pretreating wastewater to serve as a source of supply for advanced IPR/DPR treatment systems.

- e. Based on the above tasks, summarize anticipated water quality and regulatory requirements for recycled water (Title 22, specific end user requirements, reservoir management), ocean discharge (SOCWA Outfall and OCSD Outfall through GAP), stream discharge (San Diego Creek) and source water feed to IPR/DPR treatment systems (GWRS and new facilities).
2. Define Ability of District Plants to Comply with Water Quality Requirements
    - a. Obtain and analyze effluent quality and performance data for MWRP and LAW RP.
    - b. Obtain and analyze available water quality data from distribution systems and storage reservoirs.
    - c. Identify data gaps and define recommended sampling and analyses to address gaps.
    - d. Compare effluent quality with goals.
    - e. Identify wastewater characteristics or limitations in current or anticipated treatment practices that could prevent IRWD from meeting the water quality goals.
  3. Results Workshop
    - a. Hold a workshop with IRWD staff to summarize findings regarding water quality goals and compliance.
  4. Technical Memorandum
    - a. Prepare and submit a draft memorandum summarizing findings. Meet with IRWD to discuss review comments. Prepare a final memorandum incorporating review comments.

#### **IRWD's Responsibilities**

1. Provide appropriate data from IRWD's water quality database.
2. Participate in meetings.
3. Prompt review of submittals.
4. Conduct supplemental sampling and analyses, if needed.

**Assumptions**

1. Information on water quality and treatment performance is readily available in IRWD's water quality database.
2. Meetings with regulatory personnel can be conducted within the schedule constraints of the project.
3. Supplemental sampling requirements will be low (if any), and will not impede the project schedule.

**Work Products**

1. Draft and final technical memoranda. This memorandum will be converted to a chapter in the Final Report.
2. Provide 10 hard copies and one electronic copy (PDF).

**Task B6 – Treatment Facility Capabilities and Limitations**

This task will summarize the hydraulic and treatment capacities of the District's treatment plants and identify known deficiencies or limitations that may need to be addressed as part of the Master Planning process.

**HDR Services**

1. Meet with IRWD operations and maintenance staff to identify process limitations, operational/control issues and maintenance/condition concerns. The goal of these discussions is to identify existing limitations that may drive significant capital expenditures beyond those needed for capacity expansion or water quality compliance.
2. Using HDR's existing, calibrated process models along with updated flow and loading projections, define the current treatment capacities for MWRP and LAW RP.
3. Review the hydraulic capacity of the MWRP and LAW RP and identify bottlenecks.
4. Review the recycled water production efficiency at MWRP and IRWD.
5. Prepare and submit a draft memorandum summarizing findings. Meet with IRWD to discuss review comments. Prepare a final memorandum incorporating review comments.

**IRWD's Responsibilities**

1. Participate in meetings.
2. Prompt review of submittals.

**Assumptions**

1. This task will not involve condition assessments or significant site investigations.
2. Since this task includes two workshops with IRWD staff to discuss the treatment systems, a results workshop will not be needed.

**Work Products**

1. Draft and final technical memoranda. This memorandum will be converted to a chapter in the Final Report.
2. Provide 10 hard copies and one electronic copy (PDF).

**Task B7 – Water Supply and Demand for Recycled Water Distribution System**

This task provides a comprehensive supply and demand analysis for IRWD's non-potable water system. It incorporates alternative sources of supply (sewage, urban runoff, groundwater, Irvine Lake water, IDP, etc.) and existing and potential uses of treated water (irrigation, IPR/DPR, surface water discharge, etc.).

**HDR Services**

1. Define Supply Sources
  - a. Sewage
    - i. Based on the results of Task B4, define the current and projected quantity of sewage tributary to IRWD's treatment plants. Include "what if" scenarios, such as re-routing IBC, changes to interagency transfers, routing of urban runoff to the collection system, etc.
    - ii. Develop estimates of effluent production efficiencies for different effluent water qualities (e.g., secondary effluent, Title 22, potable water).
    - iii. Project available treated effluent supply on an annual and month-by-month basis through the planning horizon and at buildout.
  - b. Other Non-Potable Water Supplies
    - i. Meet with IRWD to identify other current or potential supplies of non-potable water including IDP, groundwater and Irvine Lake untreated water.
    - ii. Obtain data on quantity, annual and seasonal availability, water quality, constraints, cost and other factors that could influence the overall



supply and demand analysis.

c. Supply Summary

- i. Develop tables and graphs summarizing non-potable water supply alternatives through the planning horizon. Develop projections on an annual and month-by-month basis. Discuss where the various sources of supply are currently located and how they are connected to IRWD’s non-potable supply system.

2. Define Treated Effluent Uses

- a. Meet with IRWD to review current and potential uses for the District’s treated effluent and other non-potable water supplies. As part of these discussions, brainstorm additional opportunities to beneficially use the water or increase system resiliency against oversupply. For each use, define projected or potential water demands or discharge availability on an annual and seasonal basis. Define current and potential storage capabilities.

b. The analysis of treated effluent use will include:

- i. Non-potable water supply, both within and without IRWD’s service area, including consideration of regional demand projections.
- ii. Potable water supply including new IPR/DPR facilities and provision of source water to GWRS.
- iii. Surface water discharge to San Diego Creek and the ocean.

iv. GAP

3. Identify anticipated revenue and costs associated with the end use alternatives including non-potable and potable water rates, CORF, etc.

4. Identify preliminary source water/end use scenarios and develop supply/demand water balances. This information will be used to shape development of potential system-wide management alternatives.

5. Results Workshop

- a. Hold a workshop with IRWD staff to summarize findings regarding water supply and demand.

