

AGENDA
IRVINE RANCH WATER DISTRICT
ENGINEERING AND OPERATIONS COMMITTEE
TUESDAY, SEPTEMBER 18, 2018

CALL TO ORDER 7:30 a.m., IRWD's Operations Center, First Floor Committee Room
3512 Michelson Drive, Irvine, California 92612

ATTENDANCE Committee Chair: John Withers _____
Committee Member: Mary Aileen Matheis _____

<u>ALSO PRESENT</u>	Paul Cook	_____	Jose Zepeda	_____	Steve Malloy	_____
	Kevin Burton	_____	Eric Akiyoshi	_____	Paul Weghorst	_____
	Rich Mori	_____	Scott Toland	_____	Tom Roberts	_____
	Kelly Lew	_____	Wendy Chambers	_____	Ken Pfister	_____
	Lars Oldewage	_____	Arseny Kalinsky	_____	_____	_____
	Malcolm Cortez	_____	Barkev Meserlian	_____	_____	_____
	John Dayer	_____	Bruce Newell	_____	_____	_____

COMMUNICATIONS

1. Notes: Burton
2. Public Comments
3. Determine the need to discuss and/or take action on item(s) introduced that came to the attention of the District subsequent to the agenda being posted.
4. Determine which items may be approved without discussion.

ACTION

5. PLANNING AREA 51 HERITAGE FIELDS CAPITAL FACILITIES –
KESSLER/LEW/BURTON

Recommendation: That the Board authorize the General Manager to accept Heritage Fields' construction contract with Fydaq Company, Inc. in the amount of \$167,667.21 for the District 2 Bake Parkway Recycled Water Improvements, Project 10447; authorize a budget increase in the amount of \$110,000, from \$163,000 to \$273,000, for the District 2 Bake Parkway Recycled Water Improvements, Project 10447; authorize a budget increase in the amount of \$240,000, from \$244,200 to \$484,200, for the District 4 Benchmark and Perspective Improvements, Project 06553; and approve Contract Change Order No. 2 to Project 06553 in the amount of \$249,965 for the addition of two additional manholes and jack and bore tasks to the scope of the District 4 Benchmark and Perspective Improvements.

ACTION - Continued

6. PLANNING AREA 6 (PORTOLA SPRINGS) CAPITAL FACILITIES – LEW/BURTON

Recommendation: That the Board authorize the General Manager to accept Irvine Community Development Company's construction contract with Irvine Pipeline Company, Inc. in the amount of \$327,945 for the Portola Springs Neighborhood 5B and 5C Improvements, Projects 10100 and 10426.

7. IRVINE INDUSTRIAL COMPLEX EAST ZONE A TO B PUMP STATION UPGRADES CONSULTANT SELECTION – MCGEHEE/MORI/BURTON

Recommendation: That the Board authorize the General Manager to execute a Professional Services Agreement in the amount of \$133,750 with Lee & Ro, Inc. for engineering support services during construction of the IIC East Zone A to B BPS Upgrades, Project 06198.

8. ZONE A TO RATTLESNAKE RESERVOIR PUMP STATION CONSULTANT SELECTION – MCGEHEE/MORI/BURTON

Recommendation: That the Board authorize the General Manager to execute a Professional Services Agreement with Brown and Caldwell in the amount of \$1,247,625 for engineering design services for the Zone A to Rattlesnake Reservoir Pump Station, Project 05476.

9. DYER ROAD WELLFIELD WELL NO. 5 REHABILITATION BUDGET ADDITION – SPANGENBERG/CORTEZ/BURTON

Recommendation: That the Board authorize the addition of Project 10914 to the FY 2018-19 Capital Budget in the amount of \$770,000, for the design and construction of the Dyer Road Wellfield Well No. 5 Rehabilitation.

10. AMENDED AND RESTATED SEWER SERVICE AGREEMENT FOR EL MORRO ELEMENTARY SCHOOL AND MORO CAMPGROUND – MWE/AKIYOSHI/BURTON

Recommendation: That the Board authorize the General Manager to execute the Amended and Restated Sewer Service Agreement between Orange County Sanitation District and IRWD to provide out-of-area sewer service to El Morro Elementary School and Moro Campground.

OTHER BUSINESS

11. Directors' Comments

12. 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 above-named Committee in connection with a matter subject to discussion or consideration at an open meeting of the Committee 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 Committee 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 Committee Members, except that if such writings are distributed one hour prior to, or during, the meeting, they will be available at the entrance of the meeting room at the District's Operations Committee Room at 3512 Michelson, Irvine, California. The Irvine Ranch Water District's Committee 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) 453-5312 during business hours at least seventy-two (72) hours prior to the scheduled meeting.

September 18, 2018
Prepared by: C. Kessler/K. Lew
Submitted by: K. Burton
Approved by: Paul A. Cook 

ENGINEERING AND OPERATIONS COMMITTEE

PLANNING AREA 51 HERITAGE FIELDS CAPITAL FACILITIES

SUMMARY:

Heritage Fields El Toro, LLC (Heritage Fields) is proceeding with development of Planning Area (PA) 51 (Great Park), which includes the construction of streets, storm drains, domestic water, sewer, and recycled water improvements. Staff recommends that the Board:

- Authorize the General Manager to accept Heritage Fields' construction contract with Fydaq Company, Inc. in the amount of \$167,667.21 for the District 2 Bake Parkway Recycled Water Improvements, Project 10447;
- Authorize a budget increase in the amount of \$110,000, from \$163,000 to \$273,000, for the District 2 Bake Parkway Recycled Water Improvements;
- Authorize a budget increase in the amount of \$240,000, from \$244,200 to \$484,200, for the District 4 Benchmark and Perspective Improvements; and
- Approve Contract Change Order (CCO) No. 2 to Project 06553 in the amount of \$249,965 for the addition of two additional manholes and jack and bore tasks to the scope of the District 4 Benchmark and Perspective Improvements.

BACKGROUND:

Heritage Fields is moving forward with development of Districts 2 and 4 within PA 51. District 2 is bound by Marine Way, Alton Parkway and Interstate 5. District 4 is south of Irvine Boulevard between Districts 1 and 5. The project location map is shown as Exhibit "A". As part of this development, Heritage Fields will design and construct IRWD's domestic water, sewer, and recycled water capital improvements. The required IRWD capital facilities are documented in the June 2017 PA 51 Sub-Area Master Plan Technical Memorandum prepared by Stantec.

The design and construction of the IRWD facilities will be performed under the terms of the Master Reimbursement Agreement and Supplemental Reimbursement Agreement between Heritage Fields and IRWD approved by the Board in August 2012 and November 2015, respectively.

District 2 Bake Parkway Recycled Water Improvements:

The District 2 Bake Parkway Recycled Water Improvements consist of installing approximately 20 feet of 16-inch recycled water pipeline within the intersection of Bake Parkway and Marine Way. This portion of the pipeline was designed and bid separately from the rest of the project given the difficulty of working within the intersection. Heritage Fields retained Hunsaker to prepare the plans and received bids from three contractors; Heritage Fields recommends awarding the construction contract to the lowest bidder, Fydaq Company, Inc., for a bid amount of \$167,667.21 as shown in Exhibit "B". In addition, Heritage Fields has received consultant proposals for geotechnical observation and testing, surveying, construction support services,

design and field archeological and paleontological monitoring. Staff has reviewed the consultant proposals and the construction bids and found the amounts to be acceptable. A summary of District 2 Bake Parkway Improvements costs is shown below.

Design (Hunsaker)	\$ 45,380.00
Construction (Fydaq)	\$167,667.21
Geotechnical Services (Engeo)	\$ 2,400.00
Construction Engineering/Surveying (Hunsaker)	\$ 8,300.00
Archeo/Paleo Monitoring (LSA)	\$ 812.00
Heritage Fields Administration Fee (1%)	<u>\$ 1,676.67</u>
	\$226,235.88

District 4 Benchmark and Perspective Improvements CCO No. 2:

CCO No. 2 to the District 4 Benchmark and Perspective Improvements represents revisions to bid quantities that were originally contracted. Items were added to the original bid set as a part of a delta plan revision. CCO No. 2 includes the addition of two manholes and jack and bore construction methods to the scope of the project at the direction of IRWD. The modified scope and relocation resolved issues associated with open trench construction methods, construction of a diversion structure within an existing multiple-inlet manhole, and maintenance access. Staff has reviewed the costs and quantities associated with this change order and finds them to be acceptable. CCO No. 2, attached as Exhibit "C" in the amount of \$249,965, is for the equipment, material, and labor to install the facilities.

FISCAL IMPACTS:

Projects 10447 and 06553 are included in the FY 2018-19 Capital Budget and will be funded by Great Park Neighborhoods development. Both projects will require a budget increase.

Project No.	Current Budget	Addition <Reduction>	Total Budget
10447	\$163,000	\$110,000	\$273,000
06553	\$244,200	\$240,000	\$484,200
Total	\$407,200	\$350,000	\$757,200

ENVIRONMENTAL COMPLIANCE:

Construction of capital domestic water, sewer, and recycled water facilities for the Great Park Development is subject to CEQA. In conformance with the California Code of Regulations Title 14, Chapter 3, Article 7 an Environmental Impact Report was certified by the City of Irvine, the lead agency on April 4, 2012 (SCH# 2002101020).

RECOMMENDATION:

That the Board authorize the General Manager to accept Heritage Fields' construction contract with Fydaq Company, Inc. in the amount of \$167,667.21 for the District 2 Bake Parkway Recycled Water Improvements, Project 10447; authorize a budget increase in the amount of

\$110,000, from \$163,000 to \$273,000, for the District 2 Bake Parkway Recycled Water Improvements, Project 10447; authorize a budget increase in the amount of \$240,000, from \$244,200 to \$484,200, for the District 4 Benchmark and Perspective Improvements, Project 06553; and approve Contract Change Order No. 2 to Project 06553 in the amount of \$249,965 for the addition of two additional manholes and jack and bore tasks to the scope of the District 4 Benchmark and Perspective Improvements.

LIST OF EXHIBITS:

Exhibit “A” – Location Map

Exhibit “B” – Bid Summary, District 2 Bake Parkway Recycled Water Improvements

Exhibit “C” – CCO No. 2, District 4 Benchmark and Perspective Improvements

EXHIBIT "A"

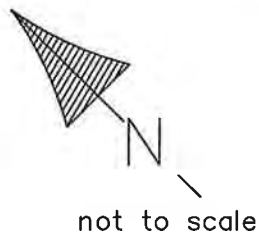
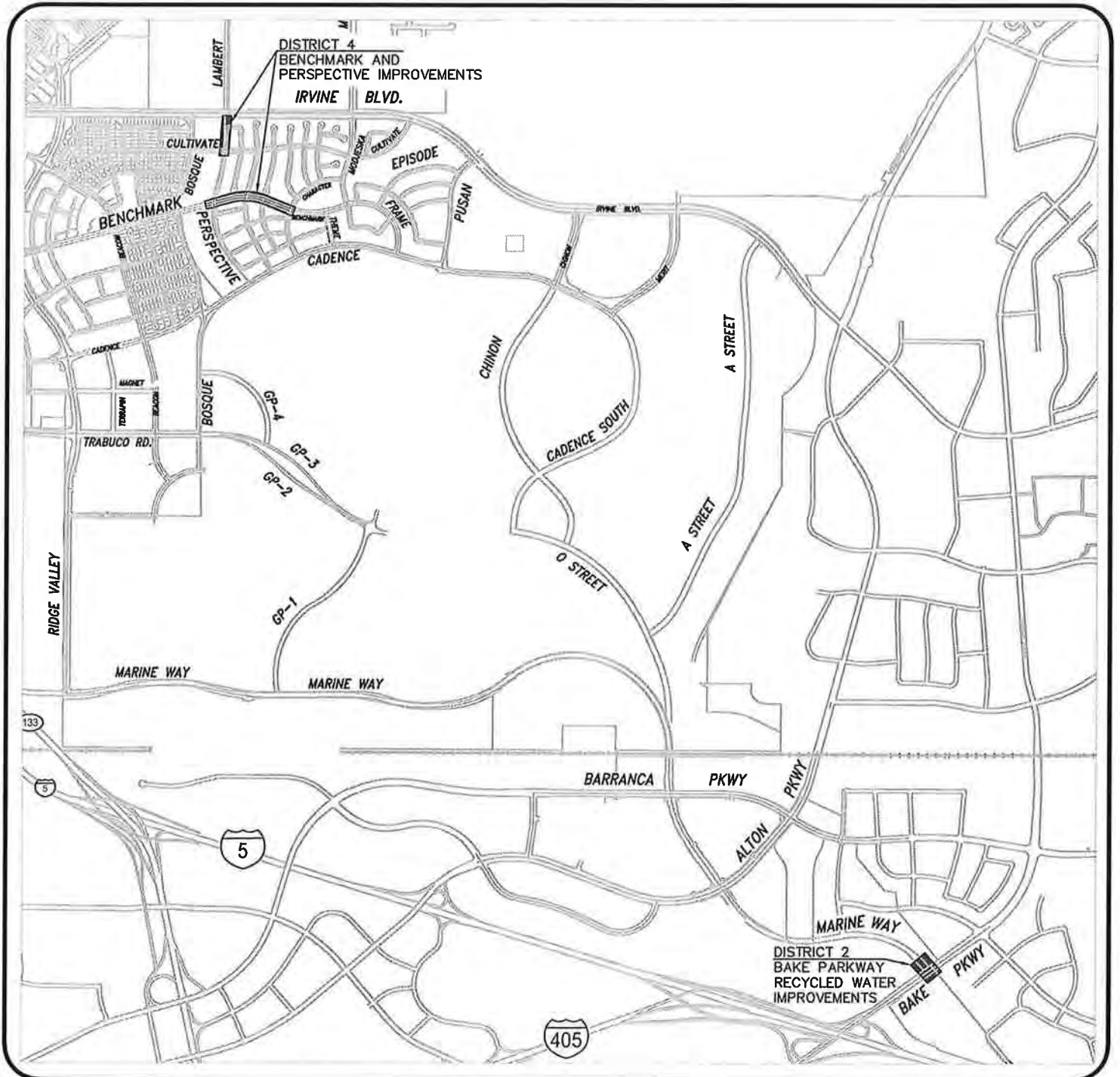


EXHIBIT "A"
LOCATION MAP

EXHIBIT "B"

Owner: Heritage Fields El Toro, LLC Project: District 2 - Bake Parkway - Recycled Water Improvements Bid Date: April 26, 2018
CODE 7142

				ENGINEER ESTIMATE		FYDAQ-LOW Attn: Greg Huntley Tel: 714.447.9760		L&S Attn: Elton Welham Tel: 714.528.3232		KEC Attn: James Elfring Tel: 951.734.3010		Kennedy - No Bid Attn: David Chorak Tel: 949.380.8363		Leatherwood - No Bid Attn: Bobby Kawai Tel: 714.593.6575	
ITEM NO.	I. IRWD CODE 7142 CAPITAL RECYCLED WATER	UNIT	OY	PRICE	AMOUNT	PRICE	AMOUNT	PRICE	AMOUNT	PRICE	AMOUNT	PRICE	AMOUNT	PRICE	AMOUNT
1.	Mobilization (Maximum of 2% of Bid Amount Section A), Complete	LS	1	\$ 3,300.00	\$ 3,300.00	\$ 750.00	\$ 750.00	\$ 8,000.00	\$ 8,000.00	\$ 2,500.00	\$ 2,500.00	\$ -	\$ -	\$ -	\$ -
2.	Performance, Labor & Payment Bond, Complete	LS	1	\$ 2,475.00	\$ 2,475.00	\$ 2,380.13	\$ 2,380.13	\$ 3,000.00	\$ 3,000.00	\$ 3,000.00	\$ 3,000.00	\$ -	\$ -	\$ -	\$ -
3.	Interim Erosion Control - SWPPP & BMP's, Complete	LS	1	\$ 2,475.00	\$ 2,475.00	\$ 750.00	\$ 750.00	\$ 2,500.00	\$ 2,500.00	\$ 6,500.00	\$ 6,500.00	\$ -	\$ -	\$ -	\$ -
4.	Development and Application of Construction Water, Complete	LS	1	\$ 1,650.00	\$ 1,650.00	\$ 750.00	\$ 750.00	\$ 1,500.00	\$ 1,500.00	\$ 6,300.00	\$ 6,300.00	\$ -	\$ -	\$ -	\$ -
5.	Traffic Control per Owner's Supplied Plan, Complete	LS	1	\$ 15,000.00	\$ 15,000.00	\$ 16,240.00	\$ 16,240.00	\$ 14,500.00	\$ 14,500.00	\$ 14,700.00	\$ 14,700.00	\$ -	\$ -	\$ -	\$ -
6.	Pressure Test Pipeline, Complete	LS	1	\$ 3,500.00	\$ 3,500.00	\$ 3,385.00	\$ 3,385.00	\$ 3,000.00	\$ 3,000.00	\$ 2,500.00	\$ 2,500.00	\$ -	\$ -	\$ -	\$ -
7.	Coordinate and Perform shutdown of 24" Recycled Water Line with IRWD Prior to Commencement of Work per IRWD Requirements, Including Disposal of Reclaimed Water to Adjacent Farmer (or as directed by IRWD), Complete	LS	1	\$ 12,000.00	\$ 12,000.00	\$ 3,675.00	\$ 3,675.00	\$ 18,500.00	\$ 18,500.00	\$ 13,200.00	\$ 13,200.00	\$ -	\$ -	\$ -	\$ -
8.	Sawcut, Remove and Replace Existing Pavement Per City Std. 223, Alt "A" Pavement Shall Match Existing ("ARHM Over" HMA Over" CMB), Complete	LF	37	\$ 300.00	\$ 11,100.00	\$ 207.00	\$ 7,659.00	\$ 275.00	\$ 10,175.00	\$ 760.00	\$ 28,120.00	\$ -	\$ -	\$ -	\$ -
9.	Furnish and Install Replacement Disturbed Recycled Water, Slope Ground Cover Ice Plant (Carpusbrofis edulis, 1 Gal at 18" O.C. spacing), Straw Wattle, 3' Thick City Approved Mulch, 90-Day Plant Maintenance, Complete	LS	1	\$ 5,000.00	\$ 5,000.00	\$ 1,050.00	\$ 1,050.00	\$ 7,500.00	\$ 7,500.00	\$ 61,800.00	\$ 61,800.00	\$ -	\$ -	\$ -	\$ -
10.	Remove and Replace Existing Curb and Gutter, Place Removals into Owner's CFD Concrete Stockpile (Within 3 Miles of Project Site), Complete	LF	20	\$ 250.00	\$ 5,000.00	\$ 285.00	\$ 5,700.00	\$ 175.00	\$ 3,500.00	\$ 315.00	\$ 6,300.00	\$ -	\$ -	\$ -	\$ -
11.	Sawcut, Remove and Replace Existing Sidewalk to Nearest Joint, Place Removals into Owner's CFD Concrete Stockpile (Within 3 Miles of Project Site), Complete	SF	110	\$ 50.00	\$ 5,500.00	\$ 52.00	\$ 5,720.00	\$ 45.00	\$ 4,950.00	\$ 58.00	\$ 6,380.00	\$ -	\$ -	\$ -	\$ -
12.	Construct Slurry Seal (Type II) from lane line to lane line in any Areas Disturbed by the Contractor's Work and Per the Satisfaction of the City Inspector, Complete	SF	1,100	\$ 10.00	\$ 11,000.00	\$ 10.00	\$ 11,000.00	\$ 8.00	\$ 8,800.00	\$ 11.50	\$ 12,650.00	\$ -	\$ -	\$ -	\$ -
13.	Remove and Replace Striping as Required in any Areas Disruted by the Contractor's Work, Complete	LS	1	\$ 3,500.00	\$ 3,500.00	\$ 1,680.00	\$ 1,680.00	\$ 3,000.00	\$ 3,000.00	\$ 6,300.00	\$ 6,300.00	\$ -	\$ -	\$ -	\$ -
14.	Furnish and Install 16" PVC Purple Pipe, C-900, DR 14, including Trenching, Bedding, Backfill, Compaction, All Fittings, Appurtenances and Thrust Blocks per IRWD Std. DWG. W-17 and as shown on the plans, Complete	LF	15	\$ 1,000.00	\$ 15,000.00	\$ 1,125.00	\$ 16,875.00	\$ 525.00	\$ 7,875.00	\$ 1,600.00	\$ 24,000.00	\$ -	\$ -	\$ -	\$ -
15.	Furnish and Install 24"x24"x16"x16" CML & CSP (0.25" Thick Min.) Cut-In Cross, Flg'd, per Detail 1 on Sheet 3; Remove Interfering Portions of 24" CML & CSP, Complete	EA	1	\$ 35,000.00	\$ 35,000.00	\$ 48,975.00	\$ 48,975.00	\$ 45,000.00	\$ 45,000.00	\$ 8,200.00	\$ 8,200.00	\$ -	\$ -	\$ -	\$ -
16.	Furnish and install 24" Slip-On Flanged Welded to Ex. 24" CML & CSP, Bond All Joints per IRWD Std. Dwg. CP-9, Complete	EA	2	\$ 2,500.00	\$ 5,000.00	\$ 3,480.00	\$ 6,960.00	\$ 2,500.00	\$ 5,000.00	\$ 3,000.00	\$ 6,000.00	\$ -	\$ -	\$ -	\$ -
17.	Furnish and Install 16"x6" D.J. Concentric Reducer, FEXFE, Including 6" Blind Flange, Complete	EA	1	\$ 3,000.00	\$ 3,000.00	\$ 3,755.00	\$ 3,755.00	\$ 850.00	\$ 850.00	\$ 4,800.00	\$ 4,800.00	\$ -	\$ -	\$ -	\$ -
18.	Furnish 24" Butterfly Valve, CL 150B, Flg'd. per IRWD Std. W-22, including Valve Box, Complete (Item Pre-Ordered by FYDAQ)	EA	1	\$ 5,877.94	\$ 5,877.94	\$ 5,877.94	\$ 5,877.94	\$ 5,877.94	\$ 5,877.94	\$ 5,877.94	\$ 5,877.94	\$ -	\$ -	\$ -	\$ -
19.	Install 24" Butterfly Valve, CL 150B, Flg'd. per IRWD Std. W-22, including Valve Box, 1 Raise, Complete	EA	1	\$ 6,500.00	\$ 6,500.00	\$ 4,525.00	\$ 4,525.00	\$ 8,000.00	\$ 8,000.00	\$ 5,000.00	\$ 5,000.00	\$ -	\$ -	\$ -	\$ -
20.	Furnish 16" Butterfly Valve, CL 150B, Flg'd. per IRWD Std. W-22, including Valve Box, Complete (Item Pre-Ordered by FYDAQ)	EA	2	\$ 2,665.07	\$ 5,330.14	\$ 2,665.07	\$ 5,330.14	\$ 2,665.07	\$ 5,330.14	\$ 2,665.07	\$ 5,330.14	\$ -	\$ -	\$ -	\$ -
21.	Install 16" Butterfly Valve, CL 150B, Flg'd. per IRWD Std. W-22, including Valve Box, 1 Raise, Complete	EA	2	\$ 4,500.00	\$ 9,000.00	\$ 3,820.00	\$ 7,640.00	\$ 5,500.00	\$ 11,000.00	\$ 2,800.00	\$ 5,600.00	\$ -	\$ -	\$ -	\$ -
22.	Furnish and Install Temporary Flush-Out Assembly per IRWD Std. W-12, including 16"x8" D.J. Concentric Reducer and 1 Raise, Complete	EA	1	\$ 5,000.00	\$ 5,000.00	\$ 5,640.00	\$ 5,640.00	\$ 1,900.00	\$ 1,900.00	\$ 12,000.00	\$ 12,000.00	\$ -	\$ -	\$ -	\$ -
23.	Raise Valve can to Final Grade After Improvements are Complete or Requested by Developer including Extra Move-In, Complete	EA	3	\$ 800.00	\$ 2,400.00	\$ 450.00	\$ 1,350.00	\$ 750.00	\$ 2,250.00	\$ 1,250.00	\$ 3,750.00	\$ -	\$ -	\$ -	\$ -
TOTAL IRWD CAPITAL IMPROVEMENTS.....				\$173,608.08		\$167,667.21		\$182,008.08		\$250,808.08		\$0.00		\$0.00	

EXHIBIT "C"

CHANGE NO.: 2

DATE: 8/04/2016

POTENTIAL CHANGE OF WORK ACKNOWLEDGEMENT & VALUE (FOR IRWD CAPITAL IMPROVEMENTS)

The purpose of this form is to acknowledge a change in work for the intent of reimbursement of costs. Upon acceptance a change order will be issued.

Contract No.: 20051601 Owner: Heritage Fields El Toro, LLC
Sewer ☒ Contractor: FYDAQ Companies
Domestic Water ☐
Reclaim Water ☐
Other ☐ Design Engineer: Hunsaker & Associates
IRWD Mgr. Kelly Lew

Project Description: District 4 Area 2 Tract 17884 IRWD Code No. 6523 Capital Facilities

PART A - POTENTIAL CHANGE OF WORK:

Plan Revision Required: ☒ YES ☐ NO Estimated Cost: 249,965.00

Change Initiated By: _____

Work Description:

Plan revisions to IRWD Code 6523 Delta A added sewer manholes and jack and bore 16" PVC.

1. Submitted by: [Signature]
Owner Representative / Date
- 2a. In IRWD's opinion the aforementioned work does ☐ does not ☐
qualify as a potential change in work.
- 2b. IRWD comments (required if representative does not concur with the potential change):

2c. Reviewed by: Christina Venzke 8/30/18
IRWD Representative / Date

3. Received and Recorded by: _____
Owner Representative / Date

PART B - CHANGE OF WORK VALUE:

\$ 249,965.00

Detailed Backup Attached ☒

1. Submitted by: [Signature]
Owner Representative / Date

2. Recommended by: _____
IRWD Representative / Date

September 18, 2018
Prepared by: K. Lew
Submitted by: K. Burton
Approved by: Paul A. Cook 

ENGINEERING AND OPERATIONS COMMITTEE

PLANNING AREA 6 (PORTOLA SPRINGS) CAPITAL FACILITIES

SUMMARY:

Irvine Community Development Company (ICDC) is proceeding with the development of Planning Area 6 (Portola Springs), which includes the construction of streets, storm drains, domestic water, sewer, and recycled water improvements. Staff recommends that the Board authorize the General Manager to accept ICDC's construction contract with Irvine Pipeline Company, Inc. (Irvine Pipeline) in the amount of \$327,945 for the Portola Springs Neighborhood 5B and 5C Recycled Water Improvements.

BACKGROUND:

IRWD and ICDC have had a Reimbursement Agreement (RA) for design and construction of IRWD capital facilities in place since May 1997. Under this RA, a Supplemental Reimbursement Agreement (SRA) serves to define the improvements to be designed and constructed within a specific planning area as well as the estimated reimbursable costs.

An SRA was previously approved in April 2004 for all IRWD capital facilities within Planning Area 6. All required IRWD capital improvements are documented in the Planning Area 6 Sub-Area Master Plan Addendum, dated September 2017. The improvements are shown in Exhibit "A".

Neighborhood 5B and 5C Improvements include construction of approximately 4,900 feet of 6-inch, 2,300 feet of 8-inch, and 1,000 feet of 12-inch recycled water pipeline. ICDC selected Wilson Mikami to complete the Neighborhood 5B and 5C Improvements design plans and it received bids from seven contractors. ICDC recommends awarding the construction contract to the lowest bidder, Irvine Pipeline, for a bid amount of \$327,945 as shown in Exhibit "B". In addition, ICDC received proposals from Wilson Mikami Corporation, NMG Geotechnical, Inc., and Stantec Consulting Services Inc. for construction support services. Staff has reviewed the consultant proposals and the construction bids and found the amounts to be acceptable. A summary of the Neighborhood 5B and 5C costs is shown below:

Design Engineering (Wilson Mikami)	\$ 30,000.00
Construction (Irvine Pipeline)	\$327,945.00
Construction Engineering (Wilson Mikami)	\$ 13,400.00
Construction Geotechnical (NMG)	\$ 8,482.00
Construction Staking (Stantec)	\$ 7,011.00
ICDC Administration Fee (1%)	<u>\$ 3,279.45</u>
	\$390,117.45

FISCAL IMPACTS:

Projects 10100 and 10426 are included in the FY 2018-19 Capital Budget and have sufficient budget and will be funded by the Portola Springs development.

ENVIRONMENTAL COMPLIANCE:

The construction of the capital facilities for Planning Area 6 is subject to the California Environmental Quality Act (CEQA) and in conformance with California Code of Regulations Title 14, Chapter 3, Article 7, an Environmental Impact Report, SCH#2001051010, was certified by the lead agency, the City of Irvine, on June 3, 2004.

RECOMMENDATION:

That the Board authorize the General Manager to accept Irvine Community Development Company's construction contract with Irvine Pipeline Company, Inc. in the amount of \$327,945 for the Portola Springs Neighborhood 5B and 5C Improvements, Projects 10100 and 10426.

LIST OF EXHIBITS:

Exhibit "A" – Location Map

Exhibit "B" – Bid Summary, Neighborhood 5B and 5C Improvements

EXHIBIT "A"

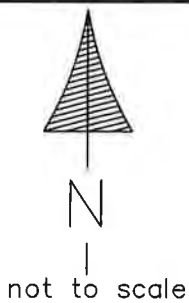
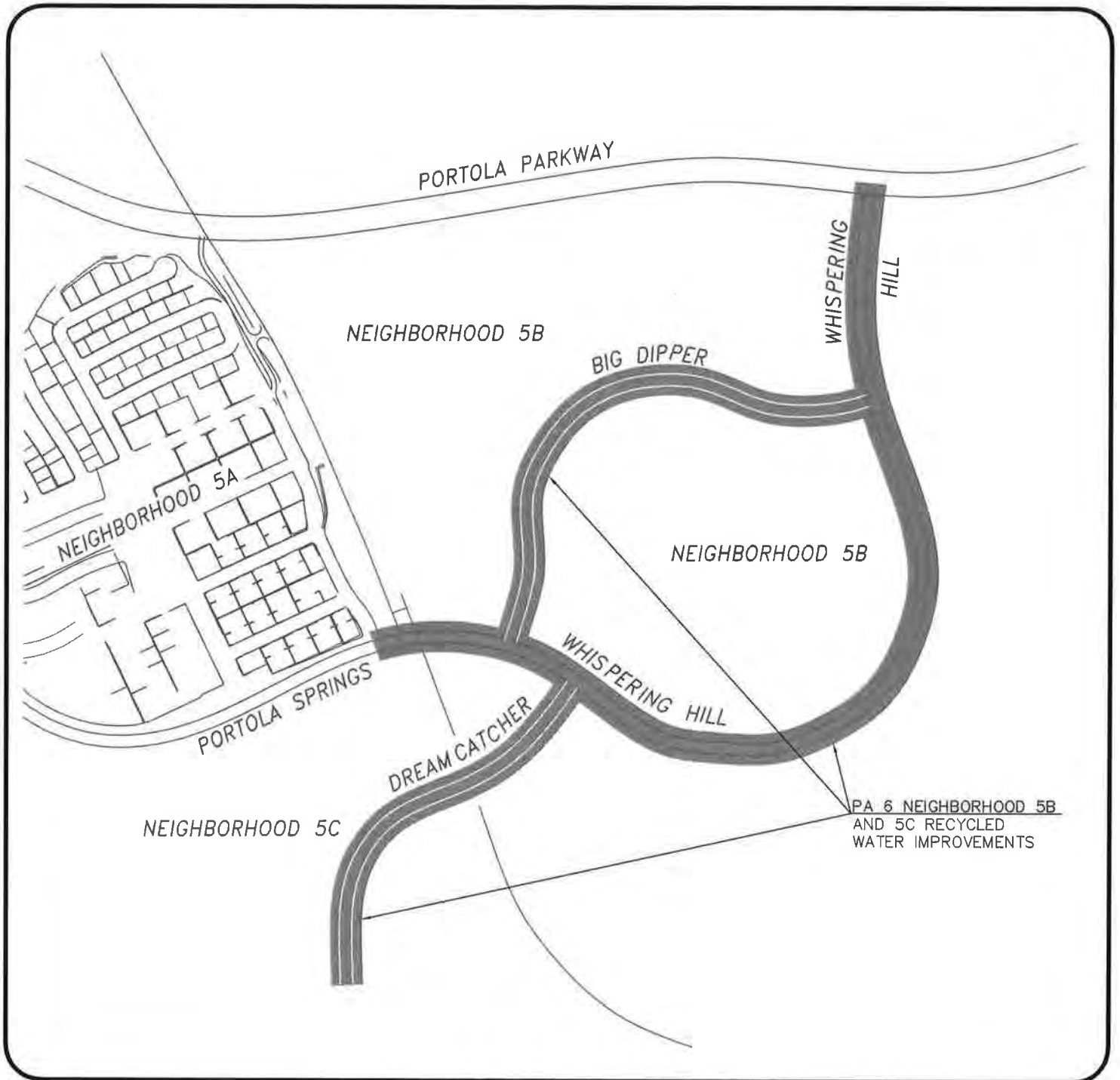


EXHIBIT "A"
LOCATION MAP

DO NOT WRITE IN THESE SPACES

Approximately 10,000 Linear Feet
TASK CODE: LD-4006.ST.53.cn04
BIO PACKAGE P00300

Excluded Name Is Not Included in Hit List

- | | | | | | | | | | | | | | | | | |
|----------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|
| 2,094 LF | \$45.00 | \$271,680.00 | \$33.00 | \$163,440.00 | \$25.00 | \$123,360.00 | \$79.00 | \$194,760.00 | \$30.00 | \$148,740.00 | \$45.00 | \$201,600.00 | \$41.00 | \$168,240.00 | \$55.00 | \$272,550.00 |
| 2,094 LF | \$55.00 | \$115,650.00 | \$45.00 | \$94,500.00 | \$38.00 | \$79,560.00 | \$58.00 | \$120,720.00 | \$42.00 | \$88,200.00 | \$55.00 | \$123,300.00 | \$50.00 | \$110,250.00 | \$65.00 | \$134,250.00 |
| 845 LF | \$70.00 | \$59,160.00 | \$62.00 | \$52,560.00 | \$54.00 | \$47,160.00 | \$82.00 | \$67,560.00 | \$60.00 | \$52,200.00 | \$75.00 | \$60,750.00 | \$68.00 | \$61,200.00 | \$85.00 | \$71,250.00 |
| 64 EA | \$1,340.00 | \$86,240.00 | \$1,070.00 | \$68,480.00 | \$1,140.00 | \$129,720.00 | \$1,740.00 | \$208,680.00 | \$1,270.00 | \$162,780.00 | \$1,580.00 | \$181,800.00 | \$1,450.00 | \$170,250.00 | \$1,750.00 | \$203,750.00 |
| 64 EA | \$1,340.00 | \$86,240.00 | \$1,070.00 | \$68,480.00 | \$1,140.00 | \$129,720.00 | \$1,740.00 | \$208,680.00 | \$1,270.00 | \$162,780.00 | \$1,580.00 | \$181,800.00 | \$1,450.00 | \$170,250.00 | \$1,750.00 | \$203,750.00 |
| 80 LF | \$350.00 | \$28,000.00 | \$300.00 | \$24,000.00 | \$280.00 | \$22,400.00 | \$400.00 | \$56,000.00 | \$300.00 | \$24,000.00 | \$350.00 | \$42,000.00 | \$320.00 | \$25,600.00 | \$380.00 | \$45,600.00 |
| 1 EA | \$1,700.00 | \$11,200.00 | \$1,400.00 | \$8,800.00 | \$1,500.00 | \$9,000.00 | \$2,100.00 | \$18,000.00 | \$1,600.00 | \$9,600.00 | \$1,900.00 | \$11,400.00 | \$1,700.00 | \$10,200.00 | \$2,000.00 | \$12,000.00 |
| 1 EA | \$1,700.00 | \$11,200.00 | \$1,400.00 | \$8,800.00 | \$1,500.00 | \$9,000.00 | \$2,100.00 | \$18,000.00 | \$1,600.00 | \$9,600.00 | \$1,900.00 | \$11,400.00 | \$1,700.00 | \$10,200.00 | \$2,000.00 | \$12,000.00 |
| 1 EA | \$1,700.00 | \$11,200.00 | \$1,400.00 | \$8,800.00 | \$1,500.00 | \$9,000.00 | \$2,100.00 | \$18,000.00 | \$1,600.00 | \$9,600.00 | \$1,900.00 | \$11,400.00 | \$1,700.00 | \$10,200.00 | \$2,000.00 | \$12,000.00 |
| 2 EA | \$3,400.00 | \$22,400.00 | \$2,800.00 | \$17,600.00 | \$3,000.00 | \$18,000.00 | \$4,200.00 | \$36,000.00 | \$3,200.00 | \$19,200.00 | \$3,800.00 | \$22,800.00 | \$3,400.00 | \$20,400.00 | \$4,000.00 | \$24,000.00 |
| 2 EA | \$3,400.00 | \$22,400.00 | \$2,800.00 | \$17,600.00 | \$3,000.00 | \$18,000.00 | \$4,200.00 | \$36,000.00 | \$3,200.00 | \$19,200.00 | \$3,800.00 | \$22,800.00 | \$3,400.00 | \$20,400.00 | \$4,000.00 | \$24,000.00 |
| 2 EA | \$3,400.00 | \$22,400.00 | \$2,800.00 | \$17,600.00 | \$3,000.00 | \$18,000.00 | \$4,200.00 | \$36,000.00 | \$3,200.00 | \$19,200.00 | \$3,800.00 | \$22,800.00 | \$3,400.00 | \$20,400.00 | \$4,000.00 | \$24,000.00 |
| 1 EA | \$3,400.00 | \$22,400.00 | \$2,800.00 | \$17,600.00 | \$3,000.00 | \$18,000.00 | \$4,200.00 | \$36,000.00 | \$3,200.00 | \$19,200.00 | \$3,800.00 | \$22,800.00 | \$3,400.00 | \$20,400.00 | \$4,000.00 | \$24,000.00 |
| 1 EA | \$3,400.00 | \$22,400.00 | \$2,800.00 | \$17,600.00 | \$3,000.00 | \$18,000.00 | \$4,200.00 | \$36,000.00 | \$3,200.00 | \$19,200.00 | \$3,800.00 | \$22,800.00 | \$3,400.00 | \$20,400.00 | \$4,000.00 | \$24,000.00 |
| 22 EA | \$72,800.00 | \$44,480.00 | \$59,600.00 | \$35,840.00 | \$63,000.00 | \$37,800.00 | \$84,000.00 | \$50,400.00 | \$38,400.00 | \$23,040.00 | \$45,800.00 | \$27,720.00 | \$17,400.00 | \$10,800.00 | \$20,800.00 | \$12,600.00 |
| | | | | | | | | | | | | | | | | |
| | | \$321,195.00 | | \$373,945.00 | | \$337,965.00 | | \$398,322.00 | | \$342,844.00 | | \$392,040.00 | | \$371,237.37 | | \$429,225.00 |

September 18, 2018
Prepared by: J. McGehee/R. Mori
Submitted by: K. Burton
Approved by: Paul A. Cook 

ENGINEERING AND OPERATIONS COMMITTEE

IRVINE INDUSTRIAL COMPLEX EAST ZONE A TO B PUMP STATION UPGRADES CONSULTANT SELECTION

SUMMARY:

The design for the Irvine Industrial Complex (IIC) East Zone A to B Booster Pump Station (BPS) project is complete. In preparation for the construction phase, staff solicited a proposal from Lee & Ro for engineering support services during construction. Staff recommends that the Board authorize the General Manager to execute a Professional Services Agreement in the amount of \$133,750 with Lee & Ro, Inc. for engineering support services during construction of the IIC East Zone A to B BPS Upgrades project.

BACKGROUND:

The Recycled Water Distribution System Analysis, prepared by Stantec in March 2016, describes how IRWD's non-potable water distribution system has undergone significant changes in operations, demands, and facility planning over the past several years. The most significant changes to the demands and operation are anticipated within the recycled water system, specifically the Zone B and Zone C pressure zones north of the I-5 freeway.

The existing IIC East Zone A to B BPS, which was constructed in 1990 and is located near the intersection of Irvine Center Drive and Odyssey as shown on Exhibit "A", currently supplies the East Irvine and Quail Hill Zone B service areas. As neighborhood development construction progresses, the pump station will also supply the Great Park Neighborhoods and Northwood Zone B service areas. To accommodate the additional system demands, the pump station capacity needs to be increased.

The project will increase the overall pump station capacity through the installation of an additional pump. During the design phase, staff identified the need for additional improvements at the pump station to replace equipment that has reached the end of its service life. These improvements include replacement of the pump station control panel, motor control center including two new variable frequency drives, and four existing pump motors. With the addition of the new pump, the site electrical service will also be replaced to accommodate the increased electrical load at the facility.

The project is currently being advertised for construction bids, and staff anticipates bringing a recommendation for construction award to the Board in October.

Consultant Selection:

Lee & Ro performed all elements of the project design including civil, mechanical, structural, electrical, and instrumentation. Staff requested Lee & Ro to submit a proposal for engineering support services during construction. The proposal, which is attached as Exhibit "B", includes

services for submittal reviews, responses to contractor questions, site visits, record drawings, energy control procedures, and construction coordination and engineering support commensurate with the requirements of the project.

Staff reviewed Lee & Ro's proposal and recommends that the Board authorize the General Manager to execute a Professional Services Agreement with Lee & Ro in the amount of \$133,750 for engineering support services during construction.

FISCAL IMPACTS:

The IIC East Zone A to B BPS Upgrades project is included in the FY 2018-19 Capital Budget and will be funded 90% through replacement funds and 10% through regional recycled water funds. The existing budgets are sufficient to fund the engineering support services recommended.

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 15303 which provides exclusion for new, small facilities or structures with new small equipment within the facility. A Notice of Exemption for the project was filed with the County of Orange on August 4, 2017.

RECOMMENDATION:

That the Board authorize the General Manager to execute a Professional Services Agreement in the amount of \$133,750 with Lee & Ro, Inc. for engineering support services during construction of the IIC East Zone A to B BPS Upgrades, Project 06198.

LIST OF EXHIBITS:

Exhibit "A" – Location Map

Exhibit "B" – Lee & Ro's Scope of Work and Fee

EXHIBIT "A"
LOCATION MAP

IIC EAST BOOSTER PUMP STATION UPGRADES PROJECT



EXHIBIT "B"



1199 South Fullerton Road, City of Industry, CA 91748
Tel: (626) 912-3391
Fax: (626) 912-2015
www.LEE-RO.com

July 20, 2018

Joe McGehee, P.E.
IRVINE RANCH WATER DISTRICT
15600 Sand Canyon Avenue
Irvine, CA 92618

Subject: Construction Support Service Fee Proposal for the IIC East Zone A to B Recycled Water Pump Station Upgrades (Rev.1)

Dear Mr. McGehee:

LEE & RO presents the following proposal for Construction Support service for IIC East Zone A to B Recycled Water Pump Station Upgrades.

Task 1: Construction Administration Assistance

LEE & RO will provide office engineering, consultation, and will coordinate with IRWD and other staff in management of the construction contract. Typical work under this task includes:

- 1.1 Project Meetings:** Attend construction meetings as requested. Assume 10 meetings at 2 hours per meeting.
- 1.2 Site Visits:** Perform site visits as requested. Assume 3 site visits at 2 hours per visit.
- 1.3 Submittal Review:** LEE & RO will review Contractor's submittals, shop drawings, catalog data and other materials for complete and strict conformance with the contract documents. Contractor's proposed deviations or substitutions will be reviewed with IRWD staff prior to approval. Assume 75 submittals, including re-submittals with a four-hour review time each.
- 1.4 Request for Information (RFI):** LEE & RO will interpret the contract documents and respond to the Contractor's RFIs, including the preparation of supplementary sketches and details required to resolve construction issues. Assume 25 RFIs at 4 hours per RFI.
- 1.5 Minor Plan Revisions:** LEE & RO will revise the contract documents as needed and approved by IRWD.
- 1.6 Energy Control Procedure and Asset Management:** LEE & RO will prepare ECP's in accordance with California Occupational Safety and Health (Cal/OSHA) requirements for all equipment that may have potential energy on template forms provided by the District. We will also complete IRWD's Asset Management spreadsheet to inventory all of the new equipment for the project. We will submit a draft set of ECPs and Asset Management spreadsheet and finalize these documents after receipt of District review comments. Documents will be submitted in electronic format.
- 1.7 Additional Construction Coordination:** Additional construction coordination is intended to cover any items that don't fall specifically into the RFI or submittal

Joe McGehee, P.E
July 20, 2018
Page 2

categories, such as answering general inquiries, coordination with the IRWD and the contractor, and other general engineering support as requested by IRWD.

Task 2: Post Construction Assistance

Once received from IRWD, LEE & RO will update the existing electronic drawing files in AUTOCAD 2016 format and provide Record Drawings in an electronic format based on the Contractor's redlines and all recorded field changes.

Fee Estimate

Our standard billing rates for this Construction Support Services shall apply and is included in Exhibit A. LEE & RO will provide the above services per the enclosed Exhibit B - Fee Breakdown for an amount of **\$133,750**.

Sincerely,



Eric Lovering, P.E.
Principal Engineer
San Diego Area Manager

Enclosures: Exhibits A and B

FEE BREAKDOWN
IRWD IIC East Zone A to B Recycled Water Pump Station Upgrades

TASK NO.	ENGINEERING CLASSIFICATIONS: E8 Managing Eng, E7 Supervising Eng, E6 Principal Eng, E5 Senior Eng, E3 Associate Engineer, T4 Designer, T3 Associate Designer, A2 Word Processor II (See Billing Rate Schedule for Entire Labor Classifications).	LEE & RO Hours per Labor Category									Total Hours	Labor Cost	Other Direct Costs (ODCs)	TOTAL FEES
		E8	E7	E6	E5	E4	E3	T4	T3	A2				
		Billing Rates (\$/Hour)												
PROJECT TASK DESCRIPTION		\$240	\$217	\$196	\$178	\$162	\$145	\$128	\$112	\$112	1.00			
1	Construction Administration Assistance													
1.1	Project Meetings (Assume 10 meetings, 2 hrs per each meeting at IRWD)	25				50					75	\$14,100	\$1,200	
1.2	Site Visits (Assume 3 site visits, 2 hrs per each site visit)	10				15					25	\$4,830	\$302	
1.3	Submittal Review (Assume 75 submittals, 4 hrs per each submittal)	40	60	80		80	40				300	\$57,060		
1.4	Request for Information (Assume 25 RFIs, 4 hrs per each RFI)	8	8	55		29					100	\$19,134		
1.5	Minor Plan Revision			4		8		28			40	\$5,664		
1.6	Energy Control Procedure and Asset Management	2		16		10					28	\$5,236		
1.7	Additional Construction Coordination	20		40		45				10	115	\$21,050		
	SUBTOTAL TASK 1 - CONSTRUCTION ADMINISTRATION ASSISTANCE	105	68	195	0	237	40	28	0	10	683	\$127,074	\$1,502	
2	Post Construction Assistance													
2.1	Record Drawing	2		4		4			26		36	\$4,824	\$350	
	SUBTOTAL TASK 2 - POST CONSTRUCTION ASSISTANCE	2	0	4	0	4	0	0	26	0	36	\$4,824	\$350	
	TOTAL NOT TO EXCEED	107	68	199	0	241	40	28	26	10	719	\$ 131,898	\$ 1,852	

September 18, 2018
Prepared by: J. McGehee/R. Mori
Submitted by: K. Burton
Approved by: Paul A. Cook 

ENGINEERING AND OPERATIONS COMMITTEE

ZONE A TO RATTLENSAKE RESERVOIR PUMP STATION CONSULTANT SELECTION

SUMMARY:

Staff is proceeding with the replacement of the existing Zone A to Rattlesnake Reservoir Pump Station as identified in the 2016 Recycled Water Distribution System Analysis. The project also includes improvements to other existing facilities within the Rattlesnake Reservoir Complex. Staff recommends that the Board authorize the General Manager to execute a Professional Services Agreement in the amount of \$1,247,625 with Brown and Caldwell for engineering design services for the Zone A to Rattlesnake Reservoir Pump Station.

BACKGROUND:

Staff is proceeding with the replacement of the existing Zone A to Rattlesnake Reservoir Pump Station Project as identified in the 2016 Recycled Water Distribution System Analysis prepared by Stantec Consulting. The project is located within the Rattlesnake Reservoir Complex as shown on the location map attached as Exhibit "A". The complex consists of several critical facilities including the Rattlesnake Reservoir, Zone A North Reservoir, Northwood Zone A to B pump station, Zone A to Rattlesnake Reservoir pump station, Zone A to C+ pump station, Zone 3 to 5 pump station, dechlorination facility, chlorination facility, Rattlesnake Reservoir strainers, IRWD caretaker residence, and several aboveground and belowground piping and valving systems.

The existing pump station, which delivers recycled water from the Zone A system to the Rattlesnake Reservoir, was constructed in 1976 and is nearing the end of its useful life. The existing pump station requires frequent maintenance attention and locating and procuring replacement parts is becoming increasingly challenging. The pump station consists of three gas engine-driven pumps and one electric motor-driven pump. The project will replace the pump station in its entirety with a new pump station equipped with all electric motor-driven pumps. The ultimate pump station capacity will be confirmed as part of the project, but staff anticipates the capacity to range between 28 million gallons per day and 33 million gallons per day.

In addition to the pump station replacement, the project also includes modifications to the existing dechlorination facility, installation of a new permanent backup power generator, extended sewer facilities to eliminate onsite septic systems currently located at the caretaker house and the park restrooms, new site electrical service, various communications and control system improvements, and demolition of the Northwood Zone A to B pump station, which will be replaced by the Eastwood Zone A to B pump station currently under construction.

Consultant Selection:

Staff received proposals for engineering design services from AECOM, Brown and Caldwell, Lee & Ro, and Stantec. Each firm presented unique project approaches and creative engineering solutions for achieving the project objectives, but Brown and Caldwell's approach to completing the project exceeded those presented by the other firms. Brown and Caldwell outlined a focused, collaborative approach to completing the preliminary design, which staff believes is the most critical phase to successfully executing the project. In addition to its collaborative approach, Brown and Caldwell presented original design concepts that maximized the use of the limited available site space at the complex and identified several facility siting alternatives that will be evaluated further. After reviewing the proposals, staff met with Brown and Caldwell to discuss and negotiate the final scope of work, project schedule, hourly billing rates, and overall fee. The consultant selection matrix is attached as Exhibit "B", and Brown and Caldwell's scope of work and fee proposal are attached as Exhibit "C".

Staff recommends that the Board authorize the General Manager to execute a Professional Services Agreement in the amount of \$1,247,625 with Brown and Caldwell since its design approach, schedule, and staff hours are consistent with the project goals and objectives.

Design Schedule:

The design phase will be completed in accordance with the following schedule milestones:

Notice of Award (anticipated)	September 25, 2018
Kick-off Meeting	October 2018
Preliminary Design Report Submittal	May 2019
Final Plans Approved	March 2020
Bid Opening and Notice of Award (Construction)	April 2020

FISCAL IMPACTS:

The Zone A to Rattlesnake Reservoir Pump Station, Project 05476, is included in the FY 2018-19 Capital Budget and will be funded through replacement funds. The existing budget is sufficient to fund the engineering services recommended.

ENVIRONMENTAL COMPLIANCE:

This project is subject to the California Environmental Quality Act (CEQA). In conformance with the California Code of Regulations Title 14, Chapter 3, Section 15004, the appropriate environmental document will be prepared when "meaningful information" becomes available. It is expected that the preliminary analysis will lead to preparation of a Notice of Exemption for the project.

RECOMMENDATION:

That the Board authorize the General Manager to execute a Professional Services Agreement with Brown and Caldwell in the amount of \$1,247,625 for engineering design services for the Zone A to Rattlesnake Reservoir Pump Station, Project 05476.

LIST OF EXHIBITS:

Exhibit "A" – Location Map

Exhibit "B" – Consultant Selection Matrix

Exhibit "C" – Brown and Caldwell Scope of Work and Fee Proposal

Zone A to Rattlesnake Reservoir Pump Station
Exhibit "A"
Location Map



EXHIBIT "B"

CONSULTANT SELECTION MATRIX

Zone A to Rattlesnake Reservoir Pump Station

Item	Description	Weights	Brown and Caldwell		AECOM		Lee & Ro		Stantec	
A	<u>TECHNICAL APPROACH</u>									
1	Project Understanding	30%	1		2		3		4	
2	Project Approach	40%	1		2		3		4	
3	Project Team	30%	1		3		2		4	
	<u>Weighted Score</u>		1.0		2.3		2.7		4.0	
	Ranking of Consultants		1		2		3		4	
B	<u>SCOPE OF WORK</u>									
TASK			Task Hours	Fee	Task Hours	Fee	Task Hours	Fee	Task Hours	Fee
1	Project Management		246	\$57,181	425	\$69,340	500	\$102,562	528	\$119,722
2	Preliminary Design		2,016	\$431,588	2,132	\$391,599	2,038	\$477,456	1,724	\$438,524
3	Final Design		4,824	\$758,857	5,826	\$691,545	4,231	\$669,981	3,129	\$530,329
	Total Engineering Services Fee		7,086	\$1,247,625	8,383	\$1,152,484	6,769	\$1,249,999	5,381	\$1,088,575
C	<u>OTHER</u>									
	Number of Drawings		114		126		153		107	
	Engineering Design Services Fee per Drawing		\$6,657		\$5,488		\$4,379		\$4,956	
	<u>Sub Consultants</u>									
	Electrical		In-house		In-house		In-house		In-house	
	Civil		In-house		In-house		In-house		In-house	
	Structural		In-house		In-house		In-house		Beyaz & Patel	
	Architectural		In-house		In-house		Nuvis (Landscaping)		In-house	
	Geotech		Converse Consultants		In-house		Ninyo & Moore		Leighton Consulting	
	Mechanical		In-house		In-house		In-house		In-house	
	Survey		Bush & Associates		Psomas		The Prizm Group		In-house	
	Surge		In-house		Northwest Hydraulics		Flowscience		Northwest Hydraulics	
	Potholing		Cardno		C-Below		Bess Testlab		Cardno	
	Exceptions taken to IRWD Std. Contract		None		None		None		None	
	DIR Numbers Provided		Yes		Yes		Yes		Yes	
	Insurance (Professional & General Liability)		Yes		Yes		Yes		Yes	

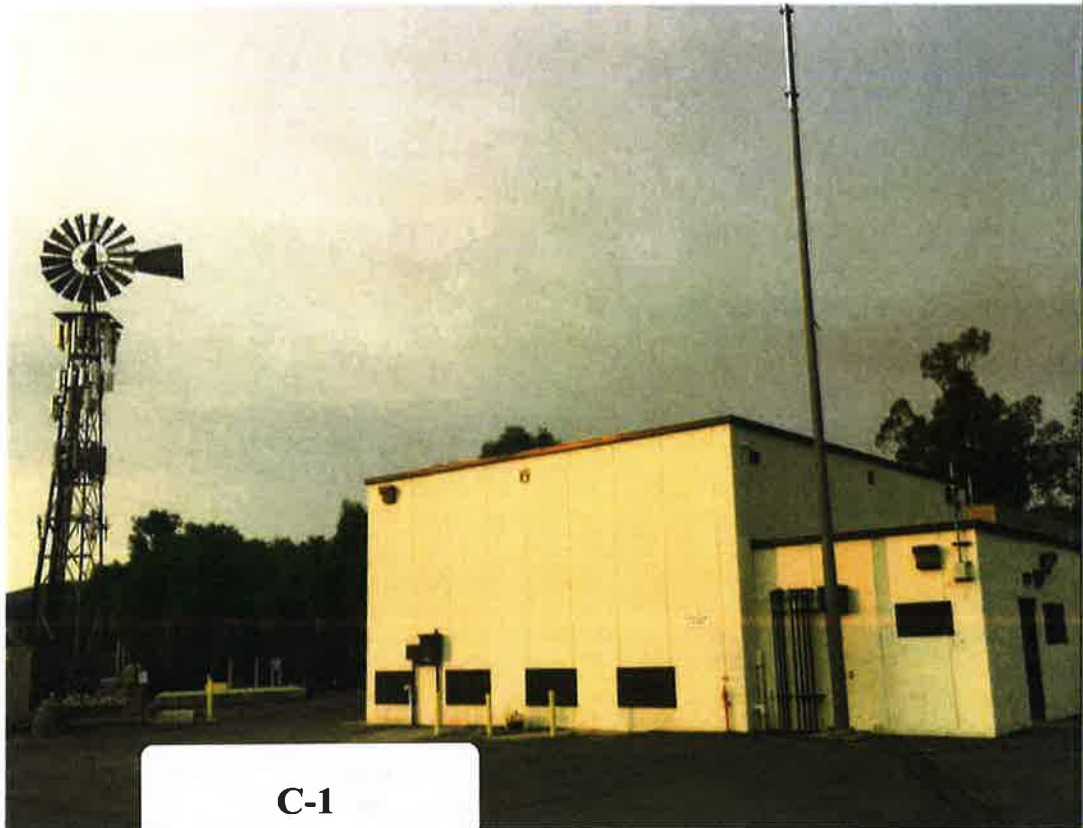
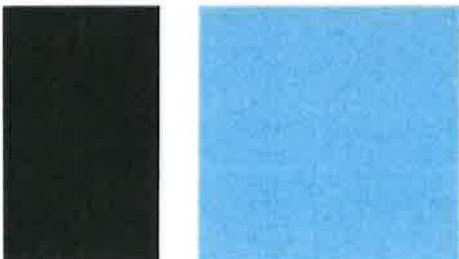
**Brown AND
Caldwell**

PROPOSAL | Prepared for
Irvine Ranch Water District



Engineering Design Services for the Zone A to Rattlesnake Reservoir Pump Station Project

August 23, 2018



Scope of Work

IRWD developed a detailed scope of work and BC agrees to perform the scope as defined in the RFP and as discussed earlier in this section. Furthermore, our level of effort (provided in sealed envelope), was developed with the following design basis:

- Utilize 2018 AutoDesk suite for design/BIM implementation using:
 - AutoCAD Civil 3D
 - Revit
- New Zone A to Rattlesnake Reservoir Pump Station located at the to-be-demolished Northwood Zone A to B Pump Station
- Modifications, as proposed, to the existing valve vault roof to accommodate H-20 traffic loading
- Renovation (not replacement) of existing dechlorination building – replace all existing chemical storage and feed, ventilation (in-kind), lighting and communications. No new architectural provisions added to existing building, other than paint and/or related product to match color scheme of neighboring chlorination building
- Locate two (2) new sodium hypochlorite metering pumps in the vacant chlorinator room of the existing Chlorination Building
- New standby generator located near new Zone A to Rattlesnake Reservoir Pump Station
- New sewer alignment around perimeter of Rattlesnake Complex with laterals to receiving points, as shown on Figure 1-3
- Use of IRWD-specific standard details and specifications and supplemented with BC details and specifications, as required.
- Loop drawings or instrument data sheets are not required

Table 1-3 provides a summary of the scope of work as broken down by task, key elements, and deliverables. The Drawings List is included at the end of this section in **Table 1-4**.

TABLE 1-3 // Scope of Work Summary

Task	Key Elements	Deliverables
1. Project Management		
A. Preparation of Project Status Reports	• Provide weekly and monthly status reports to IRWD. • Maintain tracking log of project decisions, action items, budget and schedule.	Weekly email reports summarizing activities completed previous week, activities planned for the upcoming week, and critical actions requiring decisions. Monthly reports with billing invoice summarizing work completed and status of work completed relative to budget and schedule.
B. Meetings and Workshops	Organize, attend, and conduct a total of 26 project meetings/workshop, as summarized below. • General project management and DDMs – fourteen (14) two-hour meetings. • Coordination meetings with jurisdictional agencies – two (2) two-hour meetings. • Rattlesnake Reservoir Complex site visits – six (6) two-hour meetings • Present Draft Preliminary Design Report (PDR) – one (1) three-hour workshop. • Present 60% design – one (1) two-hour meeting. • Present 90% design – one (1) two-hour meeting. • Present 100% design – one (1) two-hour meeting.	Prepare and provide meeting agendas and draft and final meeting minutes.
C. Quality Assurance/Quality Control	Perform internal, independent QA/QC for all project deliverables and maintain documentation for compliance.	QC verification form, if requested by IRWD.

TABLE 1-3 // Scope of Work Summary (continued)

Task	Key Elements	Deliverables
2. Preliminary Design		
A. Background Information	Review the Recycled Water Distribution System Analysis report, other existing reports, historical flow data, record drawings, system processes, and other information related to the project. Conduct one site visit to establish an initial site reconnaissance and understanding of existing facilities (included in Task 1.B).	Include findings in Draft PDR.
B. Utility Research	Research and identify the location of existing underground and aboveground utilities and/or other physical features within the complex and adjacent to the Zone A to C+ pump station along Portola Parkway. Information on utilities including type, pressure zone, material, size, and horizontal and vertical locations will be identified. Update the Rattlesnake Reservoir Complex Existing Facilities Map, based on the results of the research. Conduct a meeting with IRWD with a focus on site constraints and the results of the utility research (included in Task 1.B.). Pothole twenty (20) existing utilities within IRWD property to a maximum depth of 20 feet and survey five (5) of the pothole locations for northing, easting and depth.	Include updated facilities map and pothole results in Draft PDR.
C. Zone A to Rattlesnake Reservoir Pump Station Capacity Validation	Review and coordinate with IRWD for the recommended pump station capacity and pumping parameters provided by IRWD.	Include findings in Draft PDR.
D. Zone A to Rattlesnake Reservoir Pump Selection	Identify and evaluate options for the number and size of pumps required to meet the proposed pump station capacity including provisions for inclusion of a standby pump. Identify, develop, and evaluate five alternative pump capacity configurations utilizing constant speed drives, variable frequency drives, or combinations of the two. The alternatives will include any needed considerations for future expansion to meet future pumping requirements. Upon selection of the preferred pumping arrangement, identify three specific pump models, one each from Flowserve, Goulds, and Sulzer, that meet the hydraulic requirements at four separate design points for inclusion in the final technical specifications.	Include pump station configuration alternatives and recommended plan, pump selections, and other details in Draft PDR. Review with IRWD during scheduled DDM.
E. Zone A to Rattlesnake Reservoir Pump Configuration	Develop and evaluate three alternative building configurations for the new pump station based on the results of the pump selection. The pump station will consist of split-face masonry block walls with a parapet roof and will be similar in aesthetic appearance to the existing chlorination building. Each alternative building layout will include a separate pump room, electrical room, and restroom and locations for HVAC will be identified (with adequate consideration for the neighbors). The pump room will include the number of pumps as determined under Task 2.D, a high-pressure bypass pressure reducing valve (PRV), magnetic flowmeter, and a motor-operated PRV between the Zone B and Rattlesnake Reservoir pipelines. The electrical room will have an air conditioning system and others will have mechanical ventilation.	Details of evaluations and final recommendations in Draft PDR. Review with IRWD during scheduled DDM.
F. Surge Study	Complete a hydraulic transient analysis and provide recommendations for surge mitigation.	Submit three (3) hard copies and one (1) electronic copy in PDF of a Technical Memorandum (TM) describing the surge analysis details and recommendations. Finalized TM will be included with the PDR.

TABLE 1-3 // Scope of Work Summary (continued)

Task	Key Elements	Deliverables
G. Demolition of Existing Facilities	Include a summary of onsite facilities that are recommended for demolition. At a minimum, the existing Northwood Zone A to B pump station, Zone A to Rattlesnake Reservoir pump station, interior of the dechlorination facility (if dechlorination building renovation is recommended under Task H below), IRWD caretaker residence septic tank and leach field, IRWD park restroom septic tank and leach field, SCE power poles, existing electrical service and any additional facilities identified as the design progresses. Coordinate construction sequencing per Task 2.N.	Details of evaluations and final recommendations in Draft PDR.
H. Dechlorination Facility	Evaluate the condition of the existing dechlorination facility and determine whether it should be renovated or replaced in its entirety. The evaluation will include consideration of available site space for a new building, phasing requirements associated with construction, and cost considerations between the two options. Conduct building condition assessment site visit (included in Task 1.B).	Details of evaluations and final recommendations in Draft PDR. Review with IRWD during scheduled DDM.
I. Sewer Alignment Analysis	Evaluate existing 8-inch PVC sewer lateral that terminates on site and develop three alignment alternatives to extend the sewer throughout the Complex. Each alignment alternatives shall include provisions for laterals to the dechlorination building, chlorination building, new pump station (floor drains and restroom), IRWD caretaker residence and the IRWD park restroom.	Details of evaluations and final recommendations in Draft PDR. Review with IRWD during scheduled DDM.
J. Permanent Backup Power Generator	Develop and evaluate two backup power generation alternatives and provide a recommendation for which alternative to implement. One alternative will include backup power for only the new Pump Station and the other for the entire site.	Details of evaluations and final recommendations in Draft PDR.
K. Site Automation and Communications Improvements	Evaluate the existing communications infrastructure on site within each operating facility, determine which equipment should be upgraded or replaced, and provide recommendations for developing a combined communications system for the entire complex. At a minimum, a new fiber optic communications network on Rattlesnake Site, a new radio antenna for communication, replacement of existing monitoring panel (analyzer signals), connection of strainer PLC to chlorination system PLC and demolition of existing radio communication.	Details of evaluations and final recommendations in Draft PDR.
L. Site Electrical Service	Evaluate the existing and proposed site electrical loads to identify the size of the needed electrical service to the site and coordinate with SCE to begin preparation of the SCE preliminary service plan and support SCE as needed to develop the final, SCE-approved service plan during the final design phase. A new service switchboard will be provided. An automatic transfer switch and triple switch will be provided for either the new pump station only or for the entire complex, as determined under Task J. Evaluate existing overhead electrical lines and power poles and identify suitable alignment to underground.	Details of evaluations and final recommendations in Draft PDR.
M. Electrical and Controls	Develop electrical and controls design requirements associated with the proposed improvements including all facilities associated with the current and future phases.	Details of evaluations and final recommendations in Draft PDR.
N. Construction Phasing	Evaluate demolition and construction phasing requirements for the proposed pump station, emergency backup power generator, PLC and communications systems, dechlorination facility, and chlorination facility to establish seamless transfer of operations to the new facilities and demolishing the existing ones. Prepare phasing plan and sequence of construction for site layouts. Include discussion on sequencing to maintain existing services throughout construction prior to demolition.	Details of evaluations and final recommendations in Draft PDR. Review with IRWD during scheduled DDM.

TABLE 1-3 // Scope of Work Summary (continued)

Task	Key Elements	Deliverables
O. Site Master Plan	Develop five (5) site layout alternatives to include all requirements of RFP and provide recommendations. Site layouts will include pump station building, pipelines, valves, storm drains and catch basins, sewer, surge tank (if required), electrical transformers and panels, backup generator, and other appurtenances. Define site access and chemical delivery provisions and Orange County Fire Authority (OCFA) requirements. Include discussion of construction phasing, per Task 2.N.	Details of evaluations and final recommendations in Draft PDR. Review with IRWD during scheduled DDM.
P. Entry Road Improvements	Evaluate the existing entry road into the complex from the access point near the OCFA concrete driveway to the end of the paved area near the gate adjacent to the IRWD caretaker residence and provide recommendations for improvements to pavement, grades, curbs, drainage facilities, and the structural street section.	Details of evaluations and final recommendations in Draft PDR.
Q. Preliminary Grading Plan	Develop a preliminary grading plan for the selected Site Layout and incorporate improvements from Task 2.P.	Details of evaluations and final recommendations in Draft PDR.
R. Water Quality Management Plan Requirements	Define project features and best management practices that will mitigate the impact of the project on water quality and the environment according to the North Orange County permit from the National Pollutant Discharge Elimination System (NPDES) held by IRWD, which is under the jurisdiction of the Santa Ana Regional Water Quality Control Board. Perform a site assessment, compile site conditions, determine hydrologic conditions of concern and pollutants of concern, determine performance criteria, and provide recommendations for low impact development best management practices for treatment and capture of onsite stormwater. Review the proposed improvements with IRWD, determine which are suitable, and then incorporate these improvements into the project. Preparation of a complete Water Quality Management Plan is not included.	Details of evaluations and final recommendations in Draft PDR.
S. Geotechnical Investigations	Complete geotechnical investigations per detailed scope of work provided by specialty subconsultant (provided upon request). Work includes: - Existing document review - Project setup - Subsurface exploration (six (6) boring locations assumed) - Laboratory testing - Final report preparation - Drill rig services - Permit fee from Orange County Department of Environmental Health Services (if required for disposal of soils from demolition of septic facilities)	Three (3) copies of the draft Geotechnical Investigation Report (GIR) for review. Upon resolution and incorporation of review comments, three (3) copies of the final GIR and one (1) electronic copy in PDF on CD will be submitted.
T. Surveying Services	Complete surveying services per detailed scope of work provided by specialty subconsultant (provided upon request). Work includes: - Research at County offices for local survey control and property line information - Establish survey control using NAD83 coordinates and NAVD88 County benchmark elevations - Aerial mapping of the approximate 11-acre site - Field locate and add obscured surface features not visible in the aerial photography - Establish property line from found property corners and street centerline monuments - Includes one-day field survey crew time to measure coordinates and elevations of utility potholes	Will establish horizontal and vertical control and develop topographic maps to be used in the design drawings for the proposed facilities.
U. CEQA Documentation	Provide support to the IRWD selected CEQA consultant.	As required.

TABLE 1-3 // Scope of Work Summary (continued)

Task	Key Elements	Deliverables
V. NPDES Permit	Perform a Risk Level assessment in accordance with the Construction General Permit and provide the Risk Level for inclusion in the Contract Documents. The SWPPP document will be prepared by the contractor, if required.	Include recommendation in Draft PDR.
W. Project Schedule	Develop a project schedule for the design and construction phases.	Include preliminary project schedule with Draft PDR.
X. Opinion of Probable Construction Cost	Develop an Opinion of Probable Construction Cost for proposed improvements.	Include with Draft PDR.
Y. Preliminary Design Report (PDR)	Compile all the Task 2 work into a Draft PDR. Incorporate comments from IRWD on Draft PDR and finalize the Final PDR.	Six (6) hard copies and one (1) electronic copy each of the Draft PDR and Final PDR.
Z. Additional Facility Evaluations	Complete additional evaluations per IRWD direction.	As directed.
3. Final Design		
Final Design	Develop contract documents (in stages – 60%, 90%, 100%, Bid Set, Addenda) consisting of the following: • Project Manual per IRWD format consisting of IRWD's Front End Documents, special provisions as needed, technical specifications and other documents required for bid. • Construction Plans • Electrical, Instrumentation and Controls Drawings • SCE Final Service Plan • Project Schedule • Opinion of Probable Construction Cost • Preparation of Addenda and attendance at Pre-Bid Meeting	Eight (8) copies 11"x17" plans, and a red-lined Project Manual and a PDF on CD at 90% submittal. Eight (8) copies 11"x17" plans, and a table of contents for Project Manual and a PDF of entire documents and AutoCAD files of all drawings on CD at 100% submittal. One (1) full-size final stamped and signed reproducible plan set on mylar and one (1) original signed Project Manual for IRWD signatures.

Brown and Caldwell		Irvine Ranch Water District Zone A to Rattlesnake Reservoir Pump Station																					
		Puccio, Michael V PIC	Lazenby, Andrew G Project Manager	Jayakumar, Jayashankar K Project Engineer	Briggs, Mark O QA/QC	Chandrasekhar, Zeenat Structural Engineering Lead	Evans, Dwight Structural Engineering QA/QC	Bourdanoti, Polihronis I Structural Engineering	Jordan, Daniel A Structural Engineering	Glushko, Maksim Structural Engineering	Gulrquis, Michael M Process Mechanical PS Lead	Robison, Douglas B Process Mechanical PS Lead	Vest, Kenneth A Process Mechanical QA/QC	Byrne, Kirstin L Process Mechanical Pump Stations	Halverson, Eric Process Mechanical Pump Stations	Bryan, Kylie R Process Mechanical CAD	Perkins, Russell A Process Mechanical CAD	Lin, Michael Civil/Site Lead	Watts, Alex Civil/Site	Howell, Greg Civil/Site	Shadan, Farshid F Electrical Engineering Lead	Kindle, Christopher J Electrical Engineering QA/QC	Vo, Sang Van Electrical Engineering
Phase	Phase Description																						
001	Project Management	0	77	53	4	6	0	0	0	0	4	4	0	8	0	0	0	4	0	0	6	0	0
***	Default Task	0	77	53	4	6	0	0	0	0	4	4	0	8	0	0	0	4	0	0	6	0	0
002	Preliminary Design	0	68	125	21	16	4	12	12	20	40	40	14	124	161	64	170	124	176	200	10	6	48
***	Default Task	0	68	125	21	16	4	12	12	20	40	40	14	124	161	64	170	124	176	200	10	6	48
003	Final Design	4	140	260	48	44	40	148	184	246	31	31	26	129	65	208	202	106	152	250	55	34	272
001	Project Schedule	0	2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0
002	Opinion of Probable Const Cost	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
003	Prepare 60% Submittal	0	59	113	20	16	16	60	72	120	14	14	14	56	35	92	98	48	72	120	19	12	96
004	Prepare 90% Submittal	0	42	81	15	20	16	64	84	96	10	10	10	40	25	80	70	40	60	100	26	16	128
005	Prepare 100% Submittal	0	17	32	5	8	8	24	28	30	2	2	2	8	5	24	14	8	12	20	10	6	48
006	Prepare Final Submittal	4	8	8	8	0	0	0	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0
007	Bid-Phase Services	0	12	22	0	0	0	0	0	0	5	5	0	25	0	0	20	10	0	10	0	0	0
GRAND TOTAL		4	285	438	73	66	44	160	196	266	75	75	40	261	226	272	372	234	328	450	71	40	320
Hours and Dollars are rounded to nearest whole number. Rates are fixed for the duration of design																							

|--|

September 18, 2018

Prepared by: C. Spangenberg/M. Cortez

Submitted by: K. Burton

Approved by: Paul A. Cook

KLB

ENGINEERING AND OPERATIONS COMMITTEE

DYER ROAD WELLFIELD WELL NO. 5 REHABILITATION BUDGET ADDITION

SUMMARY:

Dyer Road Wellfield (DRWF) Well No. 5 was constructed in 1998 and is located in the City of Santa Ana. In 2015, Well No. 5 was rehabilitated due to extensive microbial-induced corrosion. Since the well's rehabilitation, Well No. 5 began to shut down within a few minutes after startup due to extremely quick water level drawdown below the pump intake. This project will rehabilitate the well and restore production capacity and reduce the drawdown in the well. Staff recommends that the Board authorize the addition of the DRWF Well No. 5 Rehabilitation project to the FY 2018-19 Capital Budget in the amount of \$770,000 to complete the necessary rehabilitation of the well and to mitigate continuing degradation by microbial fouling and chemical encrustation.

BACKGROUND:

DRWF Well No. 5 was constructed in 1998 and is located in the City of Santa Ana near the intersection of Goetz Avenue and South Orange Avenue as shown in Exhibit "A". Well No. 5 was rehabilitated in 2015 due to extensive microbial-induced corrosion. A video survey conducted in 2012 revealed that over 75 percent of the casing perforations were partially plugged with yellowish fibrous biological nodules and chemical iron oxide scale. The well was rehabilitated to address the microbial fouling and chemical encrustation within the screened intervals to improve the specific capacity of the well. Rehabilitation included brushing, bailing, air bursting, chemical treatment, mechanical development, and patching of two damaged screens. As a result of the rehabilitation efforts, the specific capacity was increased from 10 gallons per minute (gpm) per foot of drawdown to 16 gpm per foot of drawdown.

Since the well's rehabilitation in 2015, staff noted that Well No. 5 was shutting down within a few minutes after startup due to extremely quick water level drawdown below the pump intake. Staff performed a pump and surge regimen continuously for 24 hours in an attempt to loosen any debris located within the gravel pack, but it was unsuccessful due to the extensive biofouling within the well. Video inspection of the well indicates that the louvers are completely plugged by what appears to be crystalline calcite as a result of microbial-induced corrosion. The physical appearance of the corrosion has a different character indicating that redox and water quality conditions within the well have changed since the last rehabilitation in 2015. In addition, Well No. 5 sat dormant for at least six months as a result of the in-lieu pumping period during the second half of 2017, as was the case for most of the DRWF wells, to allow the Orange County Water District to recharge the Orange County Groundwater Basin. The well's specific capacity, as shown in Exhibit "B", experienced a reduction during this time frame while operating at pumping rates ranging between 1,900 gpm to 2,200 gpm. This project will rehabilitate the well and restore production capacity and reduce the drawdown in the well. Future measures to

mitigate microbial-induced corrosion in DRWF wells will include a monthly pumping, surging, and disinfection regimen.

Well No. 5 will be rehabilitated in parallel with DRWF Well No. 16, followed by the rehabilitation of DRWF Well No. 14. Bids will be solicited for all three wells together to secure more competitive costs and to expedite the rehabilitation of these wells. Richard C. Slade & Associates is currently completing the design and construction phase services for the three wells.

FISCAL IMPACTS:

Staff requests the addition of Project 10914 to the FY 2018-19 Capital Budget in the amount of \$770,000 as shown in the table below. Funding will be provided by the replacement fund.

Project No.	Current Budget	Addition <Reduction>	Total Budget
10914	-\$0-	\$770,000	\$770,000

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 will be prepared and files with the County of Orange in October 2018.

RECOMMENDATION:

That the Board authorize the addition of Project 10914 to the FY 2018-19 Capital Budget in the amount of \$770,000 for the rehabilitation of the Dyer Road Wellfield Well No. 5.

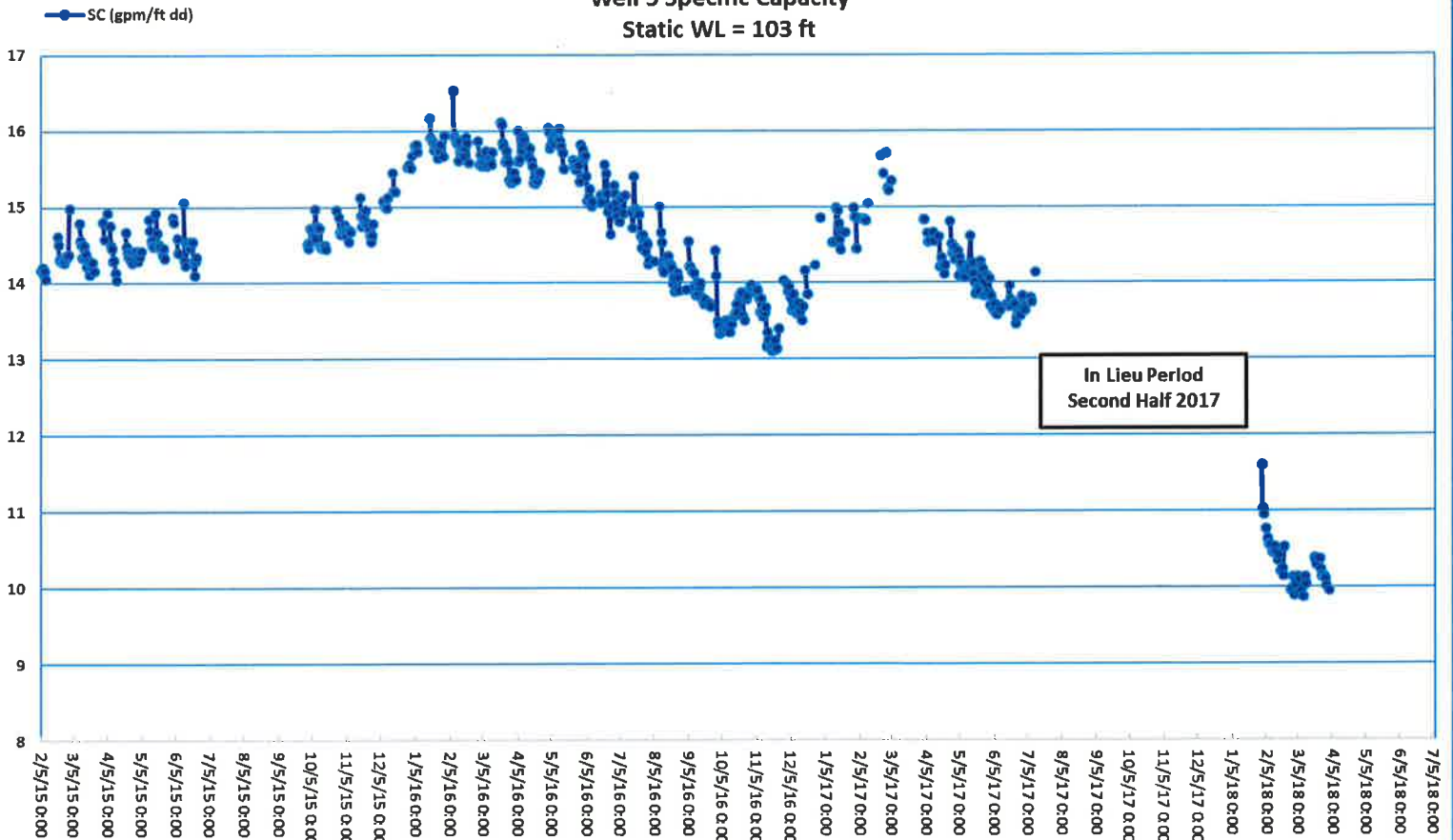
LIST OF EXHIBITS:

Exhibit "A" – Well Location Map

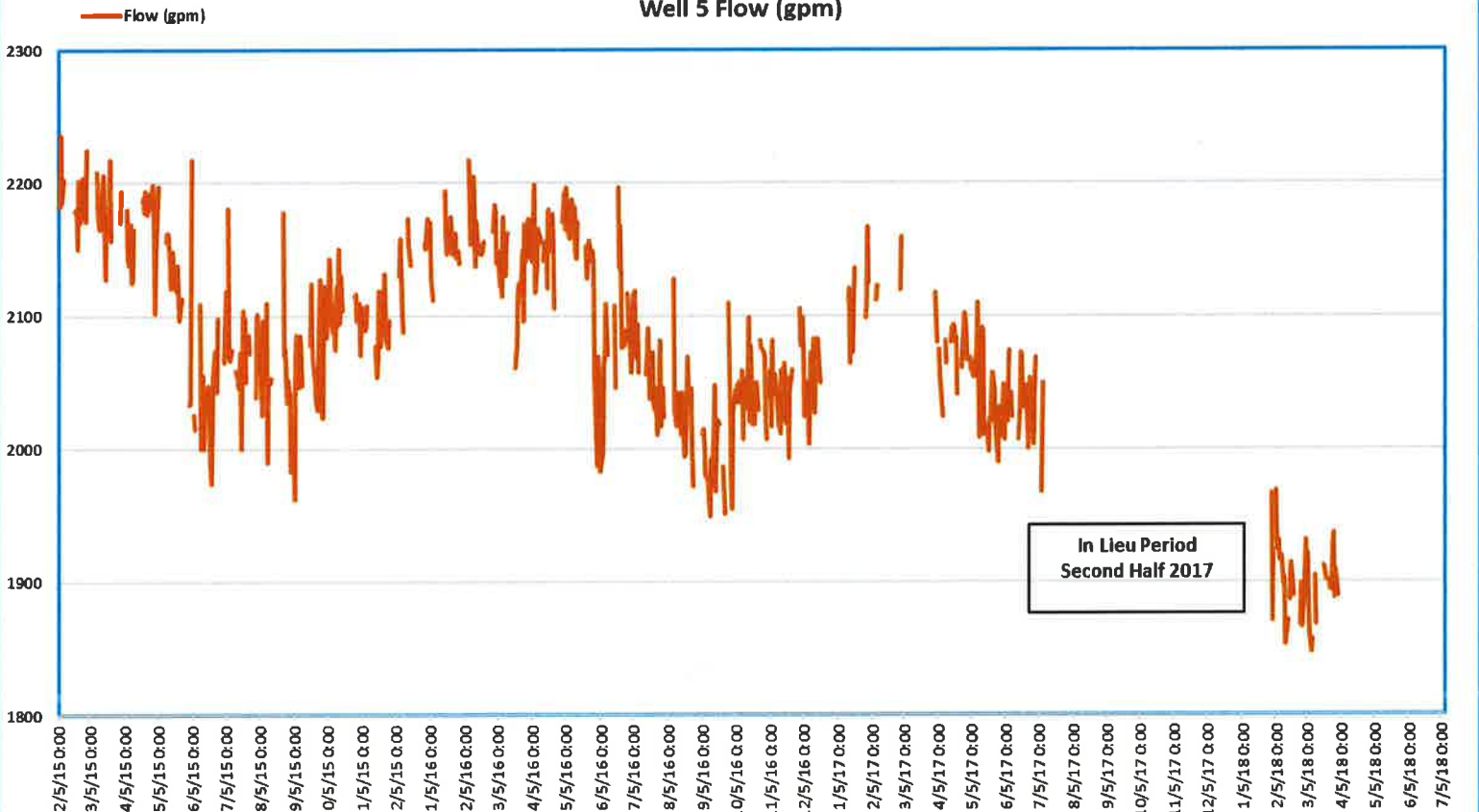
Exhibit "B" – Plot of Specific Capacity and Pumping Rate vs Time

EXHIBIT "B"

Well 5 Specific Capacity
Static WL = 103 ft



Well 5 Flow (gpm)



September 18, 2018
Prepared by: N. Mwe/E. Akiyoshi
Submitted by: K. Burton
Approved by: Paul A. Cook

ENGINEERING AND OPERATIONS COMMITTEE

AMENDED AND RESTATED SEWER SERVICE AGREEMENT FOR EL MORRO ELEMENTARY SCHOOL AND MORO CAMPGROUND

SUMMARY:

In 2002, the Orange County Sanitation District (OCSD) and IRWD entered into an out-of-area sewer service agreement to provide sewer services for El Morro Elementary School. The Amended and Restated Sewer Service Agreement will add the Moro Campground to the out-of-area service agreement, update OCSD User Fees calculations, and simplify the flow monitoring reporting requirements. Staff recommends that the Board authorize the General Manager to execute the Amended and Restated Sewer Service Agreement between OCSD and IRWD.

BACKGROUND:

In July 2002, IRWD and OCSD entered into an out-of-area sewer service agreement where IRWD became the local sewer service agency to the Laguna Beach Unified School District's (LBUSD) El Morro Elementary School. Per the 2002 agreement, attached as Exhibit "A," regional OCSD treatment fees and IRWD's operational costs are passed through to LBUSD and the OCSD treatment fees are calculated based on the school operation only. Concurrently, this sewer service arrangement was approved by the Orange County Local Area Formation Commission.

In 2005, the California State Department of Parks and Recreation opened Moro Campground and entered into an agreement with LBUSD that allowed the campground to use El Morro Elementary School's sewer collection system. The Amended and Restated Sewer Service Agreement, attached as Exhibit "B", includes the provisions to provide out-of-area sewer services to both the elementary school and Moro Campground. The Agreement, which has been reviewed by both OCSD and IRWD legal staff, will be presented to the OCSD Board in October for approval.

IRWD will continue to pass through any treatment fees from OCSD as well as IRWD's operational costs to LBUSD, who will then prorate the expenses with the Campground.

FISCAL IMPACTS:

IRWD will pass through to LBUSD the treatment fees assessed by OCSD. Additionally, IRWD will bill LBUSD all costs incurred during the year for operation, maintenance, repair, refurbishment, and replacement of the lift station and the force main.

ENVIRONMENTAL COMPLIANCE:

LBUSD was the lead agency for CEQA compliance and responsible for filing the appropriate documentation with the Orange County Clerk-Recorder and the California State Clearinghouse.

RECOMMENDATION:

That the Board authorize the General Manager to execute the Amended and Restated Sewer Service Agreement between Orange County Sanitation District and IRWD to provide out-of-area sewer service to El Morro Elementary School and Moro Campground.

LIST OF EXHIBITS:

Exhibit "A" – 2002 Sewer Service Agreement Between OCSD and IRWD

Exhibit "B" – Amended and Restated Sewer Service Agreement Between OCSD and IRWD

EXHIBIT "A"

SEWER SERVICE AGREEMENT

THIS SEWER SERVICE AGREEMENT ("Agreement") is made this 22 day of

July, 2002 by and between:

ORANGE COUNTY SANITATION DISTRICT, a
County Sanitation District, hereinafter referred to
as "OCSD",

AND

IRVINE RANCH WATER DISTRICT, a California
Water District, hereinafter referred to as "IRWD".

RECITALS

WHEREAS, OCSD is a duly organized County Sanitation District, existing pursuant to County Sanitation District Act, California Health and Safety Code section 4700, et seq., providing for the ownership, operation, and maintenance of wastewater collection, treatment, and disposal facilities within Orange County, California.

WHEREAS, IRWD is organized and existing pursuant to the California Water Act, California Water Code section 34000 et seq.

WHEREAS, El Morro Elementary School ("School"), an elementary school in Laguna Beach Unified School District, is currently on a septic tank system and needs to connect to a sanitary sewer system. The School is located at 8681 N. Coast Highway, Laguna Beach, California, as shown on Exhibit A hereto.

WHEREAS, the School is located outside of, but in close proximity to, the jurisdictional boundaries of both IRWD and OCSD. IRWD and OCSD recognize that the property on which the School is located may, in the future, be annexed into both IRWD and OCSD's jurisdictional boundaries.

WHEREAS, IRWD has proposed to act as the School's local sewerage agency and construct, at its sole expense, all the necessary sewage collection and conveyance facilities to connect the School to the OCSD South Coast Trunk Sewer located in Pacific Coast Highway at the Southern edge of OCSD's jurisdictional boundaries (hereinafter "Trunk Sewer").

WHEREAS, OCSD is willing to allow IRWD to connect those collection and conveyance facilities to the Trunk Sewer.

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

Section 1. The recitals set forth above are true and correct and are incorporated into this Agreement.

Section 2. IRWD shall serve as the local sewer servicing agency for the School and shall be responsible for the operation and maintenance of the local sewers required to connect the School to OCSD's Trunk Sewer. IRWD shall be responsible for the installation, maintenance, and operation of all necessary equipment, including but not limited to a pump station, force main, and collector sewer lines, as needed, from the point of discharge, the School, to the connection with the Trunk Sewer. IRWD shall install, operate and maintain a flow meter to measure the daily discharge from the School to the sewerage system. IRWD shall provide monthly reports to OCSD containing the results of the flow meter measurements of the daily discharge from the School. IRWD shall work with OCSD to develop a method for OCSD to obtain the School flow measurements on a daily basis through either the installation by IRWD of a Supervisory Control and Data

Acquisition System which allows OCSD to download the flow data directly from such system or by another mechanism reasonably acceptable to OCSD.

Section 3. OCSD agrees to allow the connection of IRWD's collector sewer line serving the School to the Trunk Sewer for the transport of wastewater generated from the School to OCSD's treatment facilities for treatment and disposal. No other discharge to the Trunk Sewer is authorized by this Agreement.

Section 4. IRWD shall pay to OCSD sanitary sewer service charges ("user fees") for the School discharge to the Trunk Sewer at OCSD's Class I permittee rate, as such rate may be periodically adjusted by OCSD. OCSD's 2001-2002 Class I rate includes the following: \$224.94 per million gallons of flow, \$185.07 per 1000 pounds of Biochemical Oxygen Demand ("BOD"), and \$177.07 per 1000 pounds of Suspended Solids ("SS"). Initial estimates are that the School will discharge approximately 10,000 gallons per day, with each student generating .011 pounds per day of BOD and .008 pounds per day of SS. Assuming a 9 month school year and a school population of 525 students and faculty, the annual sanitary sewer service charge will be approximately \$991.50. The Sanitary Sewer Service charges may also be adjusted to the extent that actual flow, BOD levels, SS levels and/or the school population varies from the estimates provided herein. OCSD may in its discretion require periodic sampling of BOD and SS levels, the cost of which shall be borne by IRWD. IRWD shall also provide to OCSD annual reports identifying the average daily attendance (students and faculty) at the School during each school year. OCSD shall invoice IRWD annually, following the completion of each school year, for the sanitary sewer service charges applicable to the School.

Section 5. IRWD shall obtain a connection permit from OCSD for the connection of the local sewer to the Trunk Sewer and shall pay to OCSD capital facilities capacity charges (connection fees) prior to the commencement of discharge to the Trunk Sewer. OCSD's capital facilities capacity charges are based on the School's total square footage (42,203 square feet of building space) multiplied by the unit rate of \$675.00 per thousand square feet for a total charge of \$28,487.03. If the School is expanded, additional capital facility charges shall be due to OCSD at OCSD's then-existing rate.

Section 6. This Agreement shall continue in full force and effect until terminated for either of the following reasons: (a) by mutual written agreement of OCSD and IRWD or (b) for any material breach of this Agreement by either of the Parties. For purposes of this Agreement, a material breach may include, but is not limited to, (a) the failure to timely pay, upon demand, the user fees or capital facilities capacity charges described in Sections 4 and 5 above; (b) the failure to provide, upon demand, the operation and maintenance services described in Section 2, above; or (c) the failure to perform sampling or provide reports or information required by this Agreement. To the extent of any termination for a material breach of this Agreement, the parties shall retain all rights and remedies that they may have hereunder at law or in equity.

Section 7. All notices or other communications required or permitted hereunder shall be in writing, and shall be personally delivered or sent by registered or certified mail, postage prepaid, return receipt requested, delivered or sent by electronic transmission, and shall be deemed received upon the earlier of (i) the date of delivery to the address of the person to receive such notice if delivered personally or by messenger or overnight courier; (ii) three (3) business days after the date of posting by the United States Post

Office if by mail; or (iii) when sent if given by electronic transmission. Any notice, request, demand, direction, or other communication sent by electronic transmission must be confirmed within forty-eight (48) hours by letter mailed or delivered. Notices or other communications shall be addressed as follows:

To OCSD: Orange County Sanitation District
 Post Office Box 8127
 Fountain Valley, Ca 92728-8127
 Attention: General Manager
 Telephone: (714) 962-2411
 Facsimile: (714) 962-0356

To IRWD: Irvine Ranch Water District
 Post Office Box 57000
 Irvine, CA 92618-7000
 Attention: General Manager
 Telephone: (949) 453-5300
 Facsimile: (949) 453-1228

Either party may, by written notice to the other, designate a different address, which shall be substituted for that specified above.

Section 8. In the event any one or more of the provisions contained in this Agreement, for any reason, shall be held to be invalid, illegal, or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect any other provision of this Agreement, but this Agreement shall be construed as if such invalid, illegal, or unenforceable provision had never been set forth herein, and the same shall be enforceable to the fullest extent permitted by law.

Section 9. Except as otherwise provided herein, all the terms of this Agreement shall be binding upon and shall inure to the benefit of and be enforceable by the respective successors and assigns of the Parties thereto.

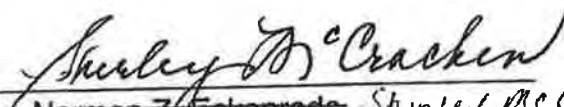
Section 10. This Agreement may be executed simultaneously in counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

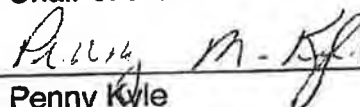
Section 11. This Agreement shall be governed by, interpreted under, and constructed and enforced in accordance with, the laws of the State of California.

Section 12. This Agreement contains the entire agreement between the Parties related to the rights herein granted and the obligations herein assumed. Any prior agreements or representations not expressly set forth herein are of no legal force or effect.

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed as of the day and year first above written.

ORANGE COUNTY SANITATION DISTRICT

By 
~~Norman Z. Eckenrode~~ Shirley McCracken
Chair of the Board of Directors

By 
Penny Kyle
Secretary of the Board of Directors

APPROVED AS TO FORM:
THOMAS L. WOODRUFF
DISTRICT COUNSEL

By 
Thomas L. Woodruff
Thomas F. Nixon

[Signatures Continued on Following Page]

IRVINE RANCH WATER DISTRICT

By 
President

By 
Clerk of the Board of Directors

APPROVED AS TO FORM:
JOAN C. ARNESON
GENERAL COUNSEL

By 
Joan C. Arneson

Exhibit A

El Morro Elementary School, OCSD Pump Stations, Gravity Sewers, and Force Mains

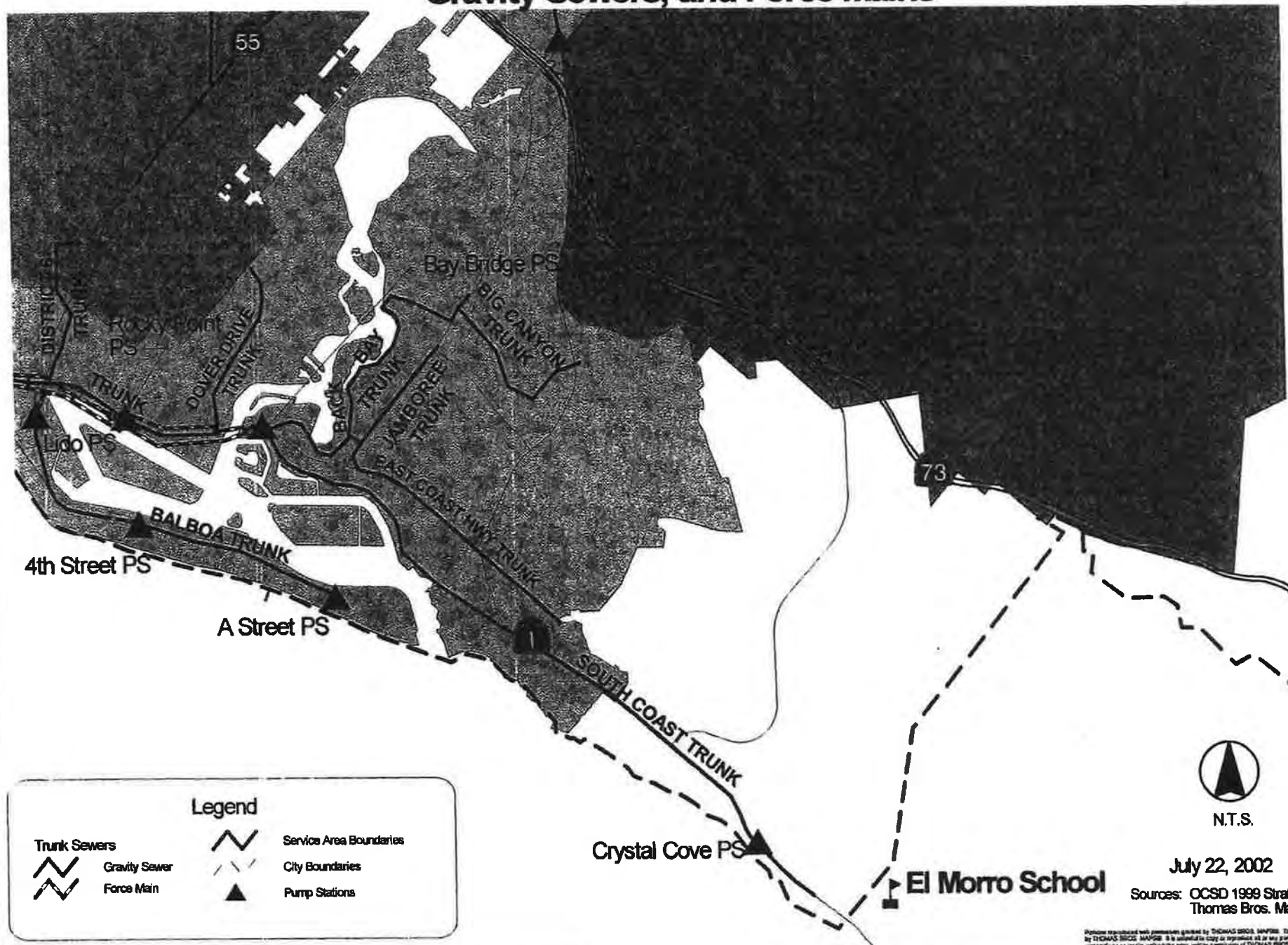


EXHIBIT “B”

AMENDED AND RESTATED SEWER SERVICE AGREEMENT (El Morro Elementary School and Moro Campground)

This Amended and Restated Sewer Service Agreement (“**Agreement**”) is effective as of _____, 2018 (“**Effective Date**”) and is between ORANGE COUNTY SANITATION DISTRICT (“**Sanitation District**”) and IRVINE RANCH WATER DISTRICT (“**IRWD**”). IRWD and Sanitation District are each a “**Party**” and together are the “**Parties**.”

A. Sanitation District is a duly organized County Sanitation District, existing pursuant to County Sanitation District Act, California Health and Safety Code section 4700, *et seq.*, providing for the ownership, operation, and maintenance of wastewater collection, treatment, and disposal facilities within Orange County, California.

B. IRWD is organized and existing pursuant to the California Water District Law, California Water Code Section 34000, *et seq.*, under which it owns, operates, and maintains wastewater collection, treatment, recycling and disposal facilities.

C. On July 22, 2002, Sanitation District and IRWD entered into a *Sewer Service Agreement* (the “**Sewer Service Agreement**”), which provided the terms under which IRWD would collect the wastewater from El Morro Elementary School (“**School**”) and convey it to Sanitation District for treatment. The School is located outside of Sanitation District’s and IRWD’s boundaries, as shown on Exhibit A.

D. Adjacent to the School is the Moro Campground (“**Campground**”), which was redeveloped by the State of California, Department of Parks and Recreation. The Campground is also located outside of Sanitation District’s and IRWD’s boundaries, as shown on Exhibit A.

E. In 2002, the Orange County Local Agency Formation Commission approved sewer service by Sanitation District and IRWD to the School and Campground. IRWD serves as the local sewer service agency for the School and Campground.

F. Under a *Joint Development Agreement between the State of California, Department of Parks and Recreation and Laguna Beach Unified School District For Design and Construction of Two Lift Stations, Storm Drainage Improvements And Entrance Road Improvements And Maintenance of Entrance Road* effective September 9, 2002, wastewater collection and conveyance facilities were constructed to connect the School and the Campground to the Sanitation District South Coast Trunk Sewer located in Pacific Coast Highway at the Southern edge of Sanitation District’s jurisdictional boundaries (“**Trunk Sewer**”).

G. IRWD owns and operates the local wastewater collection and conveyance facilities, consisting of the El Morro Elementary School lift station, force main, and a manhole upstream of the El Morro Elementary School lift station (the “**IRWD Facilities**”). The Campground’s sewer flows are combined with the School’s sewer flows in the IRWD Facilities, which are then conveyed and discharged to the Trunk Sewer.

H. IRWD must allocate operational costs, including Sanitation District's sanitary sewer service charges, between the School and the Campground. The Parties intend by this Agreement to allocate those operational costs, and to amend and restate the Sewer Service Agreement.

The Parties therefore agree as follows:

1. IRWD Collection and Metering.

1.1 Sewer Service. IRWD shall serve as the local sewer service agency for the School and the Campground.

1.2 Metering. IRWD shall operate and maintain a flow meter to measure the combined discharge to the Trunk Sewer from the School and the Campground and provide to OCSD annual meter calibration reports. IRWD shall provide annual flow reports to OCSD by July 10, or upon request, containing the monthly meter read data of combined discharge and the respective read date.

2. Sanitation District's Acceptance and Treatment of Wastewater. Sanitation District shall accept into the Trunk Sewer and shall treat and dispose all wastewater from the School and the Campground that is conveyed through the IRWD Facilities. Discharges to Sanitation District's system must be in compliance with Sanitation District's Wastewater Discharge Regulations Ordinance limits, terms, and conditions. No other discharge to the Trunk Sewer is authorized by this Agreement.

3. User Fees. IRWD shall pay to Sanitation District sanitary sewer service fees ("User Fees") for the School and the Campground discharge to the Trunk Sewer. Sanitation District shall calculate the combined User Fees applicable to the School and the Campground, and Sanitation District shall accordingly invoice IRWD annually.

3.1 User Fees will be based on metered flows at standard quality/strength concentrations for Biochemical Oxygen Demand ("BOD") and Suspended Solids ("SS"), 250 mg/L each, at OCSD's Class I permittee rate.

3.2 Sanitation District may periodically adjust the rate. Sanitation District's 2018-2019 Class I rate includes the following: \$1,433.49 per million gallons of flow, \$658.09 per 1000 pounds of BOD, and \$716.60 per 1000 pounds of SS.

4. Connection Permit/Capacity Charges. Per the Sewer Service Agreement, Sanitation District invoiced IRWD and IRWD paid capital facility capacity charges for the El Morro Elementary School. Also, the State of California, Department of Parks and Recreation obtained a Trunk Connection Permit from Sanitation District and paid the processing and annexation fees and capital facility capacity charges in 2004 in anticipation of the connection of the local sewer to the Trunk Sewer. If any of the connected facilities are expanded, then additional capital facility capacity charges will be due to Sanitation District at Sanitation District's then-existing applicable rates, fees, and charges.

5. Breach, Cure, and Remedies.

5.1 For purposes of this Agreement, a material breach may include, but is not limited to:

A. IRWD's failure to timely pay, upon demand, the User Fees or capital facilities capacity charges described in Section 3 or Section 4;

B. IRWD's failure to provide, upon demand, the operation and maintenance services described in Section 2;

C. IRWD's failure to provide reports or information required by this Agreement;

D. Sanitation District's failure to provide sewer services.

5.2 Upon the occurrence of any material breach, the non-breaching Party shall provide notice to the allegedly breaching Party and give 30 days to cure the breach.

6. Termination. This Agreement will continue in full force and effect until terminated for either of the following reasons: (a) by mutual written agreement of Sanitation District and IRWD or (b) for any material breach of this Agreement by either of the Parties that remains uncured 30 days after notice. To the extent of any termination for a material breach of this Agreement, the parties shall retain all rights and remedies that they may have hereunder at law or in equity.

7. Notice.

7.1 All notices must be in writing, and delivered as follows:

A. by hand, nationally-recognized overnight carrier, or U.S. mail, with

B. a courtesy copy sent by email.

7.2 Notices will be deemed received upon the date of delivery if by hand or overnight carrier, or three business days after the date of posting if by U.S. mail.

7.3 Notices must be addressed as follows:

To Sanitation District:

Orange County Sanitation District
10844 Ellis Avenue
Fountain Valley, Ca 92708
Attention: General Manager

To IRWD:

Irvine Ranch Water District
If by hand delivery or overnight carrier:

15600 Sand Canyon Avenue
Irvine, CA 92618

If by U.S. Mail

Post Office Box 57000
Irvine, CA 92618-7000
Attention: General Manager

With a Courtesy Copy by email to: Burton@irwd.com

7.4 Either Party may, by written notice to the other, designate a different address or addressee, which will be substituted immediately for that specified above.

8. Severability. If any provision of this Agreement, for any reason, is held to be invalid, illegal, or unenforceable in any respect, that invalidity, illegality, or unenforceability will not affect any other provision of this Agreement, but this Agreement will be construed as if the invalid, illegal, or unenforceable provision had never been set forth herein, and the remainder will be enforceable to the fullest extent permitted by law.

9. Successors & Assigns. The terms of this Agreement are binding upon and will inure to the benefit of and be enforceable by the respective successors and assigns of the Parties.

10. Mutual Indemnity. Each party shall indemnify and hold harmless the other party, and its elected officials, officers, agents, and employees from and against any and all losses, liability, damages, claims, suits, actions, and administrative proceedings or demands (including reasonable attorney's fees) relating to acts or omissions of the indemnitor, its officers, agents, or employees arising out of or incidental to the performance of any of the provisions of this Agreement. This Section 10 survives termination of the Agreement.

11. Counterparts. This Agreement may be executed in counterparts, each of which is an original, but all of which together will constitute one and the same instrument.

12. Choice of Law. This Agreement shall be governed by, interpreted under, and constructed and enforced in accordance with, the laws of the State of California.

13. Integration. This Agreement contains the entire agreement between the Parties with respect to sewer service to the School and the Campground. Any prior agreements or representations not expressly set forth herein are of no legal force or effect.

14. Supersession. This Agreement amends, supersedes, and replaces the Sewer Services Agreement.

The Parties are entering into this Agreement to be effective as of the Effective Date.

ORANGE COUNTY SANITATION DISTRICT

By: _____
Greg Sebourn
Chair of the Board of Directors

By: _____
Kelly Lore
Secretary of the Board of Directors

APPROVED AS TO FORM:

By: _____
Bradley R. Hogin
General Counsel

IRVINE RANCH WATER DISTRICT

By: _____
Paul A. Cook
General Manager

By: _____
Secretary

APPROVED AS TO FORM:

By: _____
General Counsel