moulton niguel water district

BOARD OF DIRECTORS' MEETING
MOULTON NIGUEL WATER DISTRICT
26880 Aliso Viejo Parkway, Aliso Viejo
September 12, 2019
6:00 PM
Approximate Meeting Time: 2 Hours

1. CALL MEETING TO ORDER:

2. PLEDGE OF ALLEGIANCE:

3. PUBLIC COMMENTS:

Persons wishing to address the Board of Directors on matters not listed on the Agenda may do so at this time. "Request To Be Heard" forms are available at the entrance to the Board Room. Comments are limited to five minutes unless further time is granted by the Presiding Officer. Submit form to the Recording Secretary prior to the beginning of the meeting.

Those wishing to address the Board of Directors on any item listed on the Agenda should submit a "Request To Be Heard" form to the Recording Secretary before the Presiding Officer announces that agenda item. Your name will be called to speak at that time.

PRESENTATION ITEMS:

4. UPDATE ON THE CALIFORNIA SPECIAL DISTRICTS ASSOCIATIONS PROGRAMS

CONSENT CALENDAR ITEMS:(Items on the Consent Calendar have been discussed at the regularly scheduled Administrative and Technical Committee meetings)

Consent items: Unless the General Manager or the Board requests that an item be removed from the Consent Calendar, all items will be acted upon as a whole and by one vote. Requests for discussion of any specific item should be made to the Presiding Officer in conjunction with the discussion of the consent motion.

5. MINUTES OF THE AUGUST 8, 2019 BOARD OF DIRECTORS MEETING

6. MINUTES OF THE AUGUST 22, 2019 BOARD OF DIRECTORS MEETING

7. PLANT 3A PUMP REHABILITATION SERVICES

It is recommended that the Board of Directors approve the Plant 3A Pump Rehabilitation Services Agreement with Power Brothers Machine, Inc. in the amount of $90,465; authorize the General Manager or Assistant General Manager to execute the agreement, and to approve amendments up to 10% of the contract value.

8. WASTEWATER INFLOW AND INFILTRATION FLOW MONITORING SERVICES

It is recommended that the Board of Directors approve the agreement for wastewater inflow and infiltration flow monitoring services with ADS Corp. in the amount of $239,500; authorize the General Manager or Assistant General Manager to execute the agreement; and to approve amendments up to 20% of the contract value.

9. CONSTRUCTION CONTRACT AWARD FOR 650-ZONE NIGUEL ROAD INTERTIE

It is recommended that the Board of Directors award the construction services contract to Ferreira Construction in the amount of $527,824; authorize the General Manager or Assistant General Manager to execute the contract; and to approve change orders up to 10% of the contract value.

10. PROFESSIONAL SERVICES AGREEMENT FOR STEEL RESERVOIR SEISMIC RETROFITS

It is recommended that the Board of Directors approve the Professional Services Agreement for engineering services with Lee & Ro, Inc. in the amount of $331,433; authorize the General Manager or Assistant General Manager to execute the agreement; and to approve amendments up to 10% of the contract value.

LEGAL MATTERS:

11. 2019 REPORT ON WATER QUALITY RELATIVE TO PUBLIC HEALTH GOALS – PUBLIC HEARING AND ADOPTION OF REPORT

It is recommended that the Board of Directors conduct a public hearing to receive public testimony regarding the proposed adoption of the 2019 Public Health Goals Report. Upon completion of the public hearing, it is recommended that the Board of Directors take action to approve the 2019 Report On Water Quality Relative To Public Health Goals as required under the Health And Safety Code.

TECHNICAL MATTERS:

12. ON-CALL CONSTRUCTION SUPPORT SERVICES

It is recommended that the Board of Directors authorize the General Manager or Assistant General Manager to execute three-year Construction Support Services Agreements with Jamison Engineering Contractors, Inc. and Kingmen Construction, Inc. for a total not-to-exceed amount of $750,000 each.

13. FISCAL YEAR 2019-20 METER MAINTENANCE AND REPLACEMENT PROGRAM

It is recommended that the Board of Directors authorize meter and meter-related purchases for an amount not-to-exceed $1,240,000 for Fiscal Year 2019-20.

14. MEMORANDUM OF UNDERSTANDING FOR HUNTINGTON BEACH OCEAN DESALTER

It is recommended that the Board of Directors approve the Memorandum of Understanding between Orange County Water District and Moulton Niguel Water District regarding non-binding interest in the Huntington Beach Ocean Desalter.

ADMINISTRATIVE MATTERS:

15. REDUCTION OF LONG-TERM LIABILITIES (RESOLUTION 19-__) (RESOLUTION 19-__) (RESOLUTION 19-__)

It is recommended that the Board of Directors:

1. Approve the resolution entitled, "Authorizing Payment of the Remaining Principal and Accrued Interest for the Purchase Price of the Sewer Rehabilitation Project-Phase 1 from the California Infrastructure and Economic Development Bank (CIEDB 02-026)".

2. Approve the resolution entitled, "Authorizing Payment of Remaining Principal on a Zero-Interest Rate Option for A State Water Resources Control Board State Revolving Fund ("SRF") Loan for the Reclamation Phase IV Expansion Project (SRF 120)".

3. Approve the resolution entitled, "Authorizing Payment of Remaining Principal and Accrued Interest for the Purchase Price of the Clor-Tec Phase 2 Project from the California Infrastructure and Economic Development Bank (CIEDB 01-020)".

16. METROPOLITAN FUTURE SUPPLY ACTIONS PROGRAM INTERAGENCY AGREEMENTS

It is recommended that the Board of Directors:

1. Authorize the General Manager or Assistant General Manager to execute the agreement with the Municipal Water District of Orange County for Future Supply Action Program funding.

2. Authorize the General Manager or Assistant General Manager to execute the agreement with the County of Orange to implement the Smart Watershed Network project for a program cost of $411,508.

17. REBATE APPLICATION FOR NATURESCAPE PROGRAM

It is recommended that the Board of Directors consider the NatureScape Program rebate application for Account No. 94023 without a limitation on the maximum allowable square footage and direct staff accordingly.

GENERAL MANAGER MATTERS:(Brief general updates on District matters and/or brief general updates from staff - Informational purposes only.)

BOARD REPORTS:

PRESIDENT'S REPORT:

FUTURE AGENDA ITEMS (Any items added under this section are for discussion at future meetings only.):

LATE ITEMS: (Appropriate Findings to be Made)

a. Need to take immediate action; and

b. Need for action came to District's attention after Agenda Posting. [Requires 2/3 vote (5 members) or unanimous vote if less than 2/3 are present]

ADJOURNMENT:

The Board of Directors' Meeting Room is wheelchair accessible. If you require any special disability related accommodations (i.e., access to an amplified sound system, etc.), please contact the Moulton Niguel Water District Secretary's office at (949) 831-2500 at least forty-eight (48) hours prior to the scheduled meeting. This agenda can be obtained in alternate format upon written request to the Moulton Niguel Water District Secretary at least forty-eight (48) hours prior to the scheduled meeting.

Agenda exhibits and other writings that are disclosable public records distributed to all, or a majority of, the members of the Moulton Niguel 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 at the District Office, 27500 La Paz Road, Laguna Niguel, CA ("District Office"). If such writings are distributed to members of the Board less than seventy-two (72) hours prior to the meeting, they will be available in the reception area of the District Office at the same time as they are distributed except that, if such writings are distributed immediately prior to, or during the meeting, they will be available in the Board meeting room and on the District website at www.mnwd.com.

moulton niguel water district

DRAFT
MINUTES OF THE REGULAR MEETING
OF THE BOARD OF DIRECTORS OF THE
MOULTON NIGUEL WATER DISTRICT

August 8, 2019

A Regular Meeting of the Board of Directors of the Moulton Niguel Water District was held at the District offices, 27500 La Paz Road, Laguna Niguel, California, at 6:00 PM on August 8, 2019. There were present and participating:

DIRECTORS

Duane Cave	Vice President
Richard Fiore	Director
Donald Froelich	Vice President
Kelly Jennings	Director
Gary Kurtz	Director (via teleconference)
Bill Moorhead	Director
Brian Probolsky	President

Also present and participating were:

STAFF MEMBERS, LEGAL COUNSEL, AND MEMBERS OF THE PUBLIC

Joone Lopez	General Manager
Matt Collings	Assistant General Manager
Rod Woods	Director of Engineering
Gina Hillary	Director of Human Resources
Todd Novacek	Director of Operations
Jake Vollebregt	Director of Regional & Legal Affairs
Jose Solorio	Government Affairs Officer
Jeff Ferre	Best, Best, & Krieger (General Counsel)
Paige Gulck	Board Secretary
Tim Bonita	Recording Secretary
Trevor Agrelius	MNWD
Len Barton	MNWD
Matthew Brown	MNWD
Johnathan Cruz	MNWD
Todd Dmytryshyn	MNWD

Jesus Garibay Jr.	MNWD
Rhonda Himley	MNWD
David Larsen	MNWD
Shavonne Mays	MNWD
Medha Patel	MNWD
Lindsey Stuvick	MNWD
Adrian Tasso	MNWD
Betzalel Eichenbaum	Business Machine Consultants, Inc.
Sherry Wanninger	CAC Member
Jayson Schmidt	Chandler Asset Management
Robert Hunter	General Manager, MWDOC
Dawn Guendert	Hazen and Sawyer
Ian Mackenzie	Hazen and Sawyer
Christopher Thunhorst	Hazen and Sawyer
Diana Pena	OC Coastkeeper

1. CALL MEETING TO ORDER:

The meeting was called to order by Brian Probolsky at 6:02 p.m.

2. PLEDGE OF ALLEGIANCE:

The Pledge of Allegiance was led by Donald Froelich.

3. PUBLIC COMMENTS:

None.

PRESENTATIONS:

4. QUARTERLY INVESTMENT REPORT - CHANDLER ASSET MANAGEMENT

Jayson Schmidt from Chandler Asset Management provided the quarterly investment report.

CONSENT CALENDAR ITEMS:(Items on the Consent Calendar have been discussed at the regularly scheduled Administrative and Technical Committee meetings)

5. MINUTES OF THE JULY 1, 2019 SPECIAL BOARD OF DIRECTORS MEETING

6. MINUTES OF THE JULY 11, 2019 BOARD OF DIRECTORS MEETING

7. PLANT 3A AERATION DIFFUSER SYSTEM REPLACEMENT

It is recommended that the Board of Directors approve the Plant 3A Aeration Diffuser System Replacement Agreement with Environmental Dynamics International (EDI) in

DRAFT

the amount of $255,348; authorize the General Manager or Assistant General Manager to execute the agreement; and to approve amendments up to 10% of the contract value.

9. AMENDMENT NO. 8 TO THE SANTIAGO AQUEDUCT COMMISSION JOINT POWERS AGREEMENT

It is recommended that the Board of Directors approve Amendment No. 8 to the SAC Joint Powers Agreement; and authorize the General Manager or Assistant General Manger to execute Amendment No. 8.

10. RISK AND RESILIENCE ASSESSMENT

It is recommended that the Board of Directors approve an agreement with Municipal Water District of Orange County for a not-to-exceed amount of $160,090 for Herndon Solutions Group to complete the District's Risk and Resilience Assessment; authorize the General Manager or Assistant General Manager to execute the agreement; and to approve change orders up to 20% of the authorization amount.

11. ON-SITE MOBILE FUELING SERVICES

It is recommended that the Board of Directors approve a contract services agreement with AAA Oil, Inc dba California Fuels and Lubricants (CFL), in the amount of $650,000; and authorize the General Manager or Assistant General Manager to execute the agreement.

12. PROFESSIONAL SERVICES AGREEMENT FOR STRATEGIC COMMUNICATIONS SERVICES

It is recommended that the Board of Directors approve the Professional Services Agreement with Sabal Palms Advisors for a term through June 30, 2021 at a not to exceed contract amount of $176,000; and authorize the General Manager or Assistant General Manager to execute the agreement.

MOTION DULY MADE BY DUANE CAVE AND SECONDED BY DONALD FROELICH, CONSENT ITEMS 5,6,7,9,10,11 AND 12 WERE APPROVED AS PRESENTED. A ROLL CALL VOTE WAS TAKEN, AND THE VOTE WAS UNANIMOUS WITH DIRECTORS DUANE CAVE, RICHARD FIORE, DONALD FROELICH, KELLY JENNINGS, GARY KURTZ, BILL MOORHEAD, AND BRIAN PROBOLSKY ALL VOTING 'AYE'.

8. PRINTER AND COPIER LEASING AND PRINTING SERVICES

It is recommended that the Board of Directors approve a three-year Lease Agreement in the amount of $84,362 for printer and copier equipment leasing and a three-year Service and Maintenance Agreement for printer and copier services in the amount of $60,000 with Business Machine Consultants, Inc. ("BMC"); authorize the General Manager or

DRAFT

Assistant General Manager to execute the agreements; and to approve amendments up to 10% of the agreement values.

This item was pulled from consent. Discussion ensued regarding the agreement.

MOTION DULY MADE BY DONALD FROELICH AND SECONDED BY BILL MOORHEAD, ITEM 8 WAS APPROVED AS PRESENTED. A ROLL CALL VOTE WAS TAKEN, AND THE VOTE WAS UNANIMOUS WITH DIRECTORS DUANE CAVE, RICHARD FIORE, DONALD FROELICH, KELLY JENNINGS, GARY KURTZ, BILL MOORHEAD, AND BRIAN PROBOLSKY ALL VOTING 'AYE'.

ADMINISTRATIVE MATTERS:

13. ORANGE COUNTY WATERSHED EDUCATION PROGRAM

It is recommended that the Board of Directors approve a Professional Services Agreement with Orange County Coastkeeper for a two-year term with a not to exceed amount of $140,000 for Fiscal Years 2019-20 and 2020-21; and authorize the General Manager or Assistant General Manager to execute the agreement.

Lindsey Stuvick and Diana Pena provided information on the item. Discussion ensued regarding the program.

MOTION DULY MADE BY KELLY JENNINGS AND SECONDED BY DUANE CAVE, ITEM 13 WAS APPROVED AS PRESENTED. A ROLL CALL VOTE WAS TAKEN, AND THE VOTE WAS UNANIMOUS WITH DIRECTORS DUANE CAVE, RICHARD FIORE, DONALD FROELICH, KELLY JENNINGS, GARY KURTZ, BILL MOORHEAD, AND BRIAN PROBOLSKY ALL VOTING 'AYE'.

TECHNICAL MATTERS:

14. ADOPTION OF INITIAL STUDY/MITIGATED NEGATIVE DECLARATION FOR THE REGIONAL LIFT STATION FORCE MAIN REPLACEMENT (RESOLUTION 19-16)

It is recommended that the Board of Directors approve the resolution entitled, "Adopting the Mitigated Negative Declaration and the Mitigation, Monitoring, and Reporting Program for the Regional Lift Station Force Main Replacement Project (MNWD Project No. 2013.004)."

Rod Woods provided information on the item.

MOTION DULY MADE BY GARY KURTZ AND SECONDED BY BILL MOORHEAD, ITEM 14 WAS APPROVED AS PRESENTED. A ROLL CALL VOTE WAS TAKEN, AND THE VOTE WAS UNANIMOUS WITH DIRECTORS DUANE CAVE, RICHARD FIORE, DONALD FROELICH, KELLY JENNINGS, GARY KURTZ, BILL MOORHEAD, AND BRIAN PROBOLSKY ALL VOTING 'AYE'.

DRAFT

15. PROFESSIONAL SERVICES AGREEMENT FOR PLANT 3A SOLIDS HANDLING FACILITIES IMPROVEMENTS

It is recommended that the Board of Directors approve the Professional Services Agreement for engineering services with Hazen & Sawyer in the amount of $2,357,850; authorize the General Manager or Assistant General Manager to execute the agreement; and to approve amendments up to 10% of the contract value.

Rod Woods provided details on the item. Discussion ensued regarding the agreement.

MOTION DULY MADE BY DUANE CAVE AND SECONDED BY GARY KURTZ, ITEM 15 WAS APPROVED AS PRESENTED. A ROLL CALL VOTE WAS TAKEN, AND THE VOTE WAS UNANIMOUS WITH DIRECTORS DUANE CAVE, RICHARD FIORE, DONALD FROELICH, KELLY JENNINGS, GARY KURTZ, BILL MOORHEAD, AND BRIAN PROBOLSKY ALL VOTING 'AYE'.

16. BIOSOLIDS, GRIT AND SCREENINGS HAULING AND DISPOSAL AGREEMENTS

It is recommended that the Board of Directors approve 1) the Biosolids Hauling and Disposal agreement with Holloway Environmental Solutions, LLC in the amount of $1,250,000 for a three-year term with the option to renew for two additional one-year terms; and 2) the Grit and Screenings Hauling Agreement with Athens Services in the amount of $250,000 for a three-year term with the option to renew for two additional one-year terms; and authorize the General Manager or Assistant General Manager to execute the agreements.

Rod Woods provided information on the item. Discussion ensued regarding the agreement.

MOTION DULY MADE BY DONALD FROELICH AND SECONDED BY DUANE CAVE, ITEM 16 WAS APPROVED AS PRESENTED. A ROLL CALL VOTE WAS TAKEN, AND THE VOTE WAS UNANIMOUS WITH DIRECTORS DUANE CAVE, RICHARD FIORE, DONALD FROELICH, KELLY JENNINGS, GARY KURTZ, BILL MOORHEAD, AND BRIAN PROBOLSKY ALL VOTING 'AYE'.

INFORMATION ITEMS:

17. FISCAL YEAR 2018-19 AUDIT

Trevor Agrelius provided details on the Fiscal Year 2018-19 audit. Discussion ensued regarding the item.

DRAFT

GENERAL MANAGER MATTERS:(Brief general updates on District matters and/or brief general updates from staff - Informational purposes only.)

Joone Lopez provided an update on the following District items:

- *Laguna Niguel back to school event is on August 10th*
- *Saddleback Valley Unified School District Board Meeting to recognize the joint partnership in the District's retrofit program is on August 15th*
- *City of Laguna Niguel's 30th Anniversary Celebration is on August 16th-18th*
- *4th Annual CA Data Collaborative Water Data Summit at UC Davis is on August 22nd & 23rd*
- *Orange County Chapter of WateReuse 10th Anniversary Luncheon is on August 26th*
- *Staff is helping organize the California Water Data Challenge Datathon that will be held during Sustain SoCal's Water Solutions event on August 29th*
- *The District received the Government Finance Officers Association award for the 2018 Comprehensive Annual Financial Report*

BOARD REPORTS:

Bill Moorhead stated that he has been attending El Toro Water Districts meetings and finds them informative.

Duane Cave stated that he will be attending the ACWA Energy Committee Meeting on August 9th.

Donald Froelich stated that he attended the MWDOC meeting on August 7th and that a lot of great information was shared.

Richard Fiore stated that he attended the Mission Viejo Pacific Symphony Symposium on July 27th.

PRESIDENT'S REPORT:

Brian Probolsky stated that he attended the 4th of July event in Laguna Niguel.

FUTURE AGENDA ITEMS (Any items added under this section are for discussion at future meetings only.):

The Board requested that staff bring back an item to discuss Board governance.

LATE ITEMS: (Appropriate Findings to be Made)

None.

DRAFT

ADJOURNMENT:

The meeting was adjourned at 7:42 p.m. in memory of Eric Woolery.

Respectfully submitted,

Tim Bonita
Recording Secretary

DRAFT

moulton niguel water district

DRAFT
MINUTES OF THE REGULAR MEETING
OF THE BOARD OF DIRECTORS OF THE
MOULTON NIGUEL WATER DISTRICT

August 22, 2019

A Regular Meeting of the Board of Directors of the Moulton Niguel Water District was held at the District offices, 27500 La Paz Road, Laguna Niguel, California, at 6:00 PM on August 22, 2019. There were present and participating:

DIRECTORS

Duane Cave	Vice President
Richard Fiore	Director
Donald Froelich	Vice President
Bill Moorhead	Director

Also present and participating were:

STAFF MEMBERS, LEGAL COUNSEL, AND MEMBERS OF THE PUBLIC

Matt Collings	Assistant General Manager
Todd Novacek	Director of Operations
Jeff Ferre	Best, Best, & Krieger (General Counsel)
Tim Bonita	Recording Secretary
Trevor Agrelius	MNWD
Matthew Brown	MNWD
David Larsen	MNWD
Steve Merk	MNWD
Sherry Wanninger	CAC Member

1. CALL MEETING TO ORDER:

The meeting was called to order by Duane Cave at 6:00 p.m.

2. PLEDGE OF ALLEGIANCE:

The Pledge of Allegiance was led by Richard Fiore.

3. PUBLIC COMMENTS:

None.

CONSENT CALENDAR ITEMS:(Items on the Consent Calendar have been discussed at the regularly scheduled Administrative and Technical Committee meetings)

6. ON-CALL INSPECTION SUPPORT SERVICES

It is recommended that the Board of Directors award the On-Call Inspection Support Services Agreement with MWH Constructors for a total not-to-exceed amount of $300,000; authorize the General Manager or Assistant General Manager to execute the agreement; and to approve amendments up to 10% of the total contract value.

MOTION DULY MADE BY DONALD FROELICH AND SECONDED BY RICHARD FIORE, CONSENT ITEM 6 WAS APPROVED AS PRESENTED. THE VOTE WAS UNANIMOUS WITH DIRECTORS DUANE CAVE, RICHARD FIORE, DONALD FROELICH AND BILL MOORHEAD ALL VOTING 'AYE'.

4. WASTEWATER AGREEMENT WITH EL TORO WATER DISTRICT

It is recommended that the Board of Directors approve the Emergency Wastewater Overflow Connection Agreement subject to non-substantive changes approved by legal counsel; and authorize the General Manager to execute the agreement.

This item was pulled from consent. Discussion ensued regarding the agreement.

MOTION DULY MADE BY DONALD FROELICH AND SECONDED BY BILL MOORHEAD, ITEM 4 WAS APPROVED AS PRESENTED. THE VOTE WAS UNANIMOUS WITH DIRECTORS DUANE CAVE, RICHARD FIORE, DONALD FROELICH AND BILL MOORHEAD ALL VOTING 'AYE'.

5. AMENDMENT NO. 2 FOR THE REGIONAL TREATMENT PLANT SOUTHERLY SEWER IMPROVEMENTS

It is recommended that the Board of Directors approve Amendment No. 2 to Task Order No. 18 of the As-Needed Engineering Services for Capital Improvement Program Implementation Agreement with Tetra Tech, Inc. in the amount of $36,000 for a new not-to-exceed amount of $184,900; authorize the General Manager or Assistant General Manager to execute the amendment; and to approve amendments up to 10% of the total task order amount.

This item was pulled from consent. Discussion ensued regarding the project.

DRAFT

MOTION DULY MADE BY BILL MOORHEAD AND SECONDED BY DONALD FROELICH, ITEM 5 WAS APPROVED AS PRESENTED. THE VOTE WAS UNANIMOUS WITH DIRECTORS DUANE CAVE, RICHARD FIORE, DONALD FROELICH AND BILL MOORHEAD ALL VOTING 'AYE'.

TECHNICAL MATTERS:

7. 2019 PUBLIC HEALTH GOALS

It is recommended that the Board of Directors review the Public Health Goals Report and authorize the setting of a Public Hearing for September 12, 2019 prior to consideration of approval of the Public Health Goals Report.

Matt Collings provided information on the item. Discussion ensued regarding the report.

MOTION DULY MADE BY RICHARD FIORE AND SECONDED BY BILL MOORHEAD, ITEM 7 WAS APPROVED AS PRESENTED. THE VOTE WAS UNANIMOUS WITH DIRECTORS DUANE CAVE, RICHARD FIORE, DONALD FROELICH AND BILL MOORHEAD ALL VOTING 'AYE'.

8. MULTI-HAZARD MITIGATION PLAN UPDATE (RESOLUTION 19-17)

It is recommended that the Board of Directors:

1. Approve the resolution entitled, "Adopting the Orange County Regional Water and Wastewater Multi-Hazard Mitigation Plan";

2. Authorize the General Manager or Assistant General Manager to take any other action necessary to complete the Plan including incorporation of any comments from the State Office of Emergency Services and the Federal Emergency Management Agency; and

3. Authorize the General Manager or Assistant General Manager to prepare the required letter certifying adoption.

Todd Novacek provided information on the item. Discussion ensued regarding the plan.

MOTION DULY MADE BY RICHARD FIORE AND SECONDED BY DONALD FROELICH, ITEM 8 WAS APPROVED AS PRESENTED. THE VOTE WAS UNANIMOUS WITH DIRECTORS DUANE CAVE, RICHARD FIORE, DONALD FROELICH AND BILL MOORHEAD ALL VOTING 'AYE'.

DRAFT

ADMINISTRATIVE MATTERS:

9. ADOPTION OF RESOLUTION RECOGNIZING THE HONORABLE CHARLEY WILSON (RESOLUTION 19- 18)

It is recommended that the Board of Directors approve the resolution entitled, "Recognizing the Honorable Charley Wilson".

Matt Collings provided information on the item. Discussion ensued regarding the resolution.

MOTION DULY MADE BY RICHARD FIORE AND SECONDED BY BILL MOORHEAD, ITEM 9 WAS APPROVED AS PRESENTED. THE VOTE WAS UNANIMOUS WITH DIRECTORS DUANE CAVE, RICHARD FIORE, DONALD FROELICH AND BILL MOORHEAD ALL VOTING 'AYE'.

10. ADOPTION OF RESOLUTION RECOGNIZING THE 10-YEAR ANNIVERSARY OF THE ORANGE COUNTY CHAPTER OF WATEREUSE CALIFORINA (RESOLUTION 19-19)

It is recommended that the Board of Directors approve the resolution entitled, "Recognizing the 10-Year Anniversary of the Orange County Chapter of WateReuse California".

Matt Collings provided information on the item. Discussion ensued regarding the resolution.

MOTION DULY MADE BY BILL MOORHEAD AND SECONDED BY RICHARD FIORE, ITEM 10 WAS APPROVED AS PRESENTED. THE VOTE WAS UNANIMOUS WITH DIRECTORS DUANE CAVE, RICHARD FIORE, DONALD FROELICH AND BILL MOORHEAD ALL VOTING 'AYE'.

INFORMATION ITEMS:

11. MONTHLY FINANCIAL REPORT

Trevor Agrelius presented the Monthly Financial Report.

12. EMERGENCY REPAIRS UPDATE

Steve Merk provided the Emergency Repairs Update.

DRAFT

GENERAL MANAGER MATTERS:(Brief general updates on District matters and/or brief general updates from staff - Informational purposes only.)

Matt Collings stated that Trabuco Canyon Water District appointed Fernando Paludi as its General Manager.

BOARD REPORTS:

Bill Moorhead stated that he attended the CASA conference in San Diego on August 21st

Richard Fiore stated that he attended the Laguna Niguel Back to School event, the Laguna Niguel 30th Anniversary event, and the Saddleback Valley Unified School District Board Meeting.

Duane Cave stated that he attended the ACWA Energy Committee meeting and the San Juan Basin Authority meeting.

PRESIDENT'S REPORT:

None.

FUTURE AGENDA ITEMS (Any items added under this section are for discussion at future meetings only.):

None.

LATE ITEMS: (Appropriate Findings to be Made)

None.

ADJOURNMENT:

The meeting was adjourned at 7:21 p.m.

Respectfully submitted,

Tim Bonita
Recording Secretary

DRAFT

moulton niguel water district

STAFF REPORT

TO: **Board of Directors** **MEETING DATE: September 12, 2019**

FROM: **Rod Woods, Director of Engineering**
David Larsen, Engineering Manager

SUBJECT: **Plant 3A Pump Rehabilitation Services**

SUMMARY:

Issue: Board action is required to execute an agreement for the Plant 3A Pump Rehabilitation Services, as part of Project No. 2019.303.

Recommendation: It is recommended that the Board of Directors approve the Plant 3A Pump Rehabilitation Services Agreement with Power Brothers Machine, Inc. in the amount of $90,465; authorize the General Manager or Assistant General Manager to execute the agreement; and to approve amendments up to 10% of the contract value.

Fiscal Impact: Project No. 2019.303 is budgeted in Fund 7, Rehabilitation and Replacement with a current project budget of $624,000.

Reviewed by Committee: Yes, recommended for approval at the Technical Committee Meeting on September 3, 2019.

Reviewed by Legal: Yes

BACKGROUND:

The liquids treatment facilities at Plant 3A were originally constructed in 1991 and have been in continuous operation since that time. An integral component of these facilities includes the Return Activated Sludge (RAS) pumps to recirculate activated sludge as necessary to meet the plant's wastewater treatment and regulatory requirements.

Over time, the existing RAS pumps have deteriorated, are exhibiting reduced performance, and require increased maintenance, which makes the wastewater treatment process more challenging to control.

Staff has determined that four (4) of the existing RAS pumps require rehabilitation to ensure reliable wastewater treatment is continuously provided. This will also improve treatment efficiency and reduce associated electrical costs.

DISCUSSION:

The District requested quotations for the refurbishment of four (4) RAS pumps from three qualified vendors. The scope of work that was quoted provides a full pump refurbishment. Once the pumps have been removed from service and evaluated, the scope may be modified if less work is required on the pumps. The District received responsive quotations from two vendors, and the quotations are summarized below:

Vendor	Quotation
Power Brothers Machine, Inc.	$90,465
Sloan Electromechanical Service & Sales	$94,716

Staff performed a thorough review of the quotations received and determined that the best overall value for the District was from Power Brothers Machine, Inc., who has performed quality pump refurbishment services for the District in the past and is well qualified to perform this type of work.

Staff is recommending that the Board of Directors authorize the General Manager or Assistant General Manager to execute an agreement with Power Brothers Machine, Inc. in the amount of $90,465.

This project is part of the capital improvement program costs for the Plant 3A facility, of which SMWD's proportionate share is 28-percent.

SUMMARY OF PROJECT BUDGET:

	Project Budget	Proposed / Approved Contract	Proposed / Authorized Contingency	Total Proposed / Authorized Amount
Project Items				
Aeration Diffusers Replacement	$280,883	$255,348	$25,535	$280,883
RAS Pump Rehabilitation	$99,511	$90,465	$9,046	$99,511
Primary Clarifier #3 & 4 Rehabilitation	$243,606	$0	$0	$243,606
Totals	$624,000	$345,813	$34,581	$624,000

*$0 has been expended to date.

Currently Proposed Amount

Attachments:

1. Exhibit A - Location Map
2. Plant 3A RAS Pump Refurbishment Service Agreement
3. Vendor Contact List

N

moulton niguel water district

0 50 100 200 Feet

Scale = 1:1,700

Exhibit "A" Location Map
Plant 3A Pump Rehabiltation Services

MOULTON NIGUEL WATER DISTRICT
PLANT 3A RAS PUMP REFURBISHMENT SERVICES AGREEMENT
BETWEEN MOULTON NIGUEL WATER DISTRCT AND
POWERS BROS. MACHINE, INC.
CONTRACT NO. 2019.303a

1. PARTIES AND DATE.

This Agreement for Pump Refurbishment Services ("Agreement") is made and entered into this _____ day of _____ 2019 ("Effective Date"), by and between the **Moulton Niguel Water District**, ("District") and **Powers Bros. Machine, Inc.**, a corporation, with its principal place of business at 8100 Slauson Avenue, Montebello, CA 90640 ("Contractor"). District and Contractor are sometimes individually referred to herein as "Party" and collectively as "Parties."

2. RECITALS.

2.1 Contractor.

Contractor desires to perform and assume responsibility for the provision of certain pump refurbishment services required by District on the terms and conditions set forth in this Agreement. Contractor represents that it is experienced in providing such services to public clients, is licensed in the State of California, and is familiar with the plans of District.

2.2 Project.

District desires to engage Contractor to render such services for Pump Refurbishment Services, Contract No. 2019.303a ("Project") as set forth in this Agreement.

3. TERMS.

3.1 Scope of Services and Term.

3.1.1 General Scope of Services. Contractor promises and agrees to furnish to District all labor, materials, tools, equipment, services, and incidental and customary work necessary to fully and adequately supply the services and advice on various issues affecting the decisions of District regarding the Project and on other programs and matters affecting District ("Services"). The Services are more particularly described in Exhibit "A" attached hereto and incorporated herein by reference. All Services shall be subject to, and performed in accordance with, this Agreement, the exhibits attached hereto and incorporated herein by reference, and all applicable local, state and federal laws, rules and regulations.

3.1.2 Term. The term of this Agreement shall be from the Effective Date to **March 31, 2020**, unless earlier terminated as provided herein.

3.2 Responsibilities of Contractor.

3.2.1 Control and Payment of Subordinates; Independent Contractor. The Services shall be performed by Contractor or under its supervision. Contractor will determine the means, methods and details of performing the Services subject to the requirements of this Agreement. District retains Contractor on an independent contractor basis and not as an employee of District. Contractor retains the right to perform similar or different services for others during the term of this Agreement. Any additional personnel performing the Services under this Agreement on behalf of Contractor shall also not be employees of District and shall at all times be under Contractor's exclusive direction and control. Contractor shall pay all wages, salaries, and other amounts due such personnel in connection with their performance of Services under this Agreement and as required by law. Contractor shall be responsible for all reports and obligations respecting such additional personnel, including, but not limited to: social security taxes, income tax withholding, unemployment insurance, disability insurance, and workers' compensation insurance.

3.2.2 Schedule of Services. Contractor shall perform the Services expeditiously, within the term of this Agreement, and at the times scheduled by District. Contractor represents that it has the skilled personnel required to perform the Services in conformance with such conditions. In order to facilitate Contractor's conformance with the Schedule, District shall respond to Contractor's submittals in a timely manner. Upon request of District, Contractor shall provide a more detailed schedule of anticipated performance to meet the Schedule of Services.

3.2.3 Conformance to Applicable Requirements. All work prepared by Contractor shall be subject to the approval of District.

3.2.4 Substitution of Key Personnel. Contractor has represented to District that certain key personnel will perform and coordinate the Services under this Agreement. Should one or more of such personnel become unavailable, Contractor may substitute other personnel of at least equal competence and experience upon written approval of District. In the event that District and Contractor cannot agree as to the substitution of key personnel, District shall be entitled to terminate this Agreement for cause. As discussed below, any personnel who fail or refuse to perform the Services in a manner acceptable to District, or who are determined by District to be uncooperative, incompetent, a threat to the adequate or timely completion of the Project or a threat to the safety of persons or property, shall be promptly removed from the Project by Contractor at the request of District.

3.2.5 District's Representative. District hereby designates its Director of Engineering, or his designee, to act as its representative for the performance of this Agreement ("District's Representative"). District's Representative shall have the power to act on behalf of District for all purposes under this Agreement. Contractor shall not accept direction or orders from any person other than District's Representative or his or her designee.

3.2.6 Contractor's Representative. Contractor hereby designates Kory Mikesell, or his designee, to act as its representative for the performance of this Agreement ("Contractor's Representative"). Contractor's Representative shall have full authority to represent and act on behalf of Contractor for all purposes under this Agreement. Contractor's Representative shall

supervise and direct the Services, using his or her best skill and attention, and shall be responsible for all means, methods, techniques, sequences and procedures and for the satisfactory coordination of all portions of the Services under this Agreement.

3.2.7 Coordination of Services. Contractor agrees to work closely with District staff in the performance of Services and shall be available to District's staff, consultants and other staff at all reasonable times.

3.2.8 Standard of Care; Performance of Employees. Contractor shall perform all Services under this Agreement in a skillful and competent manner, consistent with the standards generally recognized as being employed by contractors in the same discipline in the State of California. Contractor represents and maintains that it is skilled in the calling necessary to perform the Services. Contractor warrants that all employees and subcontractors shall have sufficient skill and experience to perform the Services assigned to them. Finally, Contractor represents that it, its employees and subcontractors have all licenses, permits, qualifications and approvals of whatever nature that are legally required to perform the Services, including a business license, and that such licenses and approvals shall be maintained throughout the term of this Agreement. As provided for in the indemnification provisions of this Agreement, Contractor shall perform, at its own cost and expense and without reimbursement from District, any services necessary to correct errors or omissions which are caused by Contractor's failure to comply with the standard of care provided for herein, and shall be fully responsible to District for all damages and other liabilities provided for in the indemnification provisions of this Agreement arising from the Contractor's errors and omissions.. Any employee of Contractor or its subcontractors who is determined by District to be uncooperative, incompetent, a threat to the adequate or timely completion of the Project, a threat to the safety of persons or property, or any employee who fails or refuses to perform the Services in a manner acceptable to District, shall be promptly removed from the Project by Contractor and shall not be re-employed to perform any of the Services or to work on the Project.

3.2.9 Laws and Regulations. Contractor shall keep itself fully informed of and in compliance with all local, state and federal laws, rules and regulations in any manner affecting the performance of the Project or the Services, including all Cal/OSHA requirements, and shall give all notices required by law. Contractor shall be liable for all violations of such laws and regulations in connection with Services. If Contractor performs any work knowing it to be contrary to such laws, rules and regulations and without giving written notice to District, Contractor shall be solely responsible for all costs arising therefrom. Contractor shall defend, indemnify and hold District, its officials, directors, officers, employees and agents free and harmless, pursuant to the indemnification provisions of this Agreement, from any claim or liability arising out of any failure or alleged failure to comply with such laws, rules or regulations.

3.2.10 Insurance.

(a) Time for Compliance. Contractor shall, at its expense, procure and maintain for the duration of the Agreement insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the Agreement by the Contractor, its agents, representatives, employees or subcontractors. Contractor shall not commence work under this Agreement until it has provided evidence satisfactory to District that it has secured all insurance required under this section. In addition, Contractor shall

not allow any subcontractor to commence work on any subcontract until it has provided evidence satisfactory to District that the subcontractor has secured all insurance required under this section.

(b) Types of Required Coverages. As a condition precedent to the effectiveness of this Agreement for work to be performed hereunder and without limiting the indemnity provisions of the Agreement, Contractor in partial performance of its obligations under such Agreement, shall procure and maintain in full force and effect during the term of the Agreement, the following policies of insurance.

(i) Commercial General Liability: Commercial General Liability Insurance which affords coverage at least as broad as the latest version of the Insurance Services Office "occurrence" form CG 0001, with minimum limits of at least $1,000,000 per occurrence. Defense costs shall be paid in addition to the limits. The policy shall contain no endorsements or provisions limiting coverage for (1) products and completed operations; (2) contractual liability; (3) third party action over claims; or (4) cross liability exclusion for claims or suits by one insured against another.

(ii) Automobile Liability Insurance: Automobile Liability Insurance with coverage at least as broad as the latest version of Insurance Services Office Form CA 0001 covering "Any Auto" (Symbol 1) with minimum limits of $1,000,000 each accident.

(iii) Workers' Compensation and Employer's Liability: Workers' Compensation Insurance, as required by the State of California and Employer's Liability Insurance with a limit of not less than $1,000,000 per accident for bodily injury and disease.

(iv) Contractors Pollution Liability: Contractors Pollution Liability Insurance covering all of Contractor's operations to include onsite and offsite coverage for bodily injury (including death and mental anguish), property damage, defense costs and cleanup costs with minimum limits of $5 million per loss and $10 million total all losses. Non-owned disposal site coverage shall be provided if handling, storing or generating hazardous materials or any material/substance otherwise regulated under environmental laws/regulations.

If coverage is written on a claims-made basis, the retroactive date shall precede the effective date of the initial Agreement and continuous coverage will be maintained or an extended reporting period will be exercised for a period of at least three (3) years from termination or expiration of this Agreement.

(c) Endorsements.

(i) The policy or policies of insurance required by Section 3.2.10(b) (i) Commercial General Liability and (ii) Automobile Liability Insurance shall be endorsed to provide the following:

(1) Additional Insured: District, its directors, members, officials, officers, employees and agents shall be additional insureds with regard to liability and defense of suits or claims arising out of the performance of the Agreement. Endorsements shall be issued on a

combination of ISO CG 20 10 and CG 20 37 or exact equivalents. Additional Insured Endorsements shall not (1) be restricted to "ongoing operations"; (2) exclude "contractual liability"; (3) restrict coverage to "sole" liability of Contractor; or (4) contain any other exclusions contrary to the Agreement.

(2) Primary Insurance and Non-Contributing Insurance: This insurance shall be primary and any other insurance, deductible, or self-insurance maintained by the District, its directors, members, officials, officers, employees and agents shall not contribute with this primary insurance.

(3) Severability: In the event of one insured, whether named or additional, incurs liability to any other of the insureds, whether named or additional, the policy shall cover the insured against whom claim is or may be made in the same manner as if separate policies had been issued to each insured, except that the limits of insurance shall not be increased thereby.

(4) Cancellation: The policy shall not be canceled or the coverage suspended, voided, reduced or allowed to expire until a thirty (30) day prior written notice of cancellation has been served upon District except ten (10) days prior written notice shall be allowed for non-payment of premium.

(5) Waiver of Subrogation: A waiver of subrogation stating that the insurer waives all rights of subrogation against the District, its directors, members, officials, officers, employees and agents.

(6) Duties: Any failure by the named insured to comply with reporting provisions of the policy or breaches or violations of warranties shall not affect coverage provided to the District, its directors, members, officials, officers, employees and agents.

(7) Applicability: That the coverage provided therein shall apply to the obligations assumed by Contractor under the indemnity provisions of the Agreement, unless the policy or policies contain a blanket form of contractual liability coverage.

(ii) The policy or policies of insurance required by Section 3.2.10(b) (iii) Workers' Compensation shall be endorsed, as follows:

(1) Waiver of Subrogation: A waiver of subrogation stating that the insurer waives all rights of subrogation against the District, its directors, members, officials, officers, employees and agents.

(2) Cancellation: The policy shall not be canceled or the coverage

suspended, voided, reduced or allowed to expire until a thirty (30) day prior written notice of cancellation has been served upon District except ten (10) days prior written notice shall be allowed for non-payment of premium.

(d) Deductible. Any deductible or self-insured retention must be approved in writing by District and shall protect the District, its directors, members, officials, officers, employees and agents in the same manner and to the same extent as they would have been protected had the policy or policies not contained a deductible or self-insured retention.

(e) Evidence of Insurance. Contractor, concurrently with the execution of the Agreement, and as a condition precedent to the effectiveness thereof, shall deliver either certified copies of the required policies, or original certificates and endorsements on forms approved by District. The certificates and endorsements for each insurance policy shall be signed by a person authorized by that insurer to bind coverage on its behalf. At least fifteen (15 days) prior to the expiration of any such policy, evidence of insurance showing that such insurance coverage has been renewed or extended shall be filed with District. If such coverage is cancelled or reduced, Contractor shall, within ten (10) days after receipt of written notice of such cancellation or reduction of coverage, file with District evidence of insurance showing that the required insurance has been reinstated or has been provided through another insurance company or companies.

(f) Failure to Maintain Coverage. Contractor agrees to suspend and cease all operations hereunder during such period of time as the required insurance coverage is not in effect and evidence of insurance has not been furnished to District. District shall have the right to withhold any payment due Contractor until Contractor has fully complied with the insurance provisions of this Agreement.

In the event that Contractor's operations are suspended for failure to maintain required insurance coverage, Contractor shall not be entitled to an extension of time for completion of the work because of production lost during suspension.

(g) Acceptability of Insurers. Each such policy shall be from a company or companies with a current A.M. Best's rating of no less than A-:VII and authorized to do business in the State of California, or otherwise allowed to place insurance through surplus line brokers under applicable provisions of the California Insurance Code or any federal law.

(h) Insurance for Subcontractors. Contractor shall be responsible for causing subcontractors to purchase the appropriate insurance in compliance with the terms of this Agreement, including adding District as an Additional Insured to the subcontractor's policies.

3.2.11 Safety. Contractor shall execute and maintain its work so as to avoid injury or damage to any person or property. In carrying out its Services, Contractor shall at all times be in compliance with all applicable local, state and federal laws, rules and regulations, and shall exercise all necessary precautions for the safety of employees appropriate to the nature of the work and the conditions under which the work is to be performed. Safety precautions as applicable shall include, but shall not be limited to: (A) adequate life protection and lifesaving equipment and

procedures; (B) instructions in accident prevention for all employees and subcontractors, such as safe walkways, scaffolds, fall protection ladders, bridges, gang planks, confined space procedures, trenching and shoring, equipment and other safety devices, equipment and wearing apparel as are necessary or lawfully required to prevent accidents or injuries; and (C) adequate facilities for the proper inspection and maintenance of all safety measures.

3.3 Fees and Payments.

3.3.1 Compensation. Contractor shall perform Services pursuant to this Agreement on a time and material basis, based on the rates set forth in Exhibit "A", attached hereto and incorporated herein by reference. The total compensation shall not exceed **Ninety Thousand Four Hundred Sixty-Four Dollars and Sixty-Eight Cents ($90,464.68)** without written approval of District. Contractor is responsible for, and shat pay all sales, consumer, use, and other taxes in connection with materials for the Service.

3.3.2 Payment of Compensation. Upon completion of Services, or a distinct phase of services, Consultant shall submit to District an invoice for payment. District shall, within 30 days of receiving such Invoice, review and pay all approved charges thereon.

3.3.3 Reimbursement for Expenses. Contractor shall not be reimbursed for any expenses unless authorized in writing by District.

3.3.4 Extra Work. At any time during the term of this Agreement, District may request that Contractor perform Extra Work. As used herein, "Extra Work" means any work which is determined by District to be necessary for the proper completion of the Project, but which the parties did not reasonably anticipate would be necessary at the execution of this Agreement. Contractor shall not perform, nor be compensated for, Extra Work without written authorization from District's Representative.

3.3.5 California Labor Code Requirements

(a) Contractor is aware of the requirements of California Labor Code Section 1720, et seq., and 1770, et seq., as well as California Code of Regulations, Title 8, Section 16000, et seq., ("Prevailing Wage Laws"), which require the payment of prevailing wage rates and the performance of other requirements on "public works" and "maintenance" projects. If the Services are being performed as part of an applicable "public works" or "maintenance" project, as defined by the Prevailing Wage Laws, and if the total compensation is $1,000 or more, Contractor agrees to fully comply with such Prevailing Wage Laws. District shall provide Contractor with a copy of the prevailing rates of per diem wages in effect at the commencement of this Agreement. Contractor shall make copies of the prevailing rates of per diem wages for each craft, classification or type of worker needed to execute the Services available to interested parties upon request, and shall post copies at Contractor's principal place of business and at the project site. Contractor shall defend, indemnify and hold District, its elected officials, officers, employees and agents free and harmless from any claim or liability arising out of any failure or alleged failure to comply with the Prevailing Wage Laws. It shall be mandatory upon the Contractor and all subcontractors to comply with all California Labor Code provisions, which include but are not limited to prevailing wages (Labor Code Sections 1771, 1774 and 1775), employment of apprentices (Labor Code Section

1777.5), certified payroll records (Labor Code Section 1776), hours of labor (Labor Code Sections 1813 and 1815) and debarment of contractors and subcontractors (Labor Code Sections 1777.1).

(b) If the Services are being performed as part of an applicable "public works" or "maintenance" project, then pursuant to Labor Code Sections 1725.5 and 1771.1, the Contractor and all subcontractors performing such Services must be registered with the Department of Industrial Relations. Contractor shall maintain registration for the duration of the Project and require the same of any subcontractors, as applicable. This Project may also be subject to compliance monitoring and enforcement by the Department of Industrial Relations. It shall be Contractor's sole responsibility to comply with all applicable registration and labor compliance requirements.

3.4 Accounting Records.

3.4.1 Maintenance and Inspection. Contractor shall maintain complete and accurate records with respect to all costs and expenses incurred and fees charged under this Agreement. All such records shall be clearly identifiable. Contractor shall allow a representative of District during normal business hours to examine, audit, and make transcripts or copies of such records and any other documents created pursuant to this Agreement. Contractor shall allow inspection of all work, data, documents, proceedings, and activities related to the Agreement for a period of three (3) years from the date of final payment under this Agreement.

3.5 General Provisions.

3.5.1 Termination of Agreement.

(a) Grounds for Termination. District may, by written notice to Contractor, terminate the whole or any part of this Agreement at any time and without cause by giving written notice to Contractor of such termination, and specifying the effective date thereof, at least seven (7) days before the effective date of such termination. Upon termination, Contractor shall be compensated only for those services which have been fully and adequately rendered to District through the effective date of the termination, and Contractor shall be entitled to no further compensation. Contractor may not terminate this Agreement except for cause.

(b) Effect of Termination. If this Agreement is terminated as provided herein, District may require Contractor to provide all finished or unfinished Documents and Data, as defined below, and other information of any kind prepared by Contractor in connection with the performance of Services under this Agreement. Contractor shall be required to provide such document and other information within fifteen (15) days of the request.

(c) Additional Services. In the event this Agreement is terminated in whole or in part as provided herein, District may procure, upon such terms and in such manner as it may determine appropriate, services similar to those terminated.

3.5.2 Delivery of Notices. All notices permitted or required under this Agreement shall be given to the respective parties at the following address, or at such other address as the respective parties may provide in writing for this purpose:

Contractor:

Powers Bros. Machine, Inc.
8100 Slauson Avenue
Montebello, CA 90640
Attn: Kory Mikesell

District:

Moulton Niguel Water District
P.O. Box 30203
Laguna Niguel, CA 92607
Attn: Director of Engineering

Such notice shall be deemed made when personally delivered or when mailed, forty-eight (48) hours after deposit in the U.S. Mail, first class postage prepaid and addressed to the party at its applicable address. Actual notice shall be deemed adequate notice on the date actual notice occurred, regardless of the method of service.

3.5.3 Cooperation; Further Acts. The Parties shall fully cooperate with one another, and shall take any additional acts or sign any additional documents as may be necessary, appropriate or convenient to attain the purposes of this Agreement.

3.5.4 Attorneys' Fees. If either party commences an action against the other party, either legal, administrative or otherwise, arising out of or in connection with this Agreement, the prevailing party in such litigation shall be entitled to have and recover from the losing party reasonable attorneys' fees and all costs of such action.

3.5.5 Indemnification. To the fullest extent permitted by law, Contractor shall defend, indemnify and hold District, its officials, officers, employees, volunteers and agents free and harmless from any and all claims, demands, causes of action, costs, expenses, liability, loss, damage or injury, in law or equity, to property or persons, including wrongful death, in any manner arising out of or incident to any alleged negligent acts, omissions or willful misconduct of Contractor, its officials, officers, employees, agents, subcontractors and subcontractors arising out of or in connection with the performance of the Services, the Project or this Agreement, including without limitation the payment of all consequential damages, attorneys' fees and other related costs and expenses. Contractor shall defend, at Contractor's own cost, expense and risk, any and all such aforesaid suits, actions or other legal proceedings of every kind that may be brought or instituted against District, its directors, officials, officers, employees, agents or volunteers. Contractor shall pay and satisfy any judgment, award or decree that may be rendered against District or its directors, officials, officers, employees, agents or volunteers, in any such suit, action or other legal proceeding. Contractor shall reimburse District and its directors, officials, officers, employees, agents and/or volunteers, for any and all legal expenses and costs, including reasonable attorneys' fees, incurred by each of them in connection therewith or in enforcing the indemnity herein provided. Contractor's obligation to indemnify shall not be restricted to insurance proceeds, if any, received by District or its directors, officials, officers, employees, agents or volunteers. Notwithstanding the foregoing, to the extent Contractor's Services are subject to Civil Code Section 2782.8, the above indemnity shall be limited, to the extent required by Civil Code Section 2782.8, to claims that arise out of, pertain to, or relate to the negligence, recklessness, or willful

misconduct of the Contractor. This Section 3.5.5 shall survive any expiration or termination of this Agreement.

3.5.6 Entire Agreement. This Agreement contains the entire Agreement of the parties with respect to the subject matter hereof, and supersedes all prior negotiations, understandings or agreements. This Agreement may only be supplemented, amended or modified by a writing signed by both Parties.

3.5.7 Governing Law. This Agreement shall be governed by the laws of the State of California. Venue shall be in Orange County.

3.5.8 Time of Essence. Time is of the essence for each and every provision of this Agreement.

3.5.9 District's Right to Employ Other Contractors. District reserves the right to employ other Contractors in connection with this Project.

3.5.10 Successors and Assigns. This Agreement shall be binding on the successors and assigns of the parties.

3.5.11 Assignment or Transfer. Contractor shall not assign, hypothecate, or transfer, either directly or by operation of law, this Agreement or any interest herein without the prior written consent of District. Any attempt to do so shall be null and void, and any assignees, hypothecates or transferees shall acquire no right or interest by reason of such attempted assignment, hypothecation or transfer.

3.5.12 Construction; References; Captions. Since the Parties or their agents have participated fully in the preparation of this Agreement, the language of this Agreement shall be construed simply, according to its fair meaning, and not strictly for or against any Party. Any term referencing time, days or period for performance shall be deemed calendar days and not work days. All references to Contractor include all personnel, employees, agents, and subcontractors of Contractor, except as otherwise specified in this Agreement. All references to District include its elected officials, officers, employees, agents, and volunteers except as otherwise specified in this Agreement. The captions of the various articles and paragraphs are for convenience and ease of reference only, and do not define, limit, augment, or describe the scope, content, or intent of this Agreement.

3.5.13 Amendment; Modification. No supplement, modification, or amendment of this Agreement shall be binding unless executed in writing and signed by both Parties.

3.5.14 Waiver. No waiver of any default shall constitute a waiver of any other default or breach, whether of the same or other covenant or condition. No waiver, benefit, privilege, or service voluntarily given or performed by a Party shall give the other Party any contractual rights by custom, estoppel, or otherwise.

3.5.15 No Third Party Beneficiaries. There are no intended third party beneficiaries of any right or obligation assumed by the Parties.

3.5.16 Invalidity; Severability. If any portion of this Agreement is declared invalid, illegal, or otherwise unenforceable by a court of competent jurisdiction, the remaining provisions shall continue in full force and effect.

3.5.17 Prohibited Interests. Contractor maintains and warrants that it has not employed nor retained any company or person, other than a bona fide employee working solely for Contractor, to solicit or secure this Agreement. Further, Contractor warrants that it has not paid nor has it agreed to pay any company or person, other than a bona fide employee working solely for Contractor, any fee, commission, percentage, brokerage fee, gift or other consideration contingent upon or resulting from the award or making of this Agreement. For breach or violation of this warranty, District shall have the right to rescind this Agreement without liability. For the term of this Agreement, no member, officer or employee of District, during the term of his or her service with District, shall have any direct interest in this Agreement, or obtain any present or anticipated material benefit arising therefrom.

3.5.18 Equal Opportunity Employment. Contractor represents that it is an equal opportunity employer and it shall not discriminate against any subcontractor, employee or applicant for employment because of race, religion, color, national origin, handicap, ancestry, sex or age. Such non-discrimination shall include, but not be limited to, all activities related to initial employment, upgrading, demotion, transfer, recruitment or recruitment advertising, layoff or termination. Contractor shall also comply with all relevant provisions of any minority business enterprise program, affirmative action plan or other related programs or guidelines currently in effect or hereinafter enacted.

3.5.19 Labor Certification. By its signature hereunder, Contractor certifies that it is aware of the provisions of Section 3700 of the California Labor Code which require every employer to be insured against liability for Workers' Compensation or to undertake self-insurance in accordance with the provisions of that Code, and agrees to comply with such provisions before commencing the performance of the Services.

3.5.20 Authority to Enter Agreement. Contractor has all requisite power and authority to conduct its business and to execute, deliver, and perform the Agreement. Each Party warrants that the individuals who have signed this Agreement have the legal power, right, and authority to make this Agreement and bind each respective Party.

3.5.21 Counterparts. This Agreement may be signed in counterparts, each of which shall constitute an original.

3.5.22 Employment Adverse to District. Contractor shall notify District, and shall obtain District's written consent, prior to accepting work to assist with or participate in a third-party lawsuit or other legal or administrative proceeding against District during the term of this Agreement.

3.5.23 Conflict of Employment. Employment by Contractor of personnel currently on the payroll of District shall not be permitted in the performance of this Agreement, even though such employment may occur outside of the employee's regular working hours or on weekends, holidays or vacation time. Further, the employment by Contractor of personnel who have been on

District's payroll within one year prior to the date of execution of this Agreement, where this employment is caused by and or dependent upon Contractor securing this or related Agreements with District, is prohibited.

3.5.24 Survival. All rights and obligations hereunder that by their nature are to continue after any expiration or termination of this Agreement, including, but not limited to, the indemnification and confidentiality obligations, and the obligations related to receipt of subpoenas or court orders, shall survive any such expiration or termination.

3.5.25 Subcontracting. Contractor shall not subcontract any portion of the work required by this Agreement, except as expressly stated herein, without prior written approval of District. Subcontracts, if any, shall contain a provision making them subject to all provisions stipulated in this Agreement.

IN WITNESS WHEREOF, this Agreement was executed on the date first written above.

MOULTON NIGUEL WATER DISTRICT	**POWERS BROS. MACHINE, INC.**
_____	_____
Signature	Signature
_____	_____
Name	Name
_____	_____
Title	Title
_____	_____
Date	Date

Exhibit "A"
Scope of Work and Fees

POWERS BROS. MACHINE, INC.
8100 Slauson Ave
Montebello, CA 90640

Phone # 323-728-2010

Fax # 323-728-5403

Estimate

Date	Estimate #
8/6/2019	3236

Name / Address

Moulton Niguel Water District
26161 Gordon Rd.
Laguna Hills, CA 92653
Contract No. OM18-19.013

Acct Mgr.
KM

Description	Total
Rebuild 4 pumps	
SIMFLO 1,400 GPM TDH 19.3" BOWEL MODEL SC6MF-1, COLUMN ASSY. 1-3/16" X 2" X 10" FLANGED WATER FLUSH COLUMN ASSEMBLY 316SS SHAFT. 304 BOLTS, FLUNDATIN PLATE FP-600 FABRICATED STEEL, DISHCARGE HEAD S-750 CAST IRON, SEAL TYPE WATER FLUSH PACKING ASSEMLBY WITH 416 SS SHAFT SLEEVE, IMP. DIA. 7.439", IMP. TYPE MIXED FLOW, SPECIAL BRONZE BOWL LINERS, CAST IRON IMPELLERS,	
MECHANICAL WORK TO DISASSEMBLE, REPLACE INTERNAL PARTS, INSPECT AND REASSEMBLE	23,880.52
REPLACE, LINE SHAFTS WITH 316SS PSQ, SHAFT COUPLINGS, SHAFT BUSHINGS, SS HARDWARE.	21,749.00
RECONDITION COLUMNS, FLANGES, ENCLOSING TUBES, IMPELLER, BOWL, SUCTION BELL, DISHCARGE PLATE	
COAT COLUMNS, TUBES, BOWLS, SUCTION BELOW, FOUNDATION PLATE, DISHCARGE HEAD WITH AMERLOCK 400	9,640.00
COAT IMPELLER WITH CERAMIC COATING	800.00
REPLACE MOTOR TEFC 10H.P./3 PH/60Hz/460 VOLTS	7,800.00
REPLACE PACKING WTH MECHANICAL SEAL	10,400.00
REMOVE AND REINSTALL WORKING ON 2 PUMPS AT A TIME (PREVAILING WAGES)	12,400.00
LEAD TIME 10-12 WEEKS TO REPAIR THE 4 PUMPS	

Terms: Quoted price does not include applicable taxes or environmental fees. Quote good for 30 days, payment terms are Net 30 on approved credit. There is a 2% fee on invoices paid with credit card. Shipping is F.O.B. Powers Bros. unless stated otherwise. For complete Terms and Conditions, please see www.PowersBros.com

Subtotal	$86,669.52
Sales Tax (9.5%)	$3,795.16
Total	$90,464.68

Wyatt Rias 323-797-0064
Powers Bros Machine Wyatt@Powersbros.com

VENDOR CONTACT LIST

Company Name	Company Address	Contact Person	Telephone #	E-Mail
Power Brothers Machine, Inc.	8100 Slauson Avenue Montebello, CA 90640	Kory Mikesell	(323) 728-2010	kory@Powerspumps.com
Sloan Electromechanical Service & Sales	3520 Main Street San Diego, CA 92113	David Syring	(619) 455-9024	Dsyring@sloanelectric.com
Evans Hydro, Inc.	18128 S. Santa Fe Ave. Rancho Dominguez, CA 90221	James R. Byrom, Sr.	(310) 608-5801	jbyrom.jr@evans-hydro.com

moulton niguel water district

STAFF REPORT

TO: **Board of Directors** **MEETING DATE: September 12, 2019**

FROM: **Rod Woods, Director of Engineering**
Sheldon Yu, Senior Engineer

SUBJECT: **Wastewater Inflow and Infiltration Flow Monitoring Services**

SUMMARY:

Issue: Board action is required to execute a services agreement for the Wastewater Inflow and Infiltration Flow Monitoring Services, Project No. OM19-20.018.

Recommendation: It is recommended that the Board of Directors approve the agreement for wastewater inflow and infiltration flow monitoring services with ADS Corp. in the amount of $239,500; authorize the General Manager or Assistant General Manager to execute the agreement; and to approve amendments up to 20% of the contract value.

Fiscal Impact: Sufficient funds are included in the FY19-20 Operating Budget to support the project.

Reviewed by Committee: Yes, recommended for approval at the Technical Committee Meeting on September 3, 2019.

Reviewed by Legal: Yes

BACKGROUND:

The District currently operates and maintains approximately 500 miles of gravity sewer pipelines, 11,400 manholes, and 16 active lift stations within its service area that serves more than 170,000 customers. In the February 2019 update of the District's Sewer System Management Plan (SSMP), the District incorporated strategic elements to improve the operation and maintenance of its collection system.

One of these strategic elements resulted in the District initiating a pilot program to evaluate the level of inflow and infiltration (I&I) into its wastewater collection system. I&I occurs when external water sources, such as stormwater and groundwater, enter into the wastewater collection system. I&I can potentially overload the collection

system and impact operations, including downstream lift stations and wastewater treatment plants. The evaluation will include identifying potential locations of I&I and improvements to mitigate or eliminate the identified I&I sources, if necessary. The proposed wastewater I&I flow monitoring services will allow the District to conduct continuous flow monitoring of its collection system during this upcoming wet weather season, from October 2019 through May 2020. During this seven-month period, it is anticipated that approximately 24 flow monitoring devices, in addition to several rain gauges, will be installed at strategic locations throughout the District's collection system, to measure the level of I&I into the system, if any.

AKM Consulting Engineers, through our on-call professional engineering services agreement, is currently preparing a study to comprehensively evaluate I&I within the District's collection system. This project will utilize the information developed from the AKM study to deploy flow monitoring devices strategically throughout the District to monitor and collect data for this upcoming wet weather season.

DISCUSSION:

On August 6, 2019, staff issued a request for proposals for wastewater I&I flow monitoring services to four qualified firms. Four proposals were received, and the fee estimates are summarized below:

Firm	Proposal Fee
Utility Systems Science & Software	$149,285
Downstream Services, Inc.	$213,500
ADS Corp.	$239,500
V&A Consulting Engineers	$375,186

Staff performed a thorough review of the proposals received to determine the best overall value for the District. Based on the following factors, staff recommends that ADS Corp. be awarded the contract to provide Wastewater Inflow and Infiltration Flow Monitoring Services:

- Proposal quality that addresses the District's needs.
- ADS Corp. utilizes advanced flow monitoring equipment and rain gauges, whereby the data collected is accessible via a web-based portal within a dynamic centralized data management system.
- ADS Corp. is both the manufacturer and supplier of the monitoring equipment, allowing for timely troubleshooting when required.
- ADS Corp. has extensive experience providing I&I evaluations and has provided excellent service to the District in the past.
- ADS Corp. has observed some of the most challenging flow conditions in the field.

Attachments:

1. Services Agreement for Wastewater Inflow and Infiltration Flow Monitoring Services
2. Vendor Contact List

SERVICES AGREEMENT BETWEEN
MOULTON NIGUEL WATER DISTRICT AND
ADS CORP.
MNWD PROJECT: WASTEWATER INFLOW & INFILTRATION
FLOW MONITORING
CONTRACT NO. OM19-20.018

THIS AGREEMENT (the "Agreement") is dated as of _____, 2019 (the "Effective Date"), by and between ADS Corp., hereinafter referred to as the "Vendor" and Moulton Niguel Water District hereinafter referred to as "MNWD." MNWD and Vendor may sometimes be referred to in this Agreement individually as "Party" and together as "Parties."

R E C I T A L S

Vendor proposes to provide flow monitoring installation and reporting services to MNWD for the Wastewater Inflow and Infiltration Flow Monitoring Project (the "Project"). The scope of work to be performed by Vendor under this Agreement is described in Exhibit A hereto, which is incorporated herein (the "Scope of Work").

NOW, THEREFORE, in consideration of the mutual covenants contained herein, the Parties agree as follows:

A G R E E M E N T

SECTION I - SERVICES, AUTHORIZATION

Section 1.1 Vendor proposes to perform those services which are described in the Scope of Work ("Services"). Vendor shall provide all labor, materials, tools, equipment, supplies, utilities and transportation required to perform the Services, subject to compliance with the Agreement requirements, and complete all Services in a thorough, professional manner in accordance with generally accepted professional practices and principles, and to the satisfaction of MNWD.

Section 1.2 Vendor agrees to complete the work described in the Scope of Work within the time periods set forth in the Scope of Work. Vendor agrees to coordinate the work to ensure its timely completion and shall promptly notify MNWD of any anticipated delays or causes or casualties beyond Vendor's control which may affect the work schedule.

Section 1.3 Vendor's Project Manager for this Project shall be Heather McPherson Any subcontractors Vendor proposes to use are subject to prior written approval by MNWD. Without prior written approval of MNWD, Vendor will not make any changes in Vendor's Project Manager, in consultants, in outside labor arrangements, or associations or joint ventures which are required to accomplish any part of the Scope of Work. Vendor is responsible to MNWD for the acts and omissions of its subcontractors as it is for persons directly employed by Vendor. Nothing contained in this Agreement creates any contractual relationship between any subcontractor and MNWD. Vendor shall not allow any subcontractor to commence work or services under any subcontract until all insurance required of Vendor has been obtained for the subcontractor.

SECTION II - COMPENSATION

Section 2.1 In consideration for providing the Services referred to in SECTION I herein, MNWD agrees to compensate Vendor for such Services in accordance with the Schedule of Charges set forth in Exhibit B. In no event shall the total amount paid for services rendered by Vendor pursuant to Exhibit A exceed the sum of **Two Hundred Thirty-Nine Thousand Five Hundred Dollars ($239,500)** ("Contract Amount") without the written approval of MNWD.

Section 2.2 The Contract Amount shall include all business expenses that Vendor may incur while providing the services.

Section 2.3 Monthly progress payments will be made based on submittal of invoices by Vendor. Invoices will include the number of hours worked by various labor categories, the hourly billing rate per individual if applicable, and the total amount due. Only one bill per month shall be submitted by Vendor.

SECTION III - LABOR CODE PROVISIONS

Section 3.1 Vendor is aware of the requirements of California Labor Code Section 1720, et seq., and 1770, et seq., as well as California Code of Regulations, Title 8, Section 16000, et seq., ("Prevailing Wage Laws"), which require the payment of prevailing wage rates and the performance of other requirements on "public works" and "maintenance" projects. If the Services are being performed as part of an applicable "public works" or "maintenance" project, as defined by the Prevailing Wage Laws, and if the total compensation is $1,000 or more, Vendor agrees to fully comply with such Prevailing Wage Laws. A copy of these prevailing wage rates are on file with the Department of Industrial Relations and can be found online with the State of California at http://www.dir.ca.gov/dlsr/pwd. Vendor shall make copies of the prevailing rates of per diem wages for each craft, classification or type of worker needed to execute the Services available to interested parties upon request, and shall post copies at the Vendor's principal place of business and at the project site. It is the intent of the parties to effectuate the requirements of sections 1771, 1774, 1775, 1776, 1777.5, 1813, and 1815 of the Labor Code within this Agreement, and Vendor shall therefore comply with such Labor Code sections to the fullest extent required by law. Vendor shall defend, indemnify and hold MNWD, its elected officials, officers, employees and agents free and harmless from any claim or liability arising out of any failure or alleged failure to comply with the Prevailing Wage Laws.

Section 3.2 If the services are being performed as part of an applicable "public works" or "maintenance" project, then, in addition to the foregoing, pursuant to Labor Code sections 1725.5 and 1771.1, the Vendor must be registered with the Department of Industrial Relations ("DIR"). Vendor shall maintain registration for the duration of the project. This project may also be subject to compliance monitoring and enforcement by the Department of Industrial Relations. It shall be Vendor's sole responsibility to comply with all applicable registration and labor compliance requirements, including the submission of payroll records directly to the DIR.

Section 3.3 By its signature hereunder, Vendor certifies that it is aware of the provisions of Section 3700 of the California Labor Code which require every employer to be insured against liability for Worker's Compensation or to undertake self-insurance in accordance with the provisions of that Code, and agrees to comply with such provisions before commencing the performance of the Services.

SECTION IV - WARRANTY

Section 4.1 In performing services under this Agreement, Vendor shall observe and abide by the terms and conditions of all applicable laws, regulations, ordinances, or other rules of the United States, of the State of California, or any political subdivisions thereof, or of any other duly constituted public authority or agency including but not limited to MNWD.

Section 4.2 Vendor's services will be performed in accordance with generally accepted professional practices and principles and in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions.

Section 4.3 Nothing in this Warranty or in the Agreement shall be construed to limits the rights and remedies available to MNWD at law or in equity, including, but not limited to, Code of Civil Procedure Section 337.15.

SECTION V - INSURANCE AND INDEMNIFICATION

Section 5.1 General/Automobile Liability Insurance. Vendor and each of its subcontractors shall maintain throughout the term of this Agreement a general liability policy of insurance for bodily injury and/or death, personal injury and property damage claims which may arise from or in connection with the performance of the work under this Agreement by Vendor and its subcontractors, and each of their agents, representatives, or employees. Such public liability and property damage insurance (which shall cover claims, injury, death, loss or damage or accidents from the use or operation of any automobiles, trucks and/or other mobile or stationary equipment, whether owned, non-owned or hired) shall be comprehensive in form and shall be on a "per occurrence" basis in a minimum amount of One Million Dollars ($1,000,000) per occurrence and an annual aggregate limit in a minimum amount at least twice the per occurrence limit specified in this section.

All insurance provided under this Section shall name MNWD and its' directors, officers, employees and representatives as additional insureds under each such policy ("additional insureds") and an additional insured endorsement shall be provided in form acceptable to MNWD.

Section 5.2 Worker's Compensation. By its signature hereunder, Vendor certifies that it is aware of the provisions of Section 3700 of the California Labor Code which requires every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and that Vendor will comply with such provisions before commencing the performance of work under this Agreement. Vendor shall maintain throughout the term of this Agreement workers' compensation insurance with limits no less than the statutory limits, and Employer's Liability insurance with limits no less than One Million Dollars ($1,000,000) per accident and per disease for their employees and shall file with the MNWD the certificate required by Labor Code Section 3700. The workers compensation/Employer's Liability insurance shall be endorsed with a waiver of subrogation in favor of MNWD and its' directors, officers, employees and representatives.

Section 5.3 Requirements of All Policies. All policies of insurance required under this Section 4 shall be from insurance providers who are either admitted or licensed to do business in California, or are Surplus Lines Carriers authorized to do business in California, and who have financial size and ratings of no less than A-, Class XII, and in either case are otherwise

acceptable to MNWD. All such policies shall include a provision and executed endorsement for thirty (30) days prior written notice by certified mail, return receipt requested, to MNWD of any cancellation or material alteration of such insurance. Vendor shall provide original certificates and endorsements for all such insurance on forms approved by MNWD in conformity with all requirements of this Agreement prior to commencement of any work or professional services. The policies required hereunder shall be endorsed to include contractual liability.

In the case of additional insured provisions, any insurance afforded the additional insureds by this Agreement is primary insurance as to the additional insureds. Any insurance or self-insurance maintained by the additional insureds shall be excess of the Vendor's (and its subcontractor's) insurance, and shall not contribute to such insurance.

Section 5.4 Indemnity.

(a) To the fullest extent permitted by law, Vendor shall defend (with counsel reasonably approved by MNWD), indemnify and hold MNWD, and its officials, officers, employees, agents and designated volunteers free and harmless from any and all claims, demands, causes of action, suits, actions, proceedings, costs, expenses, liability, judgments, awards, decrees, settlements, loss, damage or injury of any kind, in law or equity, to property or persons, including wrongful death, (collectively, "Claims') in any manner arising out of, pertaining to, or incident to any alleged acts, errors or omissions, or willful misconduct of Vendor, its officials, officers, employees, subcontractors, consultants or agents in connection with the performance of the Vendor's services, the Project or this Agreement, including without limitation the payment of all consequential damages, expert witness fees and attorneys' fees and other related costs and expenses, including but not limited to legal costs and expenses incurred by the in connection with any Claim or in enforcing the indemnity herein provided. Notwithstanding the foregoing, to the extent Vendor's services are subject to Civil Code Section 2782.8, the above indemnity shall be limited, to the extent required by Civil Code Section 2782.8, to claims that allegedly arise out of, pertain to, or relate to the negligence, recklessness, or willful misconduct of the Vendor.

(b) In any and all claims against the indemnified Parties by any employee of the Vendor, any subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for the Vendor, or any subcontractor, or other person under workers' compensation acts, disability benefit acts, or other employee acts.

(c) Vendor's obligations pursuant to this Section shall survive the expiration or termination of this Agreement and/or the performance or completion of any or all services and work provided under this Agreement. This indemnity obligation shall apply to all liability regardless of whether any insurance is applicable, and the policy limits of any insurance shall not act as a limitation upon the indemnification, and amounts related thereto, to be provided by Vendor hereunder.

SECTION VI – TERM

The term of this Agreement shall commence upon the Effective Date and shall remain in effect through **June 30, 2020**, unless otherwise terminated by either Party pursuant to Section VI herein.

SECTION VII - TERMINATION OR ABANDONMENT

This Agreement may be terminated in whole or in part in writing by MNWD provided that no such termination may be affected unless the Vendor is given not less than ten (10) calendar day's written notice (deliver by certified mail, return receipt requested) of intent to terminate. Additionally, MNWD may suspend performance by Vendor of any or all services listed in the Scope of Work under this Agreement by providing written notice to Vendor at least five (5) working days prior to the date on which MNWD wishes to suspend; provided, upon receipt of such notice, Vendor shall immediately suspend any work or services hereunder, unless otherwise instructed by MNWD in such notice.

Vendor shall not perform further work under this Agreement after the effective date of suspension until receipt of written notice from MNWD to resume performance. MNWD and Vendor agree that in the event MNWD suspends or terminates performance by Vendor for any cause other than the intentional or negligent error or omission of Vendor, Vendor shall be entitled to payment of compensation incurred prior to the effective date of the suspension or termination, as determined under SECTION II of this Agreement.

SECTION VIII - GENERAL

Section 8.1 This Agreement represents the entire understanding of MNWD and Vendor as to those matters contained herein. No prior oral or written understanding shall be of any force or effect with respect to those matters covered hereunder. This Agreement may not be amended, modified or altered except in writing, signed by the Parties. This Agreement shall not be construed against the Party preparing it, but shall be construed as if both Parties prepared it.

Section 8.2 Vendor represents that it is aware of no facts or circumstances which would impair its ability to provide fair and unbiased advice to MNWD in the course of performing the services hereunder, or which would impact its objectivity in performing such services hereunder.

Section 8.3 Books, documents, papers, accounting records, and other evidence pertaining to costs incurred under this Agreement shall be maintained by Vendor and made available at all reasonable times during the contract period and for four (4) years from the date of final payment under this Agreement for inspection by MNWD.

Section 8.4 Any notice required or permitted to be given hereunder if not otherwise specified herein may be given or delivered by depositing the same in the United States Post Office, registered or certified, postage prepaid, or by personal service a hand delivery, and addressed to:

MNWD:
Moulton Niguel Water District
P.O. Box 30203
Laguna Niguel, CA 92607
Attn: Director of Engineering]

VENDOR:
ADS Corp.
15201 Springdale Street
Huntington Beach, CA 92649
Attn: Heather McPherson

Section 8.5 California law shall govern the interpretation of this Agreement. In the event of any legal action to enforce or interpret this Agreement, the sole and exclusive venue shall be a court of competent jurisdiction located in Orange County, California, and the Parties hereto agree to and do hereby submit to the jurisdiction of such court, notwithstanding Code of Civil Procedure

394.

Section 8.6 In the event an action is commenced by either Party to enforce its rights or obligations arising from this Agreement, the prevailing Party in such action, in addition to any other relief and recovery awarded by the court, shall be entitled to recover all costs and expenses, including court costs, plus a reasonable amount for attorney's fees.

Section 8.7 If any section of this Agreement or provision of this Agreement as applied to either Party or to any circumstance shall be adjudged by a court of competent jurisdiction to be void or unenforceable for any reason, the same shall in no way affect (to the maximum extent permissible by law) any other provision of this Agreement, the application of any such provision under circumstances different from those adjudicated by the court, or the validity or enforceability of this Agreement as a whole.

Section 8.8 It is expressly understood and agreed that Vendor is an independent contractor and not an employee of MNWD while engaged in carrying out this Agreement. Vendor warrants that it will not represent, at any time or in any manner, that Vendor is an employee or agent of MNWD. Vendor shall have no authority to, and shall not, incur any debt, obligation or liability on behalf of MNWD.

Section 8.9 The person signing this Agreement on behalf of each Party hereto represents he/she has authority to sign on behalf of, respectively, MNWD or Vendor.

Section 8.10 This Agreement and all of the terms, conditions, and provisions hereof shall inure to the benefit of and be binding upon the Parties hereto, and their respective successors and assigns; provided, however, that no assignment of this Agreement or any interest herein shall be made by Vendor without prior written consent of MNWD.

Section 8.11 This Agreement may be executed in counterparts, each of which shall be deemed an original.

MOULTON NIGUEL WATER DISTRICT:	**ADS Corp.:**
By: _____	By: _____ (Authorized Representative of Vendor)
Printed Name: _____	Printed Name: _____
Title: _____	Title: _____
Dated: _____	Dated: _____

Exhibit A
Scope of Work

Over our 44+ year history, ADS has perfected sewer flow monitoring, from small pipes to large trunk sewers listed in the RFP. ADS completely understands the work to be accomplished as outlined in the RFP and we will present to you our detailed description how ADS will deliver high quality and accurate data from start to finish.

The process for delivering high quality involves Comprehensive Field Services, the Industry's Best Flow Monitoring Technology, Wireless Data Collection, Frequent Data Review/Analysis and utilization of the Best Staff from a Local Office (Huntington Beach, CA).

Crew Availability
ADS has more offices, more staff members, and more equipment than any other firm in our business segment. ADS will mobilize crews from our local office in Huntington Beach, CA, which is less than a 30-minute drive from the District. Because of our ISO9001 procedures and standardized field training curriculum, staff from our West Region offices (Seattle, Hayward, and San Diego) can be brought in to install monitors if needed to meet any schedule, and it will be of the same quality as our local staff.

Task 1.0– Kick-Off Meeting
Effective communication is one of the most important factors to be an efficient and effective partner, and having a successful relationship with the District from start to finish. Our work will be done in a collaborative manner as we place great importance on listening to input from the District staff, reviewing past flow monitoring projects, and complete understanding of the project objectives. We also recognize that a face-to-face meeting is the most successful means of communication. Because our team is centered in Huntington Beach, we are able to maximize face-to-face communication and be available with the District staff. The District's staff will have direct and open lines of communications with the entire ADS team for the entirety of this project.

Task 2.0 – District Workshops and monthly updates
Paul Mitchell P.E. will attend the two workshops to be held at the District's office at times to be determined during the monitoring period. Project updates will be submitted to the District monthly. The District will be updated on any unusual hydraulic events that are observed by ADS during the study period that may be of interest.

Task 3.0 – Site Investigations
Once the locations are issued to ADS, Paul Mitchell P.E. will review each site to identify the manhole in GIS, as well Google Street view for accessibility. The ADS project team will carefully inspect the monitoring sites selected to determine hydraulic suitability, physical parameters for monitoring, safety and traffic control requirements at each location. ADS may investigate adjacent manholes in order to ensure the best possible monitoring locations are identified and to verify that the maps and direction of flows are accurate such that we can ensure the expected flows are being correctly monitored. If alternate monitoring sites are suggested, ADS will obtain the District's approval prior to installation.

Task 3.1 – Supply Wireless Monitoring Equipment
Unlike our competition, where they would either purchase new flow/rain monitors, or rent them. As the manufacturer of our equipment, ADS has virtually an unlimited number of flow/rain monitors available to be deployed at a moment's notice which is a stark contrast to our competitors. ADS maintains a large inventory of our equipment in our Huntington Beach project office, where an inventory of spare monitors, parts, and sensors are maintained. ADS will provide all equipment and materials necessary to perform the assigned work for the entirety of the contract. Every monitor is checked prior to being deployed in the field and only ADS certified technician are allowed to repair our monitors and "green tag" them as ready to be installed. All ADS flow/rain monitors are installed to enable daily downloads of data from the flow meters remotely.

Task 3.2 – Flow Meter Site Installations

Installation of the flow monitoring equipment will begin once the locations have been approved by the District. ADS flow sensors are typically installed in the lines incoming to the monitored manhole to capture the best hydraulics. The monitor and sensor cables will be secured to the manhole walls and/or steps in order to allow ready access by ADS personnel and to minimize chances that debris and/or surcharging would cause the monitor or sensor ring to be dislodged in high flows. ADS will utilize an ultrasonic depth sensor as the primary depth sensor and a secondary pressure depth sensor for redundancy and surcharge conditions. The Doppler velocity sensor will be installed at the center point of the base of the pipe unless siltation requires us to adjust the location. ADS field crews will perform initial site confirmation during the installation process; the confirmation dataset is then forwarded to the Data Manager per our ISO 9001 procedures to evaluate the site hydraulics vs what the flow monitor is actually reading. The last step is to install an antenna and establish wireless connection.

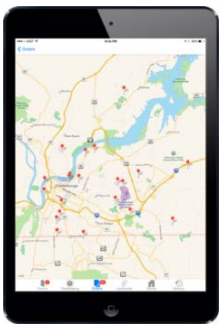
Task 3.3 – Rain Gauge Installations

Installation of the wireless rainfall monitoring equipment will begin once the site reports and locations have been approved by District. ADS will certify the accuracy of all gauges at the time of installation by performing a confirmation per our IS9001 procedures. Gauges will be installed in areas that do not obstruct or shadow rainfall from the gauge such as roofs, tree canopies, or other structures above the gauge. Gauges will be installed where vandalism and tampering are minimized. Rain Gauges will be level and plumb. Installation records will be used to document site conditions, gauge setup and configuration with site photos. Site reports will be neatly organized in a binder demonstrating the equipment is installed properly and calibrated.

Task 4.0 – Comprehensive Field Services

Comprehensive Field Service means that the District can be assured that ADS will take care of every aspect of maintaining the high performance of the flow monitoring network.

Data Analysis is a critical to the of success of any flow/depth monitoring project. Having a trained Data Analyst review the flow/depth /rain monitoring dataset and be able to interpolate any hydraulic changes is imperative. Internal procedures are in place to escalate flagged data to the Data Manager, Field Crews, and the Project Engineer and immediately come up with a plan to rectify any problems that may arise.



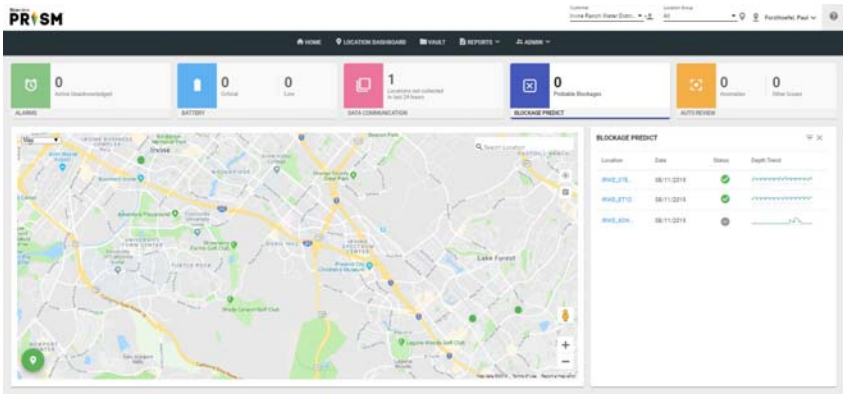
Local field crews based out of our Huntington Beach, CA office will mobilize quickly to resolve any issues that the Data Analyst has identified as well as perform regular maintenance.

ADS leverages the latest technology to effectively manage complex flow monitoring projects. Field service is directed through a server-based work order management system readily accessible to all ADS team members. Field crews are dispatched and routed in real-time using iPads. All field work is recorded on a “Daily Form” using a tablet, or on paper. These Daily Forms provide snapshots of all the field work performed on each site in a workday. Also, due to the nature of this business, all crew members are fully trained in confined space entry. Confined Space Entry (CSE) forms are REQUIRED for all maintenance in which “manned entry” is required.

Task 4.1 – Confirmations, Data Analysis and Data Finalization

The data analyst will perform a review of the collected data using FlowView Prism and/or Profile software on a regular basis to ensure that all sites are reviewed at least two times per week. ADS data analysts will review all individual monitor data in relation to upstream and downstream monitor locations, should they exist, to ensure the net flows between monitors are consistent and to make sure the overall system flow quantities balance. After the review, the analyst will coordinate with the Project Manager and/or Field Manager to direct the field crews to perform any required maintenance or repairs, as necessary, to allow for accurate and repeatable data. A trained Data Analyst will analyze and finalize data. The data analyst will be directly calculated flow using the continuity equation from recorded depth and average velocity data. The analyst will also utilize scatter plots (depths vs. velocity readings) both to verify monitor accuracy. Flow balancing of upstream and downstream sites will be completed in data finalization process.

Task 5.0 – Innovative Approach - Web Based Data Delivery and Reporting



ADS is proposing to utilize our web-based data delivery service product, FlowView Prism, our revolutionary new web-based software product that provides critical insight for managing your collection system. ADS will provide access to our FlowView Prism website for the entirety of the project. All flow/rain meter data will be transmitted to FlowView Prism on a daily schedule. The District's staff also has the ability to "collect" flow monitor data with a push of a button from multiple FlowView Prism screens. All pertinent field documentation will be uploaded to the FlowView Prism "Vault" for project personnel to access anytime.

For more detailed information on FlowView Prism tool see Appendix A

Task 5.1 – Innovative Approach - Rain Dependent Inflow & Infiltration (RDI/I) Analysis

Based on our extensive experience conducting RDI/I analysis, we have developed the industry's leading and award-winning software tool (Sliicer.com™) to analyze large amounts of flow data to quantify extraneous flows entering the system. Sliicer.com is an online, wet weather analysis tool that you have to see to believe.

Through detailed flow data analyses, wet weather questions are answered, and rehabilitation decisions are validated. Sliicer.com allows the user to test calculate "what-ifs"; incorporate Scattergraph tools; assess the operational capacity of pipe; diagnose upstream and downstream SSOs; and animate the pipe's performance in rain events, all with speed and precision.

This RDI/I specific software examines dry- and wet-weather flow data and provide rigorous performance measurements with high precision. Sliicer.com enables analysis of pre- and post- rehabilitation data, long-term seasonal effects, rainfall, dry days, scattergraphs, storm-by-storm RDI/I, system-wide RDI/I, and Q to i (flow versus rainfall) relationships.

For more detailed information on SLiiCER tool, see Appendix B

B. Flow Monitoring Devices

Area Velocity Wireless Flow Monitor

ADS is proposing the ADS Triton+ Wireless Flow Meter. The Triton+ is a multiple technology monitor that is flexible enough to collect data from almost every available sensor technology that is used in wastewater applications today.

Although Intrinsic Safety is not a requirement of the RFP, the ADS Triton+ Flow meter has been certified under IECEx (International Electrotechnical Commission Explosion Proof) Intrinsic Safety (IS) standards for use in Zone 0/Class I, Div. 1, Groups C&D rated hazardous areas.

The five multiple technology sensor options available in the Triton+ includes a the Long Range Depth Sensor, a Peak Combo Sensor, a Surface Combo Sensor, Ultrasonic Depth Sensor, and our newest sensor, the AV Gated Sensor. This array of monitoring technologies provides a fit-for-purpose monitoring platform for all of the District's needs with one monitor. Below is an overview of each sensor measurements.

Triton+ Sensor Name	Primary Depth	Secondary Depth	Velocity	Wetted Sensor	Sensor Location	Monitoring Locations
AV Gated	Uplooking Ultrasonic	Pressure Sensor	Gated Velocity	Yes	In-Pipe	Sites greater than 3" depth
Surface Velocity Combo Sensor	Downlooking Ultrasonic	Pressure Sensor Surcharge	Surface Velocity	Only in Surcharge	In-Pipe	Fast shallow flow, low flow, debris, hard to access (heavy traffic)
Peak Combo Sensor	Uplooking Ultrasonic	Pressure Sensor	Peak Velocity	Yes	In-Pipe	Every Site except <.5" depth and fast velocity
Down Looking Ultrasonic Depth Only	Downlooking Ultrasonic	N/A	N/A	No	In-Pipe	Used in conjunction with a Peak Combo Sensor, Fast shallow flow, shallow flow, debris, redundant depth
Long Range Depth Sensor	Downlooking Ultrasonic	N/A	N/A	Capacitance when submerged	In Manhole	SSO Monitoring, wet-wells, cleaning hotspots,

ADS AV Gated Sensor installed at the pipe invert. The AV Gated Sensor includes three types of sensor technologies:

- *Gated Velocity:* Works by measuring flow velocity at multiple discrete points, allowing the sensor to better characterize the velocity distribution and best measure average velocity. The returning reflected signal is processed using a digital signal processor, from which average velocity is calculated.
- *Up-Looking Ultrasonic Depth:* Uses ultrasound waves from two independent transceivers to measure the distance from the sensor upward toward the flow surface; applying the speed of sound in the water and the temperature measured by the sensor to calculate depth.
- *Pressure Depth:* Uses a piezo-resistive crystal to determine the difference between hydrostatic and atmospheric pressure. The pressure sensor is temperature compensated and vented to the atmosphere through a desiccant filled breather tube.

ADS Peak Combo Sensor *(model CS4)* installed at the pipe invert. The Peak Combo Sensor includes three types of sensor technologies:

- *Continuous Wave Peak Doppler Velocity:* Uses ultrasound waves reflected off particles to measure Doppler frequency shift which correlates to peak velocity.
- *Up-Looking Ultrasonic Depth:* Uses ultrasound waves from two independent transceivers to measure the distance from the sensor upward toward the flow surface; applying the speed of sound in the water and the temperature measured by the sensor to calculate depth.
- *Pressure Depth:* Uses a piezo-resistive crystal to determine the difference between hydrostatic and atmospheric pressure. The pressure sensor is temperature compensated and vented to the atmosphere through a desiccant filled breather tube.

One of the reasons ADS technology is selected to conduct so many flow monitoring projects is that the ***drift-free ultrasonic technology is the primary depth measurement***, while the pressure depth technology is used for redundancy and for measuring surcharge depth. Because both depths are measured in the same cross section of flow,

ADS monitors are able to automatically calibrate the pressure sensor to the ***zero-drift ultrasonic depth sensor, and this calibration is automatically performed on a daily basis.***

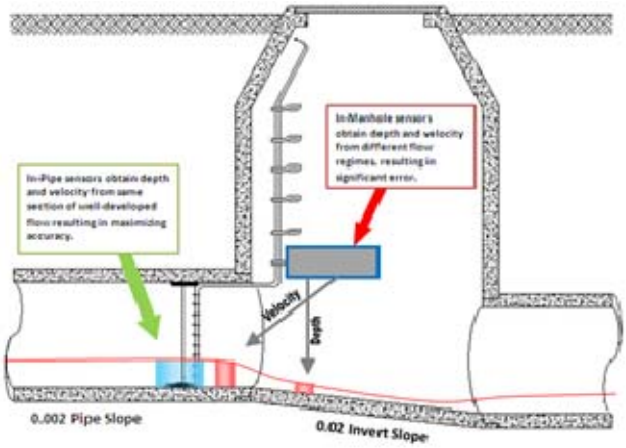
The continuous wave Peak Doppler algorithms (used in the ADS TRITON+ monitor) offer better accuracy, repeatability and precision. Peak Doppler technology registers the highest velocity particles regardless of signal strength (nearness to sensor). This allows the sensor to find the same peak flow (typically near the upper centerline of the flow cross section) regardless of size or distribution of particles in the flow at any given time; resulting in a very precise (repeatable) and verifiable velocity value. Not only does this provide increased accuracy for Rain Dependent Inflow and Infiltration (RDI/I) performance and modeling purposes, but the high degree of precision also enables the data to tell a detailed story about the hydraulic behavior (e.g. mild backwater starting at a certain depth, shifting sediment levels, the presence of a hydraulic jump or waves during part of the day, etc.) discussed later in this proposal.

The Surface Combo Sensor (CS5v), this revolutionary sensor featuring four technologies, non-contacting surface velocity, ultrasonic depth, surcharge continuous wave velocity, and redundant pressure depth. This sensor is mounted in the pipe crown to ensure depth and velocity is measured within the same cross section of the pipe. The Surface Combo Sensor is ideal for permanent locations and at locations that are steep that exhibit shallow/fast hydraulics and sites with excessive debris.

In Manhole vs In-Pipe Discussion

Even the most high-tech and reliable open channel flow meters will not provide accurate data if they are not installed and operated properly. We have seen an industry trend where some technology manufacturers are claiming their equipment can operate in any hydraulic condition and be easily installed and maintained in a manhole without contacting flow. We can certainly appreciate the desire to limit expensive confined space entry labor and equipment maintenance (ADS enters 800 manholes a day nationally!), but we know that these short-cuts can dramatically degrade data accuracy which easily eclipses the flow metering cost savings in terms of unneeded CIP or rehab efforts driven by incorrect data in the hydraulic model and RDI/I analysis.

We believe one of the biggest risk to flow monitoring programs is the use of technology that cuts corners to install sensors in the manhole to measure depth and velocity instead of the actual sewer pipe. Even if this technology can measure depth and velocity perfectly as confirmed through field confirmations in the manhole, the overall quantity data is subject to major error because it measures the depth and velocity in two completely different hydraulic regimes.



Consider this situation to the right where the upstream incoming line is a 12” pipe with a 0.002 ft/ft slope entering a standard precast manhole with an invert slope of 0.02 ft/ft. Since the flow meter sensor in the manhole is measuring depth and velocity in two completely different flow regimes, the flow quantification error can be extremely high as the table below demonstrates. In-manhole equipment advocates may suggest that these significant differences can be corrected through software adjustments and field calibrations, but such corrections would only be valid for that specific time and the overall result will always leave a question mark over the most important part of the flow metering program - **ACCURACY!**

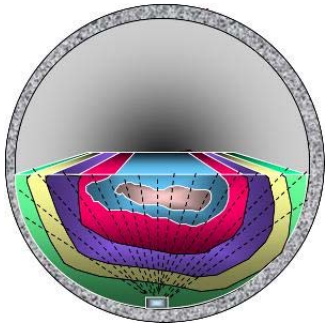
#8.

We have conducted case studies that show the cost of flow measurement error is between $1,000,000 and $2,000,000 for every million gallons per day (mgd) of flow that is misrepresented. This is due to improper prioritization of capital projects. In a small trunk line (48" diameter), this translates to more than $2,500,000 lost for each 10% increment of flow measurement error!

Pipe Measured Flow (MGD)	Depth of Water in Pipe (in)	Depth of Water in MH Invert (in)	Combined Manhole/Pipe measured flow (MGD)	Percent Error
[illegible]	[illegible]	[illegible]	[illegible]	68%
[illegible]	[illegible]	[illegible]	[illegible]	66%
[illegible]	[illegible]	[illegible]	[illegible]	65%

The potential for error with in-manhole flow meter technology is even greater during critical storm events when surcharging occurs because hydraulic conditions significantly depart from typical and the potential for even more substantial error can pervade the program. We believe the potential flow quantification errors demonstrated in the table to the right shows why it is absolutely necessary to measure flow in the actual sewer pipe and not allow for short-cuts measuring flow in the manhole to save on field labor.

In the actual sewers, the velocity profile is not uniform and can vary from site to site requiring more sophisticated velocity sensing technology and field confirmations to get true average velocity.



Our newest sensor, the AV Gated Velocity Sensor, uses gated velocity technology to measure flow velocity in multiple discrete points, which allows the sensor to better characterize the velocity distribution and best measure average velocity. This sensors technology allows average velocity to be measured through a wide range of flow conditions.

We understand that it is more difficult to install an underwater sensor. But we also understand that the prime objective of flow monitoring is not to make it convenient, rather it is to get the measurements right. ADS proposes to use our proven continuous wave Doppler Velocity sensor that can capture the diverse velocity readings depicted above which will greatly increase the data accuracy.

When flow monitoring data are used for sewer model calibration, what matters most is the accuracy and availability of the data used by the City's modeling engineers and/or Consultants to evaluate the collection system's performance. Not only does the data need to be accurate, it needs to be available during the critical wet-weather periods to see how the collection system operates under the strain of increased wet-weather flows.

Rain Gauge(s)

The ADS RainAlert III rain gauge assembly can be deployed as a stand-alone unit or part of a comprehensive monitoring network, the enclosure is suitable for ground-level, pole-mount or rooftop installation. ADS will utilize the TB6 model rain gauge, which we believe is the most accurate and reliable rain collection device in the market. The TB6 has an advanced finger filter which is less prone to clogging which is the biggest cause of rain collection failure.

C. Team

ADS will provide the District with a highly qualified and experienced project team with years of direct experience working for the surrounding communities. Our engineers, field personnel, data analysts, and support staff are experts in the field of flow/rainfall monitoring and associated Rain Dependent Inflow and Infiltration (RDI/I) analysis. The ADS team has over 110 years of flow monitoring experience and has successfully executed 100's of flow monitoring projects over the past 15+ years working together. Our team experience exceeds the requirements of this project and we are excited for this opportunity to provide our services.

Part of our project management risk assessment and minimization program ensures that project success does not hinge on the level of participation of any one individual. Rather, ADS ensures that each member of the team selected for this project is capable of performing their job independently and each has co-workers in the company who can step in and perform their job if for some unforeseen reason they are unavailable to do so. This is in stark contrast to our competitors where many of them are only one person that is keeping their flow monitoring business running. ADS is committed to maintaining the key personnel listed in this proposal throughout the term of this contract. ADS will fully staff this project with regular ADS employees with our field staff based out of our local Huntington Beach office.

ADS believes that the best way to ensure success of a flow monitoring project is to assign the most qualified personnel using the best available technology within a proven quality management system. This formula has worked for us time and time again, producing high quality data, which is delivered on time and exceeding our customers satisfaction. Our team is committed to open and timely communication with the District's representative(s), we can quickly adapt to changing conditions and the focused needs of the District and we strive for excellence with any project for which we are selected. It is our goal and desire to become your Trusted Advisor for projects such as this.

ADS has assembled a team with many years of experience in performing sewer and storm flow monitoring on both small and large-scale projects in the Southern California Area.

A brief overview of the ADS key personnel assigned to the project and their roles are described below. The local ADS key personnel listed in this proposal will be fully supported by our National ADS support staff and specialists to provide the District with the very best experience.

"Working with ADS, and with Paul Mitchell, was a pleasure. Paul ensured the on time delivery of high quality flow data every month and responded promptly to questions regarding to flow monitor performance."

- **Eric Fontenot P.E. Lead Modeler - DHI, Inc. City of Los Angeles, 96+ Monitors**

"Paul Mitchell's been great to work with. Very responsive and helpful"

- **Tori Yokoyama P.E. Modeler - RBF Engineers Port of Long Beach, 30+ Monitors**

Paul Mitchell, PE, Sr. Project Manager/Engineer. Paul has over 26 years of engineering and project management experience with an emphasis in wastewater collection systems, and environmental assessment/site remediation. Paul has been with ADS for over 16 years serving as Sr. Project Manager and Region Engineer. Paul's experience includes long and short-term flow monitoring, model verification, capacity studies for siphons, pump stations, and RDI/I analysis. Paul has authored or co-authored many technical papers on flow monitoring, rain gauging, and RDI/I analysis at CWEA, PNCWA, and WEFTEC.

Paul is always available to answer your questions that you may have for the duration of this project. Paul has always been very responsive in; investigating, digging deep into the data, comparing historical data to current datasets, discussing with our project team to form a thoughtful and honest opinion. In summary, Paul is a seasoned project manager/engineer with specific expertise in sanitary sewer flow/rain studies and associated RDI/I Analysis.

Shay Koerber, Field Manager II. A key team member resource for the Project Manager is the ADS Field Manager, Shay Koerber. The ADS Field Manager is the keystone of field success for flow monitoring projects. ADS Field Managers are responsible for controlling the quality of all field work, including conducting audits of field work to assure that all ADS procedures and work instructions are followed, ensuring all project requirements related to field work are being met, and that field work is being performed within the set schedule. Shay is designated to be the on-call field service/safety representative for this project. Shay has 13 years' experience exclusively in wastewater systems that include such tasks as investigating sites for suitable monitoring, installing monitoring equipment according to site conditions, and review of data for completeness and accuracy. He is responsible for the direct supervision of field personnel and the development of their professional and technical expertise in field activities.

Jackie Crutcher, Sr. Data Manager. Jackie has over 31 years of experience all with ADS Environmental Services. She has experience and a demonstrated performance record spanning both field and corporate operations. She has conducted thousands of sewer flow monitoring studies, and evaluation projects involving infiltration/inflow determination, combined sewer overflow evaluations, capacity analyses, sewer system evaluation surveys. Her experience encompasses key project control disciplines in project scheduling and coordination, project management, analysis, data collection, and final report preparation. Data management responsibilities also include coordinating work assignments and schedules for a group of data analysts, conducting data reviews, data audits, quality control and assisting with training of analysis team members.

Detailed Resumes are provided in Appendix C

D. Experience and References

Unlike other firms, wastewater flow monitoring is the core of our business and not just a minor or part-time endeavor. This enables ADS to hire and retain a team of highly capable and stable employees who specialize in flow monitoring. A significant number of staff members have been with ADS for over 20 years. This is in stark contrast to many flow monitoring providers who struggle try to hire field staff or various sub-ccontractors to meet project objectives. Open channel flow monitoring is not simply a small segment of our products and services, but rather our core business!

ADS' experience and strength of technology explains why so many large sewer agencies and cities like OCSD, Los Angeles, San Diego, San Jose, Seattle and Fresno continue to use ADS' services and equipment for over 20 years!

Past Flow Monitoring Experience

ADS' experience with sewer flow monitoring, rain gauging, and RDI/I projects is extensive.

Detailed descriptions of these 5 projects are available in Appendix D.

In addition to the 5 RDII project references presented in Appendix D, ADS has performed multiple flow monitoring studies directly for the MNWD or through Consultants. Following is a list of the project performed in the last five (5) years.

	# of Meters	Duration	Year of Project
MNWD	2	14 days	2015
MNWD-AKM	7	14 days	2016
MNWD-AKM	4	7 days	2017
MNWD-Tetra Tech	2	7 days	2018

E. Schedule

ADS commits to the District to meet any schedule required under this contract. Following is the proposed project schedule based on MNWD's milestones listed in RFP.

	Week Number from NTP (Sept 12)	1	2	3	4	5	6	7	8	9	10	11	12					31	32	33	34	35	36	37	38	39	40
	Number of Monthss to Notice to Proceed				1				2				3	4	5	6	7				8						
Line Item																											
1	**Project Management**																										
2	**Flow / Rainfall Monitoring**																										
	Site Assessment and Installation Plan / Acceptance																										
	Equipment Installation, Calibration, Site Documents																										
	Flow / Rainfall Monitoring October 1 - May 2																										
	Equipment Removal																										
3	**Project Reports**																										
	Live 24/7 raw data access via FlowView Prism online																										
	Monthly Updates																										
	Flow / Rainfall Monitoring Report																										
	RDI/I Analysis																										
	Draft Report Deliverable (May 14)																										
	Final Report Deliverable (June 18)																										

EXPERIENCE SUMMARY

Paul has over 31 years of technical and engineering experience with an emphasis in wastewater collection systems, municipal waste, and environmental assessment/site remediation. He currently serves as Senior Region Engineer and Project Manager. His background includes work with long-term flow monitoring services for model verification, capacity studies for siphons, pump stations, and critical sewer segments, infiltration and inflow (I/I) analysis and prioritization studies, sewer system evaluation surveys such as physical inspections, smoke testing, as well as technical reporting and presentation.

Education
B.S., Chemical Engineering - Cal State Polytechnic University Pomona, 1986
M.S. Program Core Courses, Civil/Environmental Engineering – Cal State University Long Beach, 1991

Registration *Professional Engineer, California, No 049435*
Professional Engineer, Nevada, No 016878
Professional Engineer, Utah, No 8972209-2202

Experience
31 Years

Joined Firm
2000

Relevant Experience
- *Managed over 300 Temporary Sewer Flow Monitoring Projects*
- *Expertise in Rain Dependent Inflow and Infiltration*
- *Critical Site Flow verification and Capacity Evaluation Expertise*

TEMPORARY SEWER FLOW MONITORING & RAINFALL DEPENDENT INFLOW & INFILTRATION STUDIES

East Bay Municipal Utility District, Wet Weather Sewer Flow Monitoring Study, Oakland, California

Sr. Project Manager. Had primary responsibility for running this 109-meter, 9 rain gauge, 3 year project to identify basins with substantial I/I issues. Responsibilities for the project included cost control, ensuring deliverables were met, and oversight of all field and data analysis activities. Also prepared the final data report that was included as a deliverable to Cal EPA.

City of San Jose, Numerous Sewer Flow Monitoring Studies, San Jose, California

Sr. Project Manager. Fifty-two sanitary flow monitoring sites and 16 rain gauges on a continuous basis and provide daily updates of flow and hydraulic performance via wireless telemetry to a web based data delivery platform called Flowview™. Weekly service summaries and monthly uptime performance metrics are provided along with monthly data analysis and finalization / certification of data. Deliverables also include seasonal flow metering (up to 100 meters at a time) and Rainfall Dependent Infiltration and Inflow (RDII) performance reports that provide trend analysis of dry and wet weather performance. Additions of up to 85 storm system flow monitoring locations and 9 more temporary rain gauging stations will enable the City to get a better handle on their storm system model.

City of Los Angeles, Wet Weather Sewer Flow Monitoring Study, Los Angeles, California

Sr. Project Manager. ADS was awarded a 2-year comprehensive sewer system performance evaluation for the City of Los Angeles, CA. This included deployment of 93 wireless flow monitors in lines ranging in size from 12-inch to 99-inch, flow and map verification, capacity evaluation, preparing an Web-based master database of flow data and capacity performance data. Rainfall Dependent Infiltration & Inflow (RDII) performance evaluations were conducted in metered tributary zones using Sliicer software to assist in the preparation and calibration of their wet weather performance model.

Orange County Sanitation District, Rain Dependent Inflow and Infiltration Study, Fountain Valley, California

Sr. Project Manager. ADS was awarded a 4-year - $6,200,000 project. The project involved delineation of 120 master basins and deployment of 150 wireless flow monitors to support the Cooperative Projects Program wherein RDII was targeted for reduction within the 24 Member Agencies comprising the District service area. This was the foundation project for all future RDII reduction efforts District wide.

EXPERIENCE SUMMARY

As Field Manager Shay has successfully managed the field operations from beginning to end on over 200 temporary flow monitoring projects, totaling more than 1000 monitoring sites. These projects included studies required to obtain data for modeling, inflow and infiltration, billing, event notification services, flow proportional sampling, sewer smoke testing (SSES), and pump station calibrations. Shay presently manages 14 long term projects totaling 200 monitoring sites, as well as several rain gauges.

Shay has also had the experience working with several different agencies in multiple major metropolitan cities throughout the United States. Shay has helped assist and manage several major projects, including Seattle, San Diego, Los Angeles, Las Vegas, Fresno, Reno, Oakland, and San Jose.

Education
Seattle Central Community College WA Sociology Graduated 2000
O&M of wastewater collection systems
California State University Sacramento, CA 2013

Certifications
MACP, NACP Certified
O&M Certified
T-Lock Welder (Ameron Water Transmission Group, expires October 2017)

Experience
13 Years

Joined Firm
2005

Relevant Experience
- *Successfully Managed over 300 Temporary and Permanent Sewer Flow Monitoring Projects*
- *Expertise in Flow Monitoring, Water Loss Control and SSES*
- *Software, Hardware, Data Analysis and Field Experience*
- *Safety Training Coordinator*
- *100% of Shay's projects have meet a 95% uptime rate or better*
- *Site Reports/ Site Safety Plan development*
- *Traffic Management Development*
- *Field Crew Scheduling and Safety Preparation*

TEMPORAY SEWER FLOW MONITORING & RAINFALL DEPENDENT INFLOW & INFILTRATION STUDIES

City of San Diego, Sewer Flow Monitoring and Event Notification Services, San Diego, California

Field Manager. Five-year contract with Metropolitan Wastewater worth $5,700,000. Monitor 161 sanitary flow monitoring sites in pipes ranging from 8" to 114" on a continuous basis since 2005. Provide daily updates of flow, hydraulic performance and event notification via wireless and landline telemetry to a web based data delivery platform, IntelliServe™. Daily service summaries and 95% or better uptime performance are provided along with monthly data analysis and finalization / certification of data used for billing, modeling and overflow alarming to meet EPA requirements.

City of El Cajon, Sewer System Evaluation Services, El Cajon, California

Field Manager. ADS was contracted by the City of El Cajon to conduct 164,000 lf of sanitary sewer smoke testing as a follow-up to a system- wide flow monitoring effort to identify RDII. The project involved locating cracks, breaks and illegal connections, and after extensive investigation, over 250 defects were found which assisted the City in developing a rehabilitation plan and identifying necessary sewer repairs and replacement.

City of Los Angeles, Sewer Flow Monitoring and Event Notification Services, Los Angeles, California

Field Manager. Thirty-three sanitary sewer flow monitoring sites for the purpose of billing, modeling and overflow detection. First commissioned in 1999, the monitoring stations consist of both land-line and wireless flow meters which report to ADS' web-based reporting system for real- time flow measurement and alarming. Scope of work also includes comprehensive service, data analysis, certification of data and as-needed data review and engineering services.

City of Las Vegas, Permanent Sewer Flow Monitoring, Las Vegas, Nevada

Field Manager. Thirty sanitary sewer flow monitoring sites on a continuous basis since 1997. Flow data is used for billing, modeling and flow verification during diversion activities. Scope of services includes comprehensive service, data analysis and event notification services.
Deliverables also include as-needed temporary flow monitoring and removing and reinstalling monitoring stations.

EXPERIENCE SUMMARY

Jackie is one of ADS' most experienced Data Managers with demonstrated performance record spanning both field and corporate operations. Jackie has conducted numerous sewer system flow monitoring and evaluation projects involving infiltration/inflow determination, combined sewer overflow evaluations, capacity analyses, sewer system evaluation surveys and permanent flow monitoring. Her experience encompasses key project control disciplines in project scheduling and coordination, project management, analysis, data collection, and final report preparation. In addition, she has provided analysis and software training, and customer software and product support. As a data manager for ADS, Jackie is responsible for cultivating proactive team relationships, maximizing resources and ensuring that data analysis requirements for assigned projects are achieved. She independently analyzes data, which may include sanitary, combined, and storm sewer flow data. Data management responsibilities also include coordinating work assignments and schedules for a group of data analysts, conducting data reviews, data audits, quality control and assisting with training of analysis team members.

Education
B.S., Computer Science Technology, Alabama A&M University, 1983

Experience
34 Years

Joined Firm
1985

Relevant Experience
- Industry's Most Experienced D ata Analyst
- Flow Monitoring Data Expert
- Software, Hardware, and Field Experience

TEMPORARY SEWER FLOW MONITORING & RAINFALL DEPENDENT INFLOW & INFILTRATION STUDIES

City of Los Angeles, Wet Weather Sewer Flow Monitoring Study, Los Angeles, California

Data Manager. ADS was awarded a 2-year comprehensive sewer system performance evaluation for the City of Los Angeles, CA. This included deployment of 93 wireless flow monitors in lines ranging in size from 12- inch to 99-inch, flow and map verification, capacity evaluation, preparing a Web-based master database of flow data and capacity performance data. Rainfall Dependent Infiltration & Inflow (RDII) performance evaluations were conducted in metered tributary zones using Sliicer software to assist in the preparation and calibration of their wet weather performance model.

Orange County Sanitation District, Rain Dependent Inflow and Infiltration Study, Fountain Valley, California

Data Manager. ADS was awarded a 4-year - $6,200,000 project completed in 2005. The project involved delineation of 120 master basins and deployment of 150 wireless flow monitors to support the Cooperative Projects Program wherein RDII was targeted for reduction within the 24 Member Agencies comprising the District service area.
This was the foundation project for all future RDII reduction efforts District wide.

Port of Long Beach, Long Beach, Temporary Sewer Flow Monitoring Study, Long Beach, California

Data Manager. ADS was sub-contracted by RBF Engineers to conduct temporary sewer flow monitoring at 25 gravity locations and 6 lift stations for a period of 3 months study for a wet period and 14-day dry study.

City of San Bernardino, Temporary Sewer Flow Monitoring Study, San Bernardino, California

Data Manager. ADS was sub-contracted by AKM Consulting Engineers to conduct temporary sewer flow monitoring at 25 gravity locations for a period of 14 days for dry weather model calibration.

Exhibit B
Schedule of Charges

Phase	Description: Flow Monitor Study (24 Flow Monitor and 3 Rain Gauges- 7 Months)	Cost
Mobilization	Mobilization of crews and equipment	
Flow Monitoring	Field investigation, installation, data collection, monitor maintenance for twenty-four (24) flow monitor and three (3) rain gauges for seven (7) months.	
Web-Hosting	Site set-up in FlowView Prism and hosting for seven (7) months	
Data Analysis and Final Report	Data analysis and preparation of a final RDII report	
Total Project Cost*:	**Twenty-four (24) monitors and three (3) rain gauges, seven (7) months**	**$239,500.00**
	Optional Additional Flow Monitoring	
Option to add monitors	**Option to add additional monitors to the above seven (7) month study.**	**$8,300.00/monitor**

*Pricing Assumptions: Any applicable Federal, state, or local taxes are not included; No prevailing wages or W/MBE requirements; Standard traffic control requirements assumed (traffic cones); Payment terms net 30 days.

VENDOR CONTACT LIST

Company Name	Company Address	Contact Person	Telephone #	E-Mail
ADS Corp.	15201 Springdale Street Huntington Beach, CA 92649	Heather McPherson, P.E.	213-393-8705	HMcPherson@idexcorp.com
Downstream Services, Inc.	2855 Progress Place Escondido, CA 92029	Malia Van Diepen, Project Assistant	760-746-2544	MaliaV@downstreamservices.com
Utility Systems Science & Software	601 Parkcenter Drive, Suite 209 Santa Ana, CA 92705	Mark Serres, VP	714-542-1004	Mark.serres@uscubed.com
V&A Consulting Engineers	11011 Via Frontera, Suite C San Diego, CA 92127	Megan Brown, P.E.	858-576-0226	mbrown@vaengineering.com

moulton niguel water district

STAFF REPORT

TO: **Board of Directors** **MEETING DATE: September 12, 2019**

FROM: **Rod Woods, Director of Engineering**
Todd Dmytryshyn, Engineering Manager

SUBJECT: **Construction Contract Award for 650-Zone Niguel Road Intertie**

SUMMARY:

Issue: Board action is required for the Notice Inviting Sealed Bids for the 650-Zone Niguel Road Intertie, Project No. 2010.001.

Recommendation: It is recommended that the Board of Directors award the construction services contract to Ferreira Construction in the amount of $527,824; authorize the General Manager or Assistant General Manager to execute the contract; and to approve change orders up to 10% of the contract value.

Fiscal Impact: Project No. 2010.001 is budgeted in Fund 14, Planning and Construction with a current project budget of $375,000. The proposed project budget is $665,606. Sufficient funds are available in Fund 14 which has an overall budget of $21,413,204; the overall Fiscal Year 2019-20 budget will not be impacted.

Reviewed by Committee: Yes, recommended for approval at the Technical Committee Meeting on September 3, 2019.

Reviewed by Legal: Yes

BACKGROUND:

The 650-Zone Niguel Road Intertie project is located at the intersection of Niguel Road and Alicia Parkway in the City of Laguna Niguel. The project will install approximately 650 feet of 16-inch pipe, valves, and fittings to provide a connection between two portions of the 650 zone within the potable water distribution system. This project will improve operational efficiency, flexibility, and redundancy within the zone.

Construction documents for the project were prepared by Dudek utilizing the on-call engineering services agreement. A statutory exemption was prepared in accordance with State CEQA Guidelines and a Notice of Exemption was filed with Orange County on November 30, 2018.

DISCUSSION:

A request for bids was issued to five qualified contractors. The District received five sealed bids for subject contract on August 21, 2019. The table below summarizes the bids received:

Firm	Bid
Ferreira Construction	$527,824
Paulus Engineering	$531,280
EJ Meyer Company	$555,555
TE Roberts	$652,600
Shoffeitt Pipeline	$784,200
Engineer's Estimate	**$496,000**

Staff has determined that the lowest responsible and responsive bidder was Ferreira Construction. Staff has completed its review of the contract documents and has determined that they are in order. Ferreira Construction has performed quality work for the District in the past and is well-qualified to perform this type of work.

The project budget increase is a result of several items discovered during the design phase, such as utility conflicts and increased construction duration to mitigate traffic lane closures. Additionally, the industry has seen an increase in steel prices since the project budget was developed. However, there are sufficient funds in the overall capital improvement program budget and the overall Fiscal Year 2019-20 budget will not be impacted.

As such, staff is recommending that the Board of Directors award the construction services contract to Ferreira Construction in the amount of $527,829 with an approved contingency of 10% of the contract value.

SUMMARY OF PROJECT BUDGET:

	Project Budget*	Proposed / Approved Contract	Proposed / Authorized Contingency	Total Proposed / Authorized Amount
Project Items				
Engineering	$65,000	$65,000	$0	$65,000
Construction Contract	$290,000	$527,824	$52,782	$580,606
Legal, Permits, District Labor	$20,000	$20,000	$0	$20,000
Totals	$375,000	$612,824	$52,782	$665,606

*$33,685.15 has been expended to date.
Currently Proposed Amount

Attachments:
1. Exhibit A – Location Map
2. Exhibit B – Vendor Contact List

Legend

- Proposed Intertie Pipeline
- Existing 650-Zone Pipeline

N

moulton niguel water district

0 50 100 200 Feet

Scale 1:1,600

Exhibit "A" Location Map
650-Zone Niguel Road Intertie
Contract No. 2010.001

Path: G:\GIS\Projects\Projects_Ongoing\Capital Improvement Project Exhibits\650ZoneIntertie.mxd

VENDOR CONTACT LIST

Company Name	Company Address	Contact Person	Telephone #	E-Mail
Ferreira Construction	10370 Commerce Center Dr., Suite B-200 Rancho Cucamonga, CA 91730	Bree Scott	(909) 606-5900	bscott@ferreiraconstruction.com
Paulus Engineering	2871 E.Coronado St. Anaheim, CA 92806	Jason Paulus	(714) 632-3975	jpaulus@paulusengineering.com
EJ Meyer Company	P.O. Box 277 Highland, CA 92346	Kristian Corona	(909) 425-4025	kcorona@ejmeyer.com
TE Roberts	306 W. Katella Ave., Unit B Orange, CA 92867	Tim Roberts	(714) 669-0072	troberts@teroberts.com
Shoffeitt Pipeline	15801 Rockfield Blvd., Suite L Irvine, CA 92618	John Shoffeitt	(949) 581-1600	john@shoffeittpipeline.com

moulton niguel water district

STAFF REPORT

TO: **Board of Directors** **MEETING DATE: September 12, 2019**

FROM: **Rod Woods, Director of Engineering**
Alex Thomas, Principal Engineer

SUBJECT: **Professional Services Agreement for Steel Reservoir Seismic Retrofits**

SUMMARY:

Issue: Board action is required to execute a professional services agreement for the Steel Reservoir Seismic Retrofits, Project No. 2019.030.

Recommendation: It is recommended that the Board of Directors approve the Professional Services Agreement for engineering services with Lee & Ro, Inc. in the amount of $331,433; authorize the General Manager or Assistant General Manager to execute the agreement; and to approve amendments up to 10% of the contract value.

Fiscal Impact: The Steel Tanks Seismic and Structural Retrofits program is budgeted in Fund 7, Rehabilitation and Replacement with a total program budget of $5,000,000. The overall Fund 7 budget of $27,066,964 for this fiscal year will not be impacted.

Reviewed by Committee: Yes, recommended for approval at the Technical Committee Meeting on September 3, 2019.

Reviewed by Legal: Yes

BACKGROUND:

The District owns and operates a total of 38 water storage reservoirs as a part of the potable and recycled water distribution systems. Of the 38 reservoirs, 26 are above ground steel tanks that service the potable water system.

A District-wide Steel Reservoir Assessment was completed in June of 2015. The assessment concluded that the reservoirs were in overall good condition with minimal seismic risk. However, it recommended some seismic improvements at 18 of the District's potable water reservoirs in order to improve their resiliency in the event of an earthquake. These improvements generally include the reconfiguration of inlet/outlet and drain piping to include flexible couplings, as well as extensions of ring wall foundations. During a seismic event, these improvements will reduce potential damage to piping and mitigate potential settlement of the tank foundation.

The scope of work includes preparation of construction documents to address the seismic retrofit recommendations from the Steel Reservoir Assessment. The District has applied for a Hazard Mitigation Grant through CalOES and FEMA for this project. The grant application is currently under review by FEMA.

DISCUSSION:

On July 22, 2019, staff issued a Request for Proposals for engineering services to six qualified engineering consulting firms. Four proposals were received, and the fee estimates are summarized below:

Consultant / Firm	Proposal Fee Estimates
AKM Consulting Engineers	$185,034
Lee & Ro, Inc.	$331,433
Tetra Tech	$348,000
Dudek	$379,360

Staff performed a comprehensive review of the proposals received to determine the overall best value for the professional services required. Based on the consultants' specific project understanding and approach, overall proposal quality, project specific experience, proposed project team, and cost, staff recommends that the Board approve the professional services agreement with Lee & Ro, Inc. Lee & Ro also presented an alternative approach to improve the soil in lieu of extending the ring wall foundations at several of the sites. This approach would provide a more cost effective solution during construction.

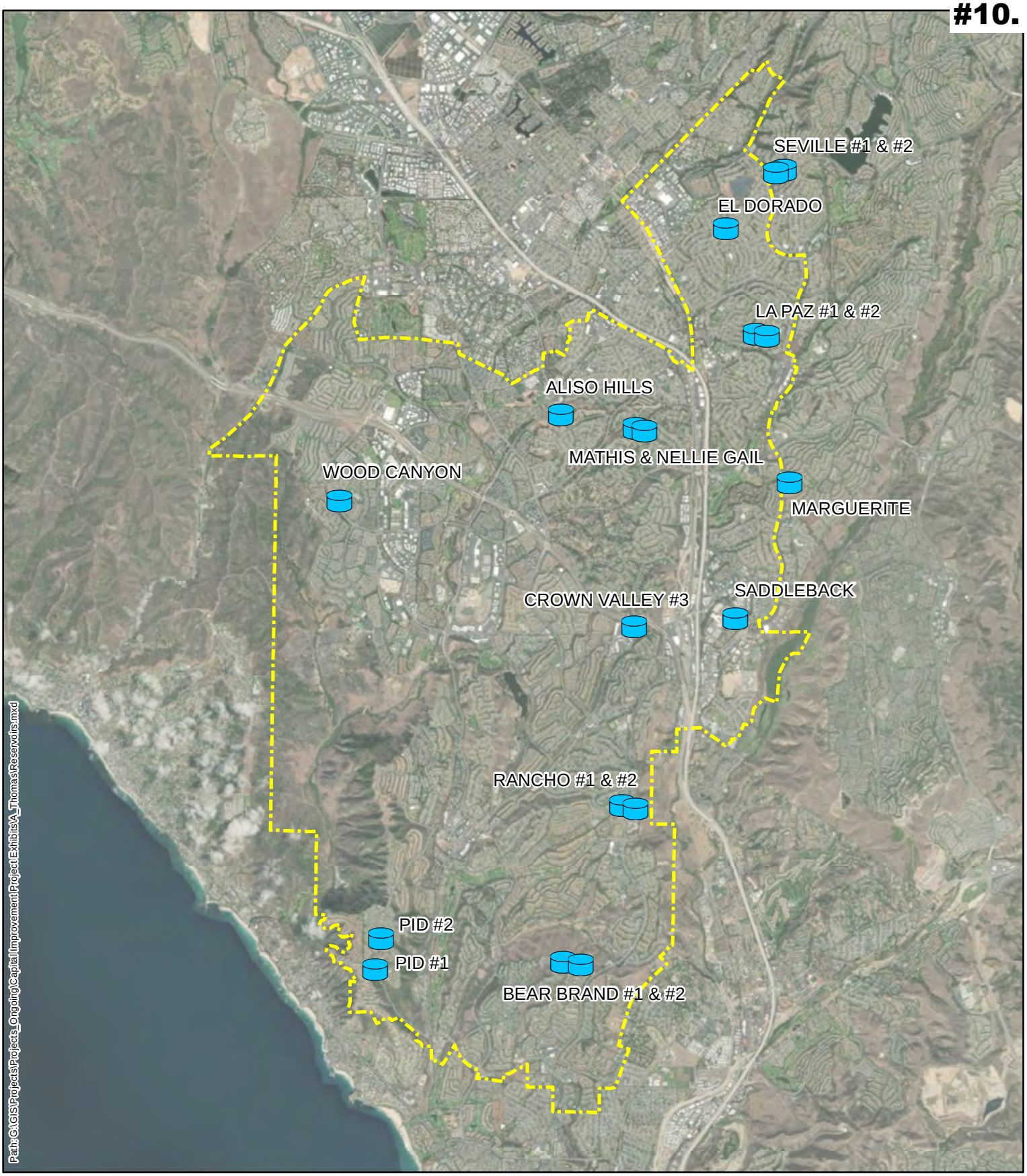
SUMMARY OF PROGRAM BUDGET:

	Project Budget	Proposed / Approved Contract	Proposed / Authorized Contingency	Total Proposed / Authorized Amount
Project Items				
Engineering	$400,000	$331,433	$33,143	$364,576
Construction	$4,100,000	$4,135,424	$0	$4,135,424
Construction Management and Inspection	$400,000	$400,000	$0	$400,000
Legal, Permits, District Labor	$100,000	$100,000	$0	$100,000
Totals	$5,000,000	$4,966,857	$33,143	$5,000,000

Currently Proposed Amount

Attachments:

1. Exhibit A - Location Map
2. Exhibit B - Professional Services Agreement for Steel Reservoir Seismic Retrofits
3. Exhibit C - Vendor Contact List



Reservoir Sites
District Boundary

N

moulton niguel water district

0 1 2 3 Miles

Scale = 1:85,000

Exhibit "A" Location Map
Steel Reservoir
Seismic Retrofits
Contract No. 2019.030

PROFESSIONAL SERVICES AGREEMENT
BETWEEN
MOULTON NIGUEL WATER DISTRICT AND
LEE & RO, INC.
MNWD PROJECT: POTABLE WATER STEEL RESERVOIR SEISMIC RETROFITS
CONTRACT NO. 2019.030

This Agreement (the "Agreement") is made and entered into this ____ day of _____, 2019 ("Effective Date") by and between the Moulton Niguel WATER DISTRICT ("MNWD") and Lee & Ro, Inc., a corporation with its principal place of business at 1199 S. Fullerton Road, City of Industry, CA 91748 ("Consultant"). MNWD and Consultant are sometimes individually referred to as "Party" and collectively as "Parties" in this Agreement.

SECTION I – PURPOSE

Consultant shall provide certain professional services required by MNWD on the terms and conditions set forth in this Agreement. Consultant represents that it has the qualifications, experience, licenses, and facilities necessary to properly perform Engineering consulting services in a competent and professional manner.

SECTION II – TERM

The term of this Agreement shall be from the Effective Date to **March 1, 2023**, unless earlier terminated as provided herein.

SECTION III – SCOPE OF SERVICES

Section 3.1. Scope of Services. The scope of services to be provided by Consultant is sExhibit et forth on Exhibit "A" attached hereto and by this reference incorporated herein ("Services"). Consultant warrants that it will perform the Services as set forth herein in a competent, professional and satisfactory manner. All Services shall be subject to, and performed in accordance with, this Agreement, the exhibits attached hereto and incorporated herein by reference, and all applicable local, state and federal laws, rules, and regulations.

Section 3.2. Schedule of Services. Consultant shall complete the Services within the term of this Agreement and shall meet any other established schedules and deadlines, including any schedule of services set forth in Exhibit "A."

Section 3.3. Permits, Licenses, Fees and Other Charges. Consultant shall, in accordance with applicable laws and ordinances, obtain at his/her/its expense all permits and licenses necessary to accomplish the Services. Failure to maintain a required license or permit may result in immediate termination of this Agreement.

SECTION IV – COMPENSATION

Section 4.1. Payment for Services Rendered. Consultant shall receive compensation, including authorized reimbursements, for all Services rendered under this Agreement at the rates set forth in Exhibit "B" attached hereto and incorporated herein by reference. The total compensation shall not exceed **Three Hundred Thirty-One Thousand Four Hundred Thirty-Three Dollars ($331,433)** without written approval by MNWD. Extra Work may be authorized, as described below, and if authorized, will be compensated at the rates and manner set forth in this Agreement.

Section 4.2. Invoices. Consultant shall submit to MNWD a monthly itemized statement which indicates work completed and hours of Services rendered by Consultant. The statement shall describe the Services and supplies provided since the initial commencement date, or since the start of the subsequent billing periods, as appropriate, through the date of the statement. MNWD shall, within 45 days of receiving such statement, review the statement and pay all approved charges thereon.

A. Payment shall not constitute acceptance of any work completed by Consultant.

B. The making of final payment shall not constitute a waiver of any claims by MNWD for any reason whatsoever.

Section 4.3. Reimbursement for Expenses. Consultant shall not be reimbursed for any expenses unless authorized in writing by MNWD.

Section 4.4. Extra Work. At any time during the term of this Agreement, MNWD may request that Consultant perform Extra Work. As used herein, "Extra Work" means any work which is determined by MNWD to be necessary for the proper completion of the Project, but which the parties did not reasonably anticipate would be necessary at the execution of this Agreement. Consultant shall not perform, nor be compensated for, Extra Work without written authorization by MNWD.

SECTION V – REPRESENTATIVES OF THE PARTIES

Section 5.1. MNWD's Representative. MNWD hereby designates its Director of Engineering, or his or her designee, to act as its representative for the performance of this Agreement ("MNWD's Representative"). Consultant shall not accept direction or orders from any person other than MNWD's Representative or his or her designee.

Section 5.2. Consultant's Representative. Consultant hereby designates Rick Liskow, or his designee, to act as its representative for the performance of this Agreement ("Consultant's Representative"). Consultant's Representative shall have full authority to represent and act on behalf of the Consultant for all purposes under this Agreement. The Consultant's Representative shall supervise and direct the Services, using his best skill and attention, and shall be responsible for all means, methods, techniques, sequences, and procedures and for the satisfactory coordination of all portions of the Services under this Agreement.

SECTION VI – RESPONSIBILITIES OF CONSULTANT

Section 6.1. Control and Payment of Subordinates; Independent Contractor. The Services shall be performed by Consultant or under its supervision. Consultant will determine the means, methods and details of performing the Services subject to the requirements of this Agreement. MNWD retains Consultant on an independent contractor basis and not as an employee. Consultant retains the right to perform similar or different services for others during the term of this Agreement. Any additional personnel performing the Services under this Agreement on behalf of Consultant shall also not be employees of MNWD and shall at all times be under Consultant's exclusive direction and control. Consultant shall pay all wages, salaries, and other amounts due such personnel in connection with their performance of Services under this Agreement and as required by law. Consultant shall be responsible for all reports and obligations respecting such additional personnel, including, but not limited to: social security taxes, income tax withholding, unemployment insurance, disability insurance, and workers' compensation insurance.

Section 6.2. Standard of Care; Performance of Employees. Consultant shall perform all Services under this Agreement in a skillful and competent manner, consistent with the standards generally recognized as being employed by professionals in the same discipline in the State of California. Consultant represents and maintains that it is skilled in the professional calling necessary to perform the Services. Consultant warrants that all employees and subconsultants shall have sufficient skill and experience to perform the Services assigned to them. Finally, Consultant represents that it, its employees and subconsultants have all licenses, permits, qualifications and approvals of whatever nature that are legally required to perform the Services, and that such licenses and approvals shall be maintained throughout the term of this Agreement. As provided for in the indemnification provisions of this Agreement, Consultant shall perform, at its own cost and expense and without reimbursement from MNWD, any services necessary to correct errors or omissions which are caused by the Consultant's failure to comply with the standard of care provided for herein.

Section 6.3. Conformance to Applicable Requirements. All work prepared by Consultant shall be subject to the approval of MNWD.

Section 6.4. Substitution of Key Personnel. Consultant has represented to MNWD that certain key personnel will perform and coordinate the Services under this Agreement. The key personnel for performance of this Agreement are as follows: Rick Liskow, Amritemdu Maji, Lee Badertscher, Alice Maupin, James Gingrich. Should one or more of such personnel become unavailable, Consultant may substitute other personnel of at least equal competence upon written approval of MNWD. In the event that MNWD and Consultant cannot agree as to the substitution of key personnel, MNWD shall be entitled to terminate this Agreement for cause. Furthermore, any personnel who fail or refuse to perform the Services in a manner acceptable to MNWD, or who are determined by MNWD to be uncooperative, incompetent, a threat to the adequate or timely completion of the Services or a threat to the safety of persons or property, shall be promptly removed from performing Services by the Consultant at the request of MNWD.

Section 6.5. Coordination of Services. Consultant agrees to work closely with MNWD staff in the performance of Services and shall be available to MNWD's staff, consultants and other staff at all reasonable times.

Section 6.6. Laws and Regulations. Consultant shall keep itself fully informed of and in compliance with all local, state and federal laws, rules and regulations in any manner affecting the performance of the Project or the Services, including all Cal/OSHA requirements, and shall give all notices required by law. Consultant shall be liable for all violations of such laws and regulations in connection with Services. If the Consultant performs any work knowing it to be contrary to such laws, rules and regulations, Consultant shall be solely responsible for all costs arising therefrom. Consultant shall defend, indemnify and hold MNWD, its officials, directors, officers, employees, and agents free and harmless, pursuant to the indemnification provisions of this Agreement, from any claim or liability arising out of any failure or alleged failure to comply with such laws, rules or regulations.

SECTION VII – LABOR CODE PROVISIONS

Section 7.1. Prevailing Wages. Consultant is aware of the requirements of California Labor Code Section 1720, et seq., and 1770, et seq., as well as California Code of Regulations, Title 8, Section 16000, et seq., ("Prevailing Wage Laws"), which require the payment of prevailing wage rates and the performance of other requirements on "public works" and "maintenance" projects. If the Services are being performed as part of an applicable "public works" or "maintenance" project, as defined by the Prevailing Wage Laws, and if the total compensation is $1,000 or more, Consultant agrees to fully comply with such Prevailing Wage Laws. A copy of these prevailing

wage rates are on file with the Department of Industrial Relations and can be found online with the State of California at http://www.dir.ca.gov/dlsr/pwd. Consultant shall make copies of the prevailing rates of per diem wages for each craft, classification or type of worker needed to execute the Services available to interested parties upon request, and shall post copies at the Consultant's principal place of business and at the project site. It is the intent of the parties to effectuate the requirements of sections 1771, 1774, 1775, 1776, 1777.5, 1813, and 1815 of the Labor Code within this Agreement, and Consultant shall therefore comply with such Labor Code sections to the fullest extent required by law. Consultant shall defend, indemnify and hold MNWD, its elected officials, officers, employees and agents free and harmless from any claim or liability arising out of any failure or alleged failure to comply with the Prevailing Wage Laws.

Section 7.2. Registration and Labor Compliance. If the services are being performed as part of an applicable "public works" or "maintenance" project, then, in addition to the foregoing, pursuant to Labor Code sections 1725.5 and 1771.1, the Consultant and all subconsultants must be registered with the Department of Industrial Relations ("DIR"). Consultant shall maintain registration for the duration of the project and require the same of any subconsultants. This project may also be subject to compliance monitoring and enforcement by the Department of Industrial Relations. It shall be Consultant's sole responsibility to comply with all applicable registration and labor compliance requirements, including the submission of payroll records directly to the DIR.

Section 7.3. Labor Certification. By its signature hereunder, Consultant certifies that it is aware of the provisions of Section 3700 of the California Labor Code which require every employer to be insured against liability for Worker's Compensation or to undertake self-insurance in accordance with the provisions of that Code, and agrees to comply with such provisions before commencing the performance of the Services.

SECTION VIII – INDEMNIFICATION

To the fullest extent permitted by law, Consultant shall immediately indemnify, defend, and hold MNWD, its directors, officials, officers, employees, volunteers and agents free and harmless from any and all claims, demands, causes of action, costs, expenses, liability, loss, damage or injury of any kind, in law or equity, to property or persons, including wrongful death, in any manner arising out of, pertaining to, or incident to any alleged acts, errors or omissions of Consultant, its officials, officers, employees, subcontractors, consultants or agents in connection with the performance of the Consultant's Services or this Agreement, including without limitation the payment of all consequential damages, expert witness fees and attorneys' fees and other related costs and expenses. Consultant shall pay and satisfy any judgment, award or decree that may be rendered against MNWD or its directors, officials, officers, employees, volunteers and agents as part of any such claim, suit, action or other proceeding. Consultant shall also reimburse MNWD for the cost of any settlement paid by MNWD or its directors, officials, officers, employees, agents or volunteers as part of any such claim, suit, action or other proceeding. Such reimbursement shall include payment for MNWD's attorneys' fees and costs, including expert witness fees. Consultant shall reimburse MNWD and its directors, officials, officers, employees, agents, and/or volunteers, for any and all legal expenses and costs incurred by each of them in connection therewith or in enforcing the indemnity herein provided. Consultant's obligation to indemnify shall survive expiration or termination of this Agreement, and shall not be restricted to insurance proceeds, if any, received by MNWD, its directors, officials, officers, employees, agents, or volunteers. Notwithstanding the foregoing, to the extent Consultant's Services are subject to Civil Code Section 2782.8, the above indemnity shall be limited, to the extent required by Civil Code Section 2782.8, to claims that arise out of, pertain to, or relate to the negligence, recklessness, or willful misconduct of the Consultant.

SECTION IX – INSURANCE

Section 9.1. Time for Compliance. Consultant shall not commence Work under this Agreement until it has provided evidence satisfactory to MNWD that it has secured all insurance required under this section. In addition, Consultant shall not allow any subconsultant to commence work on any subcontract until it has provided evidence satisfactory to MNWD that the subconsultant has secured all insurance required under this section. Failure to provide and maintain all required insurance shall be grounds for MNWD to terminate this Agreement for cause.

Section 9.2. Minimum Requirements. Consultant shall, at its expense, procure and maintain for the duration of the Agreement insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the Agreement by the Consultant, its agents, representatives, employees or subconsultants. Consultant shall also require all of its subconsultants to procure and maintain the same insurance for the duration of the Agreement. Such insurance shall meet at least the following minimum levels of coverage:

A. Commercial General Liability. Coverage for commercial general liability insurance shall be at least as broad as Insurance Services Office (ISO) Commercial General Liability Coverage (Occurrence Form CG 0001). Consultant shall maintain limits no less than $1,000,000 per occurrence, or the full per occurrence limits of the policies available, whichever is greater, for bodily injury, personal injury and property damage. If Commercial General Liability Insurance or other form with general aggregate limit or product-completed operations aggregate limit is used, including but not limited to form CG 2503, either the general aggregate limit shall apply separately to this Agreement/location or the general aggregate limit shall be twice the required occurrence limit. The general liability policy shall include or be endorsed (amended) to state that: (1) MNWD, its directors, officials, officers, employees, agents, and volunteers shall be covered as additional insured with respect to the Work or operations performed by or on behalf of the Consultant, including materials, parts or equipment furnished in connection with such work using as broad a form as CG 20 10 11 85 or the latest versions of both CG 20 10 and CG 20 37; and (2) the insurance coverage shall be primary insurance as respects MNWD, its directors, officials, officers, employees, agents, and volunteers using as broad a form as CG 20 01 04 13, or if excess, shall stand in an unbroken chain of coverage excess of the Consultant's scheduled underlying coverage. Any insurance or self-insurance maintained by MNWD, its directors, officials, officers, employees, agents, and volunteers shall be excess of the Consultant's insurance and shall not be called upon to contribute with it in any way.

B. Automobile Liability. Coverage shall be at least as broad as the latest version of the Insurance Services Office Business Auto Coverage form number CA 0001, code 1 (any auto). Consultant shall maintain limits no less than $1,000,000 per accident for bodily injury and property damage. The automobile liability policy shall include or be endorsed (amended) to state that: (1) MNWD, its directors, officials, officers, employees, agents, and volunteers shall be covered as additional insureds with respect to the ownership, operation, maintenance, use, loading or unloading of any auto owned, leased, hired or borrowed by the Consultant or for which the Consultant is responsible; and (2) the insurance coverage shall be primary insurance as respects MNWD, its directors, officials, officers, employees, agents, and volunteers, or if excess, shall stand in an unbroken chain of coverage excess of the Consultant's scheduled underlying coverage. Any insurance or self-insurance maintained by MNWD, its directors, officials, officers, employees, agents, and volunteers shall be excess of the Consultant's insurance and shall not be called upon to contribute with it in any way. The automobile liability policy shall cover all owned, non-owned, and hired automobiles.

C. Workers' Compensation and Employer's Liability Insurance. Consultant shall maintain Workers' Compensation insurance as required by the State of California and Employer's Liability Insurance in an amount no less than $1,000,000 per accident for bodily injury or disease. The insurer shall agree to waive all rights of subrogation against MNWD, its directors, officials, officers, employees, agents, and volunteers for losses paid under the terms of the insurance policy which arise from work performed by the Consultant.

D. Professional Liability. Consultant shall procure and maintain, and require its subconsultants to procure and maintain, for a period of five (5) years following completion of the Project, errors and omissions liability insurance appropriate to their profession covering Consultant's wrongful acts, negligent actions, errors or omissions. The retroactive date (if any) is to be no later than the effective date of this agreement. Consultant shall purchase a one-year extended reporting period: i) if the retroactive date is advanced past the effective date of this Agreement; ii) if the policy is canceled or not renewed; or iii) if the policy is replaced by another claims-made policy with a retroactive date subsequent to the effective date of this Agreement. Such insurance shall be in an amount not less than $2,000,000 per claim.

E. Excess Liability (if necessary). The limits of Insurance required in this Agreement may be satisfied by a combination of primary and umbrella or excess insurance. Any umbrella or excess coverage shall contain or be endorsed to contain a provision that such coverage shall also apply on a primary and non-contributory basis for the benefit of MNWD (if agreed to in a written contract or agreement) before MNWD's own primary or self-Insurance shall be called upon to protect it as a named insured. The policy shall be endorsed to state that MNWD, its directors, officials, officers, employees, agents, and volunteers shall be covered as additional insured at least as broad a form as CG 20 10 11 85 or the latest versions of both CG 20 10 and CG 20 37. The coverage shall contain no special limitations on the scope of protection afforded to MNWD, its directors, officials, officers, employees, agents, and volunteers.

Section 9.3. All Coverages. The Consultant is required by this Agreement to state that: (i) coverage shall not be suspended, voided, reduced or canceled except after thirty (30) days prior written notice by certified mail, return receipt requested, has been given to MNWD; If any of the required coverages expire or cancel during the term of this agreement, the Consultant shall deliver the renewal certificate(s) including the general liability additional insured endorsement to MNWD at least ten (10) days prior to the cancellation or expiration date; and (ii) any failure to comply with reporting or other provisions of the policies, including breaches of warranties, shall not affect coverage provided to MNWD, its directors, officials, officers, employees, agents, and volunteers.

Section 9.4. Separation of Insureds; No Special Limitations. All insurance required by this Section shall contain standard separation of insureds provisions. In addition, such insurance shall not contain any special limitations on the scope of protection afforded to MNWD, its directors, officials, officers, employees, agents, and volunteers.

Section 9.5. Deductibles and Self-Insurance Retentions. Any deductibles or self-insured retentions must be declared to and approved by MNWD. Consultant shall guarantee that, at the option of MNWD, either: (i) the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects MNWD, its directors, officials, officers, employees, agents, and volunteers; and insurer shall provide or be endorsed to provide that the deductibles or SIR may be satisfied by either the named or additional insureds, co-insurers, and/or insureds other than the First Named Insured or (ii) the Consultant shall procure a bond guaranteeing payment of losses and related investigation costs, claims, and administrative and defense expenses.

Section 9.6. Acceptability of Insurers. Insurance is to be placed with insurers with a current A.M. Best's rating no less than A-:VII or equivalent, or as otherwise approved by MNWD.

Section 9.7. Verification of Coverage. Consultant shall furnish MNWD with certificates of insurance and endorsements effecting coverage required by this Agreement on forms satisfactory to MNWD. The certificates and endorsements for each insurance policy shall be signed by a person authorized by that insurer to bind coverage on its behalf, and shall be on forms provided by MNWD if requested. All certificates and endorsements must be received and approved by MNWD before work commences. MNWD reserves the right to require complete, certified copies of all required insurance policies, at any time. In the event that the Consultant employs other consultants (sub-consultants) as part of the services covered by this agreement, it shall be the Consultant's responsibility to require and confirm that each sub-consultant meets the minimum insurance requirements specified above.

Section 9.8. Reporting of Claims. Consultant shall report to MNWD, in addition to Consultant's insurer, any and all insurance claims submitted by Consultant in connection with the Services under this Agreement.

SECTION X – TERMINATION

Section 10.1. Grounds for Termination. MNWD may, by written notice to Consultant, terminate the whole or any part of this Agreement at any time and without cause by giving written notice to Consultant of such termination, and specifying the effective date thereof, at least seven (7) days before the effective date of such termination. Upon termination, Consultant shall be compensated only for those services which have been adequately rendered to MNWD, and Consultant shall be entitled to no further compensation. Consultant may not terminate this Agreement except for cause.

Section 10.2. Effect of Termination. If this Agreement is terminated as provided herein, MNWD may require Consultant to provide all finished or unfinished Documents and Data and other information of any kind prepared by Consultant in connection with the performance of Services under this Agreement. Consultant shall be required to provide such document and other information within fifteen (15) days of the request.

Section 10.3. Additional Services. In the event this Agreement is terminated in whole or in part as provided herein, MNWD may procure, upon such terms and in such manner as it may determine appropriate, services similar to those terminated.

SECTION XI – OWNERSHIP OF MATERIALS AND CONFIDENTIALITY

Section 11.1. Documents & Data; Licensing of Intellectual Property. This Agreement creates a non-exclusive and perpetual license for MNWD to copy, use, modify, reuse, or sublicense any and all copyrights, designs, and other intellectual property embodied in plans, specifications, studies, drawings, estimates, and other documents or works of authorship fixed in any tangible medium of expression, including but not limited to, physical drawings or data magnetically or otherwise recorded on computer diskettes, which are prepared or caused to be prepared by Consultant under this Agreement ("Documents & Data"). All Documents & Data shall be and remain the property of MNWD, and shall not be used in whole or in substantial part by Consultant on other projects without MNWD's express written permission. Within thirty (30) days following the completion, suspension, abandonment or termination of this Agreement, Consultant shall provide to MNWD reproducible copies of all Documents & Data, in a form and amount required by MNWD. MNWD reserves the right to select the method of document reproduction and to establish where the reproduction will be accomplished. The reproduction expense shall be borne

by MNWD at the actual cost of duplication. In the event of a dispute regarding the amount of compensation to which the Consultant is entitled under the termination provisions of this Agreement, Consultant shall provide all Documents & Data to MNWD upon payment of the undisputed amount. Consultant shall have no right to retain or fail to provide to MNWD any such documents pending resolution of the dispute. In addition, Consultant shall retain copies of all Documents & Data on file for a minimum of fifteen (15) years following completion of the Project, and shall make copies available to MNWD upon the payment of actual reasonable duplication costs. Before destroying the Documents & Data following this retention period, Consultant shall make a reasonable effort to notify MNWD and provide MNWD with the opportunity to obtain the documents.

Section 11.2. Subconsultants. Consultant shall require all subconsultants to agree in writing that MNWD is granted a non-exclusive and perpetual license for any Documents & Data the subconsultant prepares under this Agreement. Consultant represents and warrants that Consultant has the legal right to license any and all Documents & Data. Consultant makes no such representation and warranty in regard to Documents & Data which were prepared by design professionals other than Consultant or its subconsultants, or those provided to Consultant by MNWD.

Section 11.3. Right to Use. MNWD shall not be limited in any way in its use or reuse of the Documents and Data or any part of them at any time for purposes of this Project or another project, provided that any such use not within the purposes intended by this Agreement or on a project other than this Project without employing the services of Consultant shall be at MNWD's sole risk. If MNWD uses or reuses the Documents & Data on any project other than this Project, it shall remove the Consultant's seal from the Documents & Data and indemnify and hold harmless Consultant and its officers, directors, agents and employees from claims arising out of the negligent use or re-use of the Documents & Data on such other project. Consultant shall be responsible and liable for its Documents & Data, pursuant to the terms of this Agreement, only with respect to the condition of the Documents & Data at the time they are provided to MNWD upon completion, suspension, abandonment or termination. Consultant shall not be responsible or liable for any revisions to the Documents & Data made by any party other than Consultant, a party for whom the Consultant is legally responsible or liable, or anyone approved by the Consultant.

Section 11.4. Intellectual Property Indemnification. Consultant shall defend, indemnify and hold MNWD, its directors, officials, officers, employees, volunteers and agents free and harmless, pursuant to the indemnification provisions of this Agreement, for any alleged infringement of any patent, copyright, trade secret, trade name, trademark, or any other proprietary right of any person or entity in consequence of the use on the Project by MNWD of the Documents & Data, including any method, process, product, or concept specified or depicted.

Section 11.5. Confidentiality. All Documents & Data, either created by or provided to Consultant in connection with the performance of this Agreement, shall be held confidential by Consultant. All Documents & Data shall not, without the prior written consent of MNWD, be used or reproduced by Consultant for any purposes other than the performance of the Services. Consultant shall not disclose, cause or facilitate the disclosure of the Documents & Data to any person or entity not connected with the performance of the Services or the Project. Nothing furnished to Consultant that is otherwise known to Consultant or is generally known, or has become known, to the related industry shall be deemed confidential. Consultant shall not use MNWD's name or insignia, photographs of the Project, or any publicity pertaining to the Services or the Project in any magazine, trade paper, newspaper, television or radio production or other similar medium without the prior written consent of MNWD.

SECTION XII – ACCOUNTING, INSPECTION AND AUDIT

Section 12.1. Records. Consultant shall keep and shall preserve for four (4) years after final completion of the services, accurate and detailed records of all ledgers, books of account, invoices, vouchers, cancelled checks, and other documents or records evidencing or relating to the work, services and disbursements charged to MNWD under this Agreement (collectively, "Books and Records"). Any and all Books and Records must be maintained in accordance with generally accepted accounting principles and must be sufficiently complete and detailed so as to permit an accurate evaluation of the services provided by Consultant under this Agreement. During such four (4) year period, Consultant shall give MNWD and its agents, during normal business hours, access to such Books and Records. MNWD and its agents shall have the right to make copies of any of the said Books and Records.

Section 12.2. Custody. Where MNWD has reason to believe that any of the Books and Records required to be maintained by this Article may be lost or discarded due to dissolution or termination of Consultant's business, MNWD may, by written request, require that custody of such Books and Records be given to a person or entity mutually agreed upon and such Books and Records thereafter shall be maintained by such person or entity at Consultant's expense. Access to the Books and Records shall be granted to MNWD and its Representatives.

SECTION XIII – GENERAL PROVISIONS

Section 13.1. Delivery of Notices. All notices permitted or required under this Agreement shall be given to the respective parties at the following address, or at such other address as the respective parties may provide in writing for this purpose:

MNWD:	**CONSULTANT:**
Moulton Niguel Water District	Lee & Ro, Inc.
P.O. Box 30203	1199 S. Fullerton Road
Laguna Niguel, CA 92677	City of Industry, CA 91748
Attn: Director of Engineering	Attn: Rick Liskow

Such notice shall be deemed made when personally delivered or when mailed, forty-eight (48) hours after deposit in the U.S. Mail, first class postage prepaid and addressed to the party at its applicable address. Actual notice shall be deemed adequate notice on the date actual notice occurred, regardless of the method of service.

Section 13.2. Subcontracting/Subconsulting. Consultant shall not subcontract any portion of the work required by this Agreement, except as expressly stated herein, without prior written approval of MNWD. Subcontracts, if any, shall contain a provision making them subject to all provisions stipulated in this Agreement.

Section 13.3. Equal Opportunity Employment. Consultant represents that it is an equal opportunity employer and it shall not discriminate against any subconsultant, employee or applicant for employment because of race, religion, color, national origin, handicap, ancestry, sex or age. Such non-discrimination shall include, but not be limited to, all activities related to initial employment, upgrading, demotion, transfer, recruitment or recruitment advertising, layoff or termination. Consultant shall also comply with all relevant provisions of MNWD's Minority Business Enterprise program, Affirmative Action Plan or other related programs or guidelines currently in effect or hereinafter enacted.

Section 13.4. Time of Essence. Time is of the essence for each and every provision of this Agreement.

Section 13.5. MNWD's Right to Employ Other Consultants. MNWD reserves right to employ other consultants in connection with this Project.

Section 13.6. Successors and Assigns. This Agreement shall be binding on the successors and assigns of the parties.

Section 13.7. Assignment or Transfer. Consultant shall not assign, hypothecate or transfer, either directly or by operation of law, this Agreement or any interest herein without the prior written consent of MNWD. Any attempt to do so shall be null and void, and any assignees, hypothecates or transferees shall acquire no right or interest by reason of such attempted assignment, hypothecation or transfer.

Section 13.8. Construction; References; Captions. Since the Parties or their agents have participated fully in the preparation of this Agreement, the language of this Agreement shall be construed simply, according to its fair meaning, and not strictly for or against any Party. Any term referencing time, days or period for performance shall be deemed calendar days and not work days. All references to Consultant include all personnel, employees, agents, and subconsultants of Consultant, except as otherwise specified in this Agreement. All references to MNWD include its elected officials, officers, employees, agents, and volunteers except as otherwise specified in this Agreement. The captions of the various articles and paragraphs are for convenience and ease of reference only, and do not define, limit, augment, or describe the scope, content or intent of this Agreement.

Section 13.9. Amendment; Modification. No supplement, modification or amendment of this Agreement shall be binding unless executed in writing and signed by both Parties.

Section 13.10. Waiver. No waiver of any default shall constitute a waiver of any other default or breach, whether of the same or other covenant or condition. No waiver, benefit, privilege, or service voluntarily given or performed by a Party shall give the other Party any contractual rights by custom, estoppel or otherwise.

Section 13.11. No Third Party Beneficiaries. There are no intended third party beneficiaries of any right or obligation assumed by the Parties.

Section 13.12. Invalidity; Severability. If any portion of this Agreement is declared invalid, illegal, or otherwise unenforceable by a court of competent jurisdiction, the remaining provisions shall continue in full force and effect.

Section 13.13. Prohibited Interests. Consultant maintains and warrants that it has not employed nor retained any company or person, other than a bona fide employee working solely for Consultant, to solicit or secure this Agreement. Further, Consultant warrants that it has not paid nor has it agreed to pay any company or person, other than a bona fide employee working solely for Consultant, any fee, commission, percentage, brokerage fee, gift or other consideration contingent upon or resulting from the award or making of this Agreement. Consultant further agrees to file, or shall cause its employees or subconsultants to file, a Statement of Economic Interest with MNWD's Filing Officer as required under state law in the performance of the Services. For breach or violation of this warranty, MNWD shall have the right to rescind this Agreement without liability. For the term of this Agreement, no member, officer or employee of MNWD, during the term of his or her service with MNWD, shall have any direct interest in this Agreement, or obtain any present or anticipated material benefit arising therefrom.

Section 13.14. Cooperation; Further Acts. The Parties shall fully cooperate with one another, and shall take any additional acts or sign any additional documents as may be necessary, appropriate or convenient to attain the purposes of this Agreement.

Section 13.15. Governing Law. This Agreement shall be governed by the laws of the State of California. Venue shall be in Orange County.

Section 13.16. Government Code Claim Compliance. In addition to any and all contract requirements pertaining to notices of and requests for compensation or payment for extra work, disputed work, claims and/or changed conditions, Consultant must comply with the claim procedures set forth in Government Code sections 900 et seq. prior to filing any lawsuit against MNWD. Such Government Code claims and any subsequent lawsuit based upon the Government Code claims shall be limited to those matters that remain unresolved after all procedures pertaining to extra work, disputed work, claims, and/or changed conditions have been followed by Consultant. If no such Government Code claim is submitted, or if any prerequisite contractual requirements are not otherwise satisfied as specified herein, Consultant shall be barred from bringing and maintaining a valid lawsuit against MNWD.

Section 13.17. Attorneys' Fees. If either party commences an action against the other party, either legal, administrative or otherwise, arising out of or in connection with this Agreement, the prevailing party in such litigation shall be entitled to have and recover from the losing party reasonable attorneys' fees and all other costs of such action.

Section 13.18. Authority to Enter Agreement. Consultant has all requisite power and authority to conduct its business and to execute, deliver, and perform the Agreement. Each Party warrants that the individuals who have signed this Agreement have the legal power, right, and authority to make this Agreement and bind each respective Party.

Section 13.19. Counterparts. This Agreement may be signed in counterparts, each of which shall constitute an original.

Section 13.20. Entire Agreement. This Agreement contains the entire Agreement of the parties with respect to the subject matter hereof, and supersedes all prior negotiations, understandings or agreements. This Agreement may only be modified by a written amendment signed by both parties.

MOULTON NIGUEL WATER DISTRICT:	**LEE & RO, INC.:**
By: _____	By: _____ (Authorized Representative of Consultant)
Printed Name: _____	Printed Name: _____
Title: _____	Title: _____
Dated: _____	Dated: _____

Exhibit A
Scope of Services

Section A: SCOPE

1. Project Description

A Steel Reservoir Assessment Study was completed for the Moulton Niguel Water District (District) in June of 2015. The study determined that 18 of the 26 steel potable water reservoirs owned and operated by the District require one or more of the following improvements to comply with the current seismic codes and standards:

- Retrofit of the ring wall footing
- Installation of a flexible inlet/outlet coupling
- Installation of a flexible drain coupling.

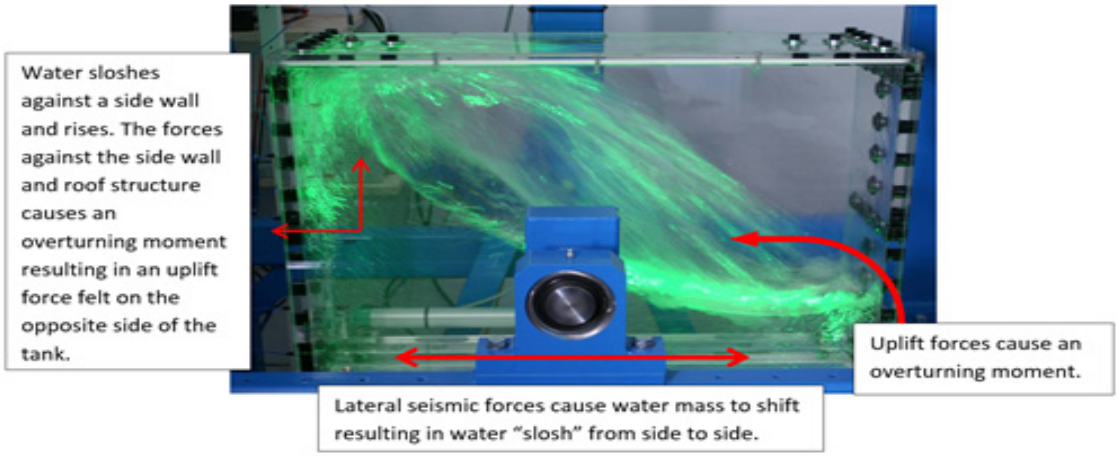
Based on the information supplied in the RFP, ***Table 1-1*** provides a summary of the improvements required at each reservoir.

Table 1-1: Potable Water Steel Reservoir Seismic Improvements Summary Table

NAME OF RESERVOIR	ADDRESS	ZONE	SIZE (MG)	RING WALL RETROFIT	INLET/OUTLET FLEX CPLNG	DRAIN FLEX CPLNG
ALISO HILLS	24773 MENDOCINO CT.	450	1.75	REQUIRED		REQUIRED
BEAR BRAND #1	24939 BEACON HILL LN.	650	2.5	REQUIRED	REQUIRED	
BEAR BRAND #2	24939 BEACON HILL LN.	650	2.5	REQUIRED	REQUIRED	
SADDLEBACK	27989 MARGUERITE	450	1.5	REQUIRED	REQUIRED	REQUIRED
SEVILLE #1	23391 VIA BAHIA	850	0.5		REQUIRED	REQUIRED
SEVILLE #2	23391 VIA BAHIA	850	0.5		REQUIRED	REQUIRED
MARGUERITE	26433 DELEMOS/26433 GANIA	650	2.5	REQUIRED		
PID #2	31250 PACIFIC ISLAND DR.	815	1	REQUIRED	REQUIRED	
RANCHO#1	29828 GOLDEN LANTERN	650	1.5	REQUIRED	REQUIRED	REQUIRED
RANCHO#2	29828 GOLDEN LANTERN	650	1.5	REQUIRED	REQUIRED	REQUIRED
CROWN VALLEY #3	25545 RANCHO NIGUEL RD.	450	4.3			REQUIRED
ELDORADO	26475 LOPE DE VEGA DR.	650	2.25			REQUIRED
WOOD CANYON	22443 PACIFIC PARK DR.	650	1			REQUIRED
LA PAZ #1	26852 PRECIADOS	650	1		REQUIRED	
LA PAZ #2	26852 PRECIADOS	650	1		REQUIRED	
MATHIS #2	25655 NELLIE GAIL	650	1.75		REQUIRED	
NELLIE GAIL	25655 NELLIE GAIL	650	4		REQUIRED	REQUIRED
PID #1	31540 PACIFIC ISLAND DR.