6. Technical Memorandum

- a. Prepare and submit a draft memorandum

summarizing findings. Meet with IRWD to discuss review comments. Prepare a final memorandum incorporating review comments.

**IRWD’s Responsibilities**

- 1. Participate in meetings.
- 2. Provide appropriate data from water supply reports and analyses.
- 3. Prompt review of submittals.

**Assumptions**

- 1. Supply/demand analyses will be developed for 3 to 5 source water/end use scenarios.

**Work Products**

- 1. Draft and final technical memoranda. This memorandum will be converted to a chapter in the Final Report.
- 2. Provide 10 hard copies and one electronic copy (PDF).

**WORK AREA C – ALTERNATIVES DEVELOPMENT AND EVALUATION**

**Objectives:**

- Develop a logical, transparent and defensible plan for evaluating alternatives and making decisions.
- Identify solutions that increase the effectiveness of IRWD’s treatment and recycled water systems, meet existing and future water quality requirements, increase resiliency, and provide the best return on investment for the District’s customers.

**Task C1 – System-Wide Alternatives for Conveyance and Treatment**

This task identifies and evaluates “big picture” alternatives for configuration and management of IRWD’s sewage collection, treatment, biosolids management, and treated effluent use and discharge systems.

**HDR Services**

- 1. Define Evaluation Methodology and Decision Making Process
  - a. Define the evaluation methodology, tools and criteria for use in comparing system-wide management alternatives.
  - b. Define the decision making process for the alternatives and evaluation stages. Identify who needs to be participate, when they need to be

involved, and what information they will require – both content and format.

- c. Prepare a cost model for use in evaluating and comparing system-wide alternatives. Identify all assumptions and review these with District staff. Define the format for presenting cost estimate results. Prepare a memorandum documenting the model assumptions and use.

Cost components will be discussed with IRWD, but some of the anticipated components include capital costs, operating costs, land, OCSD charges, SOCWA outfall disposal, and potential costs impacted by the IPR/DPR alternative, including the Basin Equity Assessment (BEA), the Replenishment Assessment (RA), and the cost of importing treated MWD water. In evaluating these costs, we will focus on those cost categories that are differentiators for the alternatives.

- Capital costs for treatment and conveyance systems will be developed using HDR's parametric cost models which are updated to reflect local conditions and market trends. We will supplement this tool with vendor quotes and specialized approaches for any unique circumstances.
- Operating costs will include treatment plant O&M, sewage conveyance, recycled water pumping, recycled water pretreatment (if needed), potable water treatment (if added), and the cost of imported water used for non-potable supply; Revenue costs will include the sale of recycled water or potable water generated from a recycled water supply.
- OCSD costs will include CORF, equity, and O&M charges.
- Land costs will be based on real estate values in the areas impacted.

## 2. Brainstorm, Consolidate and Screen System-Wide Alternatives

- a. Perform the following work during a workshop with IRWD:
  - i. Based on the information developed during the Basis of Planning tasks, brainstorm system-wide alternatives for conveyance and treatment. These alternatives should provide a comprehensive

management program for IRWD's sewage, but may include various combinations of the following attributes:

1. Number and location of treatment plants
  2. Amount of sewage routed to each plant
  3. Treated effluent uses or discharge (location and annual/seasonal quantities)
  4. Treated effluent conveyance and storage
- ii. Consolidate and screen the alternative management strategies to eliminate fatally flawed concepts and to reduce the number of alternatives to a manageable number for detailed evaluation.
- ## 3. Confirm Short List of Alternatives for Evaluation
- a. Conduct a follow-up meeting to refine the short-listed management alternatives, and to clarify expectations, methodologies and deliverables for the detailed evaluation of the alternatives.
- ## 4. Identify Representative Treatment Processes for Use in System-Wide Alternatives
- a. For each short-listed system-wide management alternative, define the amount of capacity IRWD must provide in each District-owned treatment plant. Develop these capacity projections in 5-year increments through the planning horizon.
  - b. For those plants needing capacity increases, conduct a workshop with IRWD staff to identify and screen conceptual treatment approaches for achieving the capacity increase and/or effluent quality improvement. The selected "representative treatment" concepts will be used for initial estimation of expansion costs for use in the overall evaluation of system-wide management alternatives. Identify logical phasing of the capacity expansions and upgrades.
  - c. Similarly, develop representative biosolids management concepts for use in evaluating the system-wide alternatives.
  - d. Develop estimated capital and operating costs for capacity expansion alternatives.
  - e. For alternatives that involve reducing flows to, or

abandoning use of, a treatment facility, estimate the revenue or avoided costs that would result from this action (e.g., elimination of LAWRP, reduction of sewage flow to OCSD).

- f. Identify key issues or constraints associated with increasing or reducing treatment of IRWD sewage at treatment facilities owned by IRWD or other adjacent jurisdictions.
  - g. Prepare and submit a draft memorandum summarizing findings. Meet with IRWD to discuss review comments. Prepare a final memorandum incorporating review comments.
5. Develop Short-Listed System Wide Alternatives
    - a. Incorporating the representative treatment concepts identified in the prior subtask, develop short-listed system-wide alternatives on a conceptual level. Identify and quantify sources of sewage for each plant and uses of treated effluent. Refine water supply and demand balances. Define, locate and size major conveyance, liquid treatment and biosolids processing components. Define roles of IRWD and potential partners (if any). Develop cost and revenue information for use in the cost model, including avoided costs.
    - b. Prepare descriptions of each system-wide alternative, and discuss the options relative to the selected evaluation criteria.
  6. Evaluate and Select System-Wide Management Plan
    - a. In a workshop with IRWD, review the short-listed System-Wide Alternatives and rate them against the evaluation criteria. Based on the analyses, select the preferred system-wide management plan.
  7. Technical Memorandum
    - a. Prepare and submit a draft memorandum summarizing findings. Prepare a final memorandum incorporating review comments.

#### **IRWD's Responsibilities**

1. Attendance at meetings by IRWD Project Manager and technical staff as appropriate.
2. Provide historical information on capital and operating costs of IRWD facilities.
3. Use the District's Recycled Water Hydraulic Model

to analyze and size recycled water conveyance components included in the system-wide alternatives

4. Prompt review of submittals
5. Coordination of review comments.

#### **Assumptions**

1. Up to 5 system-wide alternatives will be evaluated.
2. Detailed analysis of treatment plants owned and operated by other agencies will not be required.
3. HDR will use IRWD's Sewer Collection Model to define sewage conveyance improvements.
4. Analysis excludes consideration of an IPR/DPR project other than pretreatment considerations at MWRP and LAWRP for future IPR/DPR.

#### **Work Products**

1. Evaluation Criteria
2. Cost model
3. Interim memorandum on representative treatment and biosolids management concepts for use in the system-wide alternatives analysis.
4. Draft and final technical memoranda. This memorandum will be converted to a chapter in the Final Report.
5. Provide 10 hard copies and one electronic copy (PDF).

#### **Task C2 - Plant Specific Alternatives Analysis**

This task will address site-specific technology selection and site layout issues for each treatment plant based on the selected system-wide water management plan.

#### **HDR Services**

1. Refine the evaluation criteria for use in comparing plant specific technology alternatives.
2. Based on interim and long-term capacity requirements, conduct a workshop with IRWD to brainstorm and screen liquid treatment and biosolids management alternatives. Summarize findings in a memorandum.
3. Develop short-listed alternatives in detail. Development will include sizing of major treatment units; preliminary process schematics; estimates of land requirements; estimates of capital and operating costs; and discussion of phasing opportunities.

4. Conduct a workshop with IRWD to review treatment alternatives and preliminary evaluations. Gain input from IRWD for refinement/additional evaluation required prior to selection of a preferred alternative.
5. Conduct workshops to review refinements and select preferred alternatives for both MWRP and LAWRP (one workshop per plant). Summarize findings in a memorandum.
6. Prepare and submit a draft memorandum summarizing findings. Meet with IRWD to discuss review comments. Prepare a final memorandum incorporating review comments.

**IRWD's Responsibilities**

1. Participate in workshops.
2. Prompt review of submittals.

**Assumptions**

1. Level of effort is based on expanding the MWRP and LAWRP to nominal capacities of 33 and 7.5 mgd, respectively.

**Work Products**

1. Workshop summaries.
2. Memoranda summarizing treatment alternatives.
3. Draft and final technical memoranda. This memorandum will be converted to a chapter in the Final Report.
4. Provide 10 hard copies and one electronic copy (PDF).

**WORK AREA D – DESIGN CRITERIA AND IMPLEMENTATION PLAN**

**Objectives:**

- Provide clear definition of treatment and conveyance facilities needed to implement the preferred system-wide management strategy.
- Develop logical phasing and implementation plans.
- Refine capital and operating costs.
- Sufficiently develop required system components to allow IRWD to proceed with subsequent implementation steps, including preliminary design.

**Task D1 – Conceptual Design of Treatment Facilities**

This task will develop a conceptual design for each treatment plant, addressing design criteria, process

definition and site layout issues.

For the purposes of preparing scope and fee, the following assumptions have been made regarding the number of IRWD treatment facilities that will require conceptual designs and the level of complexity involved in the expansion and modifications for the treatment processes. These assumptions are for budgeting only and do not prejudice selection of capacity allocations and treatment technologies:

- IRWD will continue to have two treatment plants: MWRP and LAWRP
- MWRP will be expanded to 33 mgd using MBR technology and the current biosolids processing system.
- LAWRP will consist of a new liquid treatment system and will convey liquid or dewatered biosolids to MWRP for further processing.

**HDR Services**

1. HDR will provide the following design information on the selected concepts for upgrading and expanding IRWD's treatment plants:
  - a. Design flows and loads
  - b. Effluent quality requirements
  - c. Process flow diagram
  - d. Mass balance diagram
  - e. Hydraulic profile
  - f. Unit process design criteria table
  - g. Sizing of key facilities
  - h. Narrative description of unit processes
  - i. Preliminary process and major equipment selection
  - j. Site plan
2. Review Workshops
  - a. Conduct a workshop for each treatment plant to review the conceptual designs.
3. Prepare and submit a draft memorandum summarizing findings. Meet with IRWD to discuss review comments. Prepare a final memorandum incorporating review comments.



**IRWD's Responsibilities**

1. Participate in meetings.
2. Prompt review of submittals.

**Assumptions**

1. Conceptual designs will be developed for two IRWD treatment plants.
2. Conceptual designs exclude an IPR/DPR plant.

**Work Products**

1. Draft and final technical memoranda for each treatment plant. These memoranda will be converted to chapters in the Final Report.
2. Provide 10 hard copies and one electronic copy (PDF).

**Task D2 – Conceptual Design of Collection and Conveyance Facilities**

HDR will develop conceptual designs for major facilities required to convey sewage to treatment plants or convey treated effluent to storage, advanced treatment, surface water discharge or other end use locations.

**HDR Services**

1. HDR will provide the following design information on the selected concepts for conveying sewage or treated effluent:
  - a. Design flows
    - i. Pumping stations
    - ii. Capacity
    - iii. Type
    - iv. Preliminary location
    - v. Narrative description
  - b. Pipelines
    - i. Diameter
    - ii. Preliminary routing
    - iii. Narrative description of route, identifying major crossings or other construction challenges.
2. Review Workshop

- a. Conduct a workshop to review the conceptual conveyance designs.
3. Prepare and submit a draft memorandum summarizing findings. Meet with IRWD to discuss review comments. Prepare a final memorandum incorporating review comments.

**IRWD's Responsibilities**

1. Participate in meetings.
2. Prompt review of submittals.

**Assumptions**

1. Conceptual designs will be developed for two pump stations and two pipelines.

**Work Products**

1. Draft and final technical memoranda. This memorandum will be converted to a chapter in the Final Report.
2. Provide 10 hard copies and one electronic copy (PDF).

**Task D3 – Environmental Compliance and Permit Requirements**

This task will define environmental documentation and permitting requirements to implement the recommended improvements to IRWD's treatment plants and conveyance improvements.

**HDR Services**

1. Review existing permit conditions associated with owning and operating the MWRP and LAW RP facilities and programs.
2. Identify environmental documentation and permitting required to implement and operate the recommended plan. Prepare a summary table for permit and approval requirements that lists: 1) permit or approval, 2) federal, state, regional or local agency, 3) triggering action or mechanism, 4) information and level of detail needed for application, 5) processing time and 6) comments. Supplement the summary table with a narrative discussion of the most critical permits or approvals, including presentation of an action plan to gain approval.
3. Prepare and submit a draft memorandum summarizing findings. Meet with IRWD to discuss review comments. Prepare a final memorandum incorporating review comments.

**IRWD's Responsibilities**

1. Provide copies of all current permits and approvals that are relevant to the project.
2. Assist with identifying potential environmental documentation and permit requirements.
3. Prompt review of submittals.

**Assumptions**

1. Task B5 will address issues associated with current and anticipated effluent quality requirements. It will also discuss the impacts of raw sewage quality on IRWD’s ability to meet treatment objectives.
2. The results workshop for Task D3 will be combined with the workshop for Task D4.

**Work Products**

1. Draft and final technical memoranda. This memorandum will be converted to a chapter in the Final Report.
2. Provide 10 hard copies and one electronic copy (PDF).

**Task D4 – Implementation Plan**

HDR will develop an implementation plan for the recommended improvements that addresses phasing, constructability issues and maintenance of operation during construction. The plan will include a project schedule and projected capital and operating costs.

**HDR Services**

1. Develop the following elements of the Implementation Plan:
  - a. Phasing Plan. Identify logical phasing for construction of treatment and conveyance components.
  - b. Constructability Issues. Discuss key constructability challenges and constraints.
  - c. Maintenance of Plant Operation Issues. Identify key issues associated with maintenance of operation and permit compliance during construction. Preliminarily identify mitigation measures.
  - d. Capital & O&M Costs. Summarize projected capital and operating costs by facility and by phase.
  - e. Implementation Plan and Schedule. Prepare an implementation schedule for all phases of the work including planning, environmental and permitting, design and construction. Provide a narrative

discussion of the schedule to clarify assumptions and discuss key issues.

2. Results Workshop
  - a. Conduct a workshop to review the permitting and implementation plans.
3. Prepare and submit a draft memorandum summarizing findings. Meet with IRWD to discuss review comments. Prepare a final memorandum incorporating review comments.

**IRWD’s Responsibilities**

1. Prompt review of submittal.

**Assumptions**

1. None.

**Work Products**

1. Draft and final technical memoranda. This memorandum will be converted to a chapter in the Final Report.
2. Provide 10 hard copies and one electronic copy (PDF).

**WORK AREA E – PROJECT REPORT**

**Objective:**

- Provide a clear, concise report summarizing analyses, findings and recommendations.
- The report will include an executive summary and incorporate content from the technical memos into a single cohesive report that presents the decisions and solutions followed by the analysis and backup information.

**Task E1 – Project Report**

**HDR Services**

1. Prepare and submit a draft final report incorporating all technical memoranda developed in prior tasks.
2. Meet with IRWD staff to discuss review comments on draft report.
3. Revise the draft report to respond to formal comments. The revised report will be the final Master Plan.

**IRWD’s Responsibilities**

1. Consolidate review comments for presentation to HDR.
2. Arrange for additional printing (beyond documents defined in work products) and distribution



of documents.

**Assumptions**

1. The draft Master Plan will be revised once to produce the final Master Plan.

**Work Products**

1. Ten bound copies of the draft Master Plan.
2. Ten bound copies of the final Master Plan.
3. One electronic copy of the final Master Plan in PDF.



July 23, 2018

Prepared by: T. Bonkowski/M. Cortez

Submitted by: K. Burton *(KLB)*

Approved by: Paul A. Cook *(Signature)*

## ACTION CALENDAR

### CULVER DRIVE RECYCLED WATER PIPELINE REPLACEMENT CONSTRUCTION AWARD

#### SUMMARY:

This project will construct a 12-inch recycled water pipeline to replace the existing 8-inch asbestos cement pipeline in Culver Drive between University Drive and Ethel Coplen Way in Irvine. Staff recommends that the Board authorize the General Manager to execute a construction contract with E.J. Meyer Company in the amount of \$707,777 for the Culver Drive Recycled Water Pipeline Replacement project.

#### BACKGROUND:

The Zone A recycled water system in Culver Drive, between University Drive to the south and Ethel Coplen Way to the north, supplies recycled water to the Rancho San Joaquin Golf Course and the City of Irvine's landscaped parkway behind the westerly curb of Culver Drive. The pipeline, originally installed in 1976, is asbestos cement pipe (ACP) and ultimately connects to a polyvinyl chloride (PVC) segment approximately 700 feet south of the street intersection of Culver Drive and Ethel Coplen/Sandburg Way.

The ACP segment is approximately 1,250 feet and has had several repairs. During a previous repair, a sample portion of the ACP was removed and staff retained HDR to perform a forensic analysis on the pipe sample. HDR's analysis concluded that the pipe exhibited corrosion of the interior or leaching of the lime component of ACP, which is likely caused by high pH levels in recycled water from MWRP, and recommended replacing the pipeline. Several years ago, the distribution pipeline system in Blue Lake in the Woodbridge area was composed of ACP and required replacement due to this issue. Hydraulic modeling of the Zone A recycled water system reflected a need to increase the segment's pipe diameter from 8- to 12-inches to meet maximum velocity criteria.

This project will abandon the existing 8-inch ACP and install a replacement 12-inch PVC pipeline in the roadway, where it will be offset approximately six feet from the west curbface. In addition, three replacement services will be constructed and connected to the existing onsite private plumbing just downstream of the existing meters. Construction will start within the street intersection of Culver and University Drives, to precede the City of Irvine's upcoming street improvement project for this intersection, and progress northerly.

#### Construction Award:

The District retained RCE Consultants in March 2018 for the design of the required pipeline improvements. The design was completed in June 2018 and the project was advertised for construction bidding to a select list of ten pipeline contractors. Five contractors attended the

pre-bid meeting and five contractors submitted bids on July 28, 2018. E.J. Meyer Company is the apparent low bidder with a bid amount of \$707,777; the engineer's estimate was \$779,610. The Bid Summary is attached as Exhibit "B".

FISCAL IMPACTS:

Project 10588 is included in the FY 2018-19 Capital Budget. The existing budget is sufficient to fund the construction of the project.

ENVIRONMENTAL COMPLIANCE:

This project is exempt from the California Environmental Quality Act (CEQA) and in conformance with California Code of Regulations Title 14, Chapter 3, 15302. Section 15302 provides exemption for the replacement of existing facilities where the new facility will be located on the same site as the facility replaced and will have substantially the same purpose as the facility replaced. Additionally, State Guideline 15282 provides exemptions for the installation of new pipeline as long as the project does not exceed one mile (or 5,280 feet) in length. A Notice of Exemption for the project was filed with the County of Orange on May 18, 2017.

COMMITTEE STATUS:

Construction awards are not routinely taken to Committee prior to submittal to the Board.

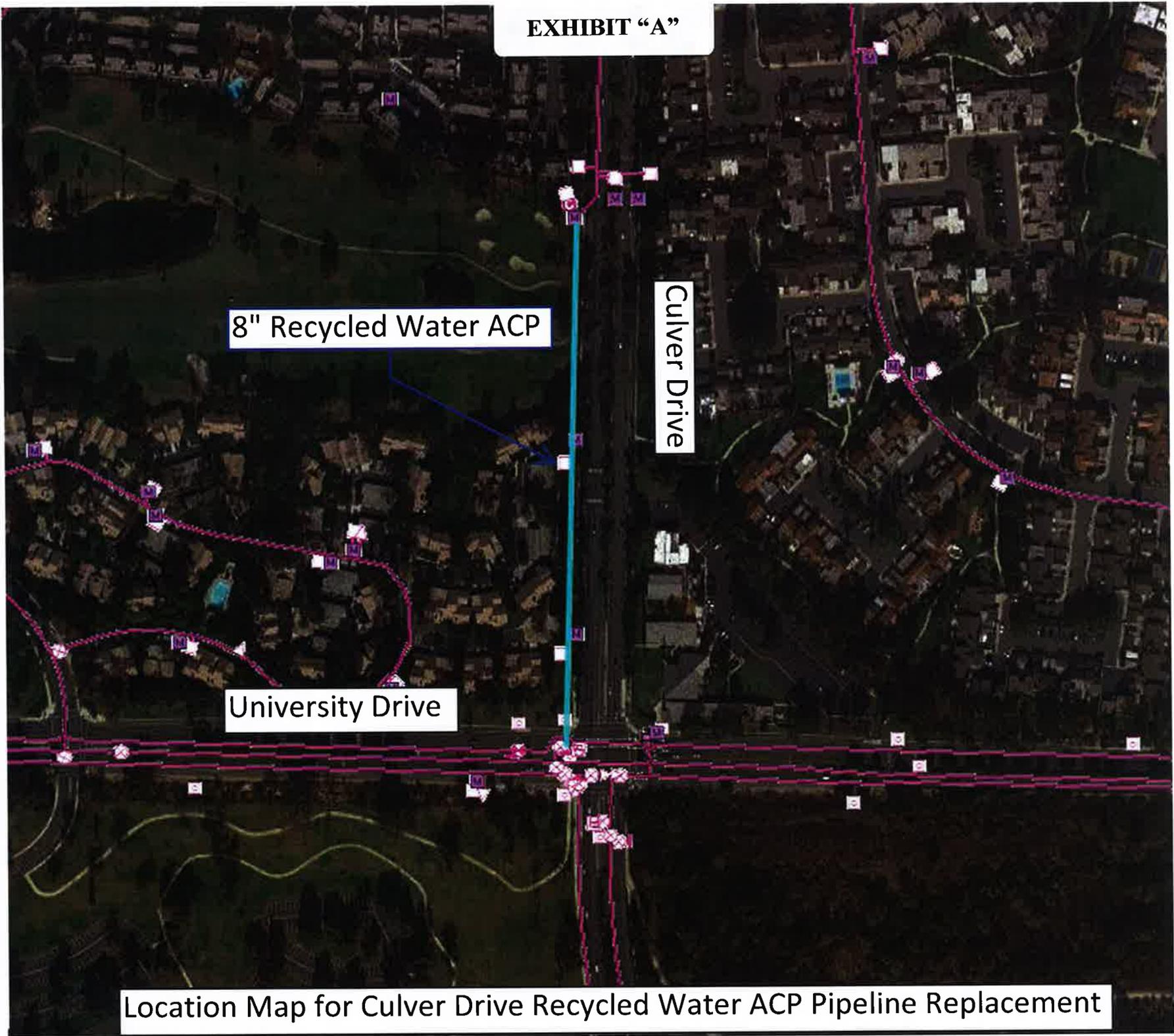
RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE GENERAL MANAGER TO EXECUTE A CONSTRUCTION CONTRACT WITH E.J. MEYER COMPANY IN THE AMOUNT OF \$707,777 FOR THE CULVER DRIVE RECYCLED WATER PIPELINE REPLACEMENT, PROJECT 10588.

LIST OF EXHIBITS:

Exhibit "A" – Location Map  
Exhibit "B" – Bid Summary

**EXHIBIT "A"**



8" Recycled Water ACP

Culver Drive

University Drive

Location Map for Culver Drive Recycled Water ACP Pipeline Replacement

# EXHIBIT "B"

Bid Opening: Thursday, July 12, 2018 @ 2:00 p.m.

Irvine Ranch Water District  
Bid Summary For  
Culver Drive Recycled Water Pipeline Replacement  
PR 10588, Code 7252

Entered By: L. Gates

Item No.	Description	Qty	Unit	Engineer's Estimate		1 E.J. Meyer Company Highland, CA		2 L & S Construction, Inc. Orange, CA		3 T.E. Roberts, Inc. Orange, CA	
				Unit Price	Total Amount	Unit Price	Total Amount	Unit Price	Total Amount	Unit Price	Total Amount
1	Mobilization & Demobilization (not to exceed 5% of total bid price)	1	LS	\$35,000.00	\$35,000.00	\$35,000.00	\$35,000.00	\$32,000.00	\$32,000.00	\$8,000.00	\$8,000.00
2	Provide traffic control, including traffic control plans, all necessary equipment and materials, set-up and removal, and temporary Ac, in accordance with City of Irvine requirements	1	LS	\$40,000.00	\$40,000.00	\$13,007.00	\$13,007.00	\$42,000.00	\$42,000.00	\$9,700.00	\$9,700.00
3	Sheeting, shoring, & excavation safety	1	LS	\$10,000.00	\$10,000.00	\$10,000.00	\$10,000.00	\$9,000.00	\$9,000.00	\$9,700.00	\$9,700.00
4	Furnish and install 12" AWWA C900 DR-14 Purple Pipe in trench per IRWD Std. Dwg. W-17 with 1-sack slurry backfill per City of Irvine Std. Plan 223 including fittings and appurtenances with thrust blocks per IRWD Std. Dwg. W-16	1,210	LF	\$315.00	\$381,150.00	\$350.00	\$423,500.00	\$238.00	\$287,980.00	\$210.00	\$254,100.00
5	Furnish and install 8" AWWA C900 DR-14 Purple Pipe in trench per IRWD Std. Dwg. W-17 with 1-sack slurry backfill per City of Irvine Std. Plan 223 including fittings and appurtenances with thrust blocks per IRWD Std. Dwg. W-16	30	LF	\$275.00	\$8,250.00	\$350.00	\$10,500.00	\$382.00	\$11,460.00	\$490.00	\$14,700.00
6	Furnish and install 12" butterfly valve and box per IRWD Std. Dwg. W-22 with thrust blocks per IRWD Std. Dwg. W-16	3	EA	\$6,500.00	\$19,500.00	\$4,000.00	\$12,000.00	\$6,000.00	\$18,000.00	\$7,600.00	\$22,800.00
7	Furnish and install 8" gate valve and box per IRWD Std. Dwg. W-22 with thrust blocks per IRWD Std. Dwg. W-16	1	EA	\$5,200.00	\$5,200.00	\$2,500.00	\$2,500.00	\$2,300.00	\$2,300.00	\$6,600.00	\$6,600.00
8	Furnish and install new 2" copper water service lateral per IRWD Std. Dwg. W-2	3	EA	\$4,000.00	\$12,000.00	\$6,000.00	\$18,000.00	\$6,000.00	\$18,000.00	\$14,600.00	\$43,800.00
9	Furnish and install 8" water meter assembly in remote-read local below-grade vault per IRWD Std. Dwg. W-5 including removal of existing vault, meter, and piping	1	LS	\$80,000.00	\$80,000.00	\$65,000.00	\$65,000.00	\$80,000.00	\$80,000.00	\$84,000.00	\$84,000.00
10	Remove and replace traffic loop detectors per City of Irvine Std. Plans TS-8A to TS-8E	8	EA	\$5,000.00	\$40,000.00	\$800.00	\$6,400.00	\$650.00	\$5,200.00	\$4,300.00	\$34,400.00
11	Remove and replace existing sidewalk per City of Irvine Std. Plan 201	256	SF	\$35.00	\$8,960.00	\$20.00	\$5,120.00	\$30.00	\$7,680.00	\$54.00	\$13,824.00
12	Remove and replace existing curb & gutter per City of Irvine Std. Plan 200	50	LF	\$75.00	\$3,750.00	\$25.00	\$1,250.00	\$100.00	\$5,000.00	\$230.00	\$11,500.00
13	Restore existing pavement in trench section per City of Irvine Std. Plan 223	7,500	LF	\$10.00	\$75,000.00	\$5.00	\$37,500.00	\$17.00	\$127,500.00	\$21.00	\$157,500.00
14	Type II slurry seal per City of Irvine Standards	15,000	SF	\$0.80	\$12,000.00	\$1.00	\$15,000.00	\$1.00	\$15,000.00	\$1.29	\$19,350.00
15	Abandon in place existing 8" ACP main. Fill with 6-sack slurry. Plug open ends with concrete.	1	LS	\$2,000.00	\$2,000.00	\$10,000.00	\$10,000.00	\$9,000.00	\$9,000.00	\$9,000.00	\$9,000.00
16	Connect to existing 24" recycled water main per Detail "A" of the Plans including removal of existing pipe, valve, and fittings.	1	LS	\$17,000.00	\$17,000.00	\$10,000.00	\$10,000.00	\$24,000.00	\$24,000.00	\$10,100.00	\$10,100.00
17	Connect to existing 8" recycled water main per Detail "B" of the Plans including removal of existing pipe and fittings.	1	LS	\$12,000.00	\$12,000.00	\$10,000.00	\$10,000.00	\$9,500.00	\$9,500.00	\$10,400.00	\$10,400.00
18	Restore pavement striping including crosswalk striping and lane	1	LS	\$4,500.00	\$4,500.00	\$10,000.00	\$10,000.00	\$13,500.00	\$13,500.00	\$41,000.00	\$41,000.00
19	Furnish and install 1-inch air-release assembly per IRWD Std. Dwg. W-11	1	EA	\$5,800.00	\$5,800.00	\$10,000.00	\$10,000.00	\$5,800.00	\$5,800.00	\$15,000.00	\$15,000.00
20	Identify and reset survey markers and centerline ties	1	LS	\$5,000.00	\$5,000.00	\$500.00	\$500.00	\$2,500.00	\$2,500.00	\$12,000.00	\$12,000.00
21	Final Record Drawings	1	LS	\$2,500.00	\$2,500.00	\$2,500.00	\$2,500.00	\$2,500.00	\$2,500.00	\$2,500.00	\$2,500.00
Subtotal, Base Bid Items and Additive/Deductive Bid Items					\$779,610.00	\$779,610.00	\$707,777.00	\$707,777.00	\$727,920.00	\$727,920.00	\$789,974.00
Adjustment (+ or -)					\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>TOTAL AMOUNT OF BID</b>					<b>\$779,610.00</b>	<b>\$779,610.00</b>	<b>\$707,777.00</b>	<b>\$707,777.00</b>	<b>\$727,920.00</b>	<b>\$727,920.00</b>	<b>\$789,974.00</b>

Irvine Ranch Water District  
 Bid Summary For  
 Culver Drive Recycled Water Pipeline Replacement  
 PR 10588, Code 7252

			<b>Engineer's Estimate</b>		<b>1 E.J. Meyer Company Highland, CA</b>		<b>2 L &amp; S Construction, Inc. Orange, CA</b>		<b>3 T.E. Roberts, Inc. Orange, CA</b>		
Item No.	Description	Qty	Unit Price	Total Amount	Unit Price	Total Amount	Unit Price	Total Amount	Unit Price	Total Amount	
<b>NOTES:</b>				<b>Item</b>		<b>Manufacturers:</b>		<b>Manufacturers:</b>		<b>Manufacturers:</b>	
1 - Paulus Engineering, Inc. did not acknowledge Addendum No. 2.		8-inch & 12-inch PVC C-900 DR 14 Pipe		Vinyltech		Vinyltech		Vinyltech		Vinyltech	
		8-inch Gate Valve		Mueller		Clow		MH		MH	
		12-inch Butterfly Valve		Mueller		Dezurik		Crispin		Crispin	
				<b>Subcontractors:</b>		<b>Subcontractors:</b>		<b>Subcontractors:</b>		<b>Subcontractors:</b>	
				Paving/Slurry Seal: All American Asphalt		Paving: All American Asphalt		Slurry Seal: All American Asphalt		Slurry Seal: All American Asphalt	
				Striping: Superior Pavement Markings		Striping: Superior Pavement Markings		Striping: Superior Pavement Markings		Striping: Superior Pavement Markings	
				Traffic Loops: Smithson Electric, Inc.		Grinding: Pavement Recycling Systems, Inc.		Grind/Cap: Hardy & Harper		Grind/Cap: Hardy & Harper	
						Loop/Camera: Traffic Loops Crackfilling, Inc.		Sidewalk, Curb & Gutter: Structures Unlimited		Sidewalk, Curb & Gutter: Structures Unlimited	
								Pipe Abandonment: Cell-Crete		Pipe Abandonment: Cell-Crete	
								Traffic Loops: Traffic Loops Crackfilling, Inc.		Traffic Loops: Traffic Loops Crackfilling, Inc.	

Irvine Ranch Water District  
 Bid Summary For  
 Culver Drive Recycled Water Pipeline Replacement  
 PR 10588, Code 7252

Item No.	Description	Qty	Unit	Engineer's Estimate		4 GCI Construction, Inc. San Clemente, CA		5 Paulus Engineering, Inc. Anaheim, CA	
				Unit Price	Total Amount	Unit Price	Total Amount	Unit Price	Total Amount
1	Mobilization & Demobilization (not to exceed 5% of total bid price)	1	LS	\$35,000.00	\$35,000.00	\$40,000.00	\$40,000.00	\$19,000.00	\$19,000.00
2	Provide traffic control, including traffic control plans, all necessary equipment and materials, set-up and removal, and temporary Ac, in accordance with City of Irvine requirements	1	LS	\$40,000.00	\$40,000.00	\$40,000.00	\$40,000.00	\$70,000.00	\$70,000.00
3	Sheeting, shoring, & excavation safety	1	LS	\$10,000.00	\$10,000.00	\$52,500.00	\$52,500.00	\$8,000.00	\$8,000.00
4	Furnish and install 12" AWWA C900 DR-14 Purple Pipe in trench per IRWD Std. Dwg. W-17 with 1-sack slurry backfill per City of Irvine Std. Plan 223 including fittings and appurtenances with thrust blocks per IRWD Std. Dwg. W-16	1,210	LF	\$315.00	\$381,150.00	\$312.00	\$377,520.00	\$468.00	\$566,280.00
5	Furnish and install 8" AWWA C900 DR-14 Purple Pipe in trench per IRWD Std. Dwg. W-17 with 1-sack slurry backfill per City of Irvine Std. Plan 223 including fittings and appurtenances with thrust blocks per IRWD Std. Dwg. W-16	30	LF	\$275.00	\$8,250.00	\$635.00	\$19,050.00	\$463.00	\$13,890.00
6	Furnish and install 12" butterfly valve and box per IRWD Std. Dwg. W-22 with thrust blocks per IRWD Std. Dwg. W-16	3	EA	\$6,500.00	\$19,500.00	\$5,000.00	\$15,000.00	\$4,270.00	\$12,810.00
7	Furnish and install 8" gate valve and box per IRWD Std. Dwg. W-22 with thrust blocks per IRWD Std. Dwg. W-16	1	EA	\$5,200.00	\$5,200.00	\$4,500.00	\$4,500.00	\$3,140.00	\$3,140.00
8	Furnish and install new 2" copper water service lateral per IRWD Std. Dwg. W-2	3	EA	\$4,000.00	\$12,000.00	\$7,800.00	\$23,400.00	\$7,960.00	\$23,880.00
9	Furnish and install 8" water meter assembly in remote-read local below-grade vault per IRWD Std. Dwg. W-5 including removal of existing vault, meter, and piping	1	LS	\$80,000.00	\$80,000.00	\$75,000.00	\$75,000.00	\$59,450.00	\$59,450.00
10	Remove and replace traffic loop detectors per City of Irvine Std. Plans TS-8A to TS-8E	8	EA	\$5,000.00	\$40,000.00	\$2,600.00	\$20,800.00	\$800.00	\$6,400.00
11	Remove and replace existing sidewalk per City of Irvine Std. Plan 201	256	SF	\$35.00	\$8,960.00	\$63.55	\$16,268.80	\$21.00	\$5,376.00
12	Remove and replace existing curb & gutter per City of Irvine Std. Plan 200	50	LF	\$75.00	\$3,750.00	\$267.00	\$13,350.00	\$180.00	\$9,000.00
13	Restore existing pavement in trench section per City of Irvine Std. Plan 223	7,500	LF	\$10.00	\$75,000.00	\$8.32	\$62,400.00	\$5.22	\$39,150.00
14	Type II slurry seal per City of Irvine Standards	15,000	SF	\$0.80	\$12,000.00	\$1.75	\$26,250.00	\$0.93	\$13,950.00
15	Abandon in place existing 8" ACP main. Fill with 6-sack slurry. Plug open ends with concrete.	1	LS	\$2,000.00	\$2,000.00	\$22,000.00	\$22,000.00	\$11,015.00	\$11,015.00
16	Connect to existing 24" recycled water main per Detail "A" of the Plans including removal of existing pipe, valve, and fittings.	1	LS	\$17,000.00	\$17,000.00	\$28,000.00	\$28,000.00	\$15,866.00	\$15,866.00
17	Connect to existing 8" recycled water main per Detail "B" of the Plans including removal of existing pipe and fittings.	1	LS	\$12,000.00	\$12,000.00	\$25,000.00	\$25,000.00	\$11,925.00	\$11,925.00
18	Restore pavement striping including crosswalk striping and lane	1	LS	\$4,500.00	\$4,500.00	\$15,000.00	\$15,000.00	\$15,470.00	\$15,470.00
19	Furnish and install 1-inch air-release assembly per IRWD Std. Dwg. W-11	1	EA	\$5,800.00	\$5,800.00	\$15,000.00	\$15,000.00	\$10,370.00	\$10,370.00
20	Identify and reset survey makers and centerline ties	1	LS	\$5,000.00	\$5,000.00	\$10,000.00	\$10,000.00	\$2,700.00	\$2,700.00
21	Final Record Drawings	1	LS	\$2,500.00	\$2,500.00	\$2,500.00	\$2,500.00	\$2,500.00	\$2,500.00
Subtotal, Base Bid Items and Additive/Deductive Bid Items					\$779,610.00	\$903,538.80	\$920,172.00		
Adjustment (+ or -)					\$0.00	\$0.00	\$0.00		
<b>TOTAL AMOUNT OF BID</b>					<b>\$779,610.00</b>	<b>\$903,538.80</b>	<b>\$920,172.00</b>		

Irvine Ranch Water District  
 Bid Summary For  
 Culver Drive Recycled Water Pipeline Replacement  
 PR 10588, Code 7252

				<b>4</b>		<b>5</b>			
				<b>Engineer's Estimate</b>		<b>GCI Construction, Inc.</b>		<b>Paulus Engineering, Inc.</b>	
						<b>San Clemente, CA</b>		<b>Anaheim, CA</b>	
Item No.	Description	Qty	Unit	Unit Price	Total Amount	Unit Price	Total Amount	Unit Price	Total Amount
<b>NOTES:</b>				<b>Item</b>		<b>Manufacturers:</b>		<b>Manufacturers:</b>	
1	Paulus Engineering, Inc. did not acknowledge Addendum No. 2			8-inch & 12-inch PVC C-900 DR 14 Pipe		Vinyltech		Vinyltech	
				8-inch Gate Valve		Mueller		MH	
				12-inch Butterfly Valve		Mueller		Crispin	
						<b>Subcontractors:</b>		<b>Subcontractors:</b>	
						Slurry Abandonment: Cell-Crete		Grind & Cap/Slurry Seal: All American Asphalt	
						Striping: Superior Pavement Markings		Loops & Cameras: Traffic Loops Crackfilling, Inc.	
						Asphalt: Hardy and Harper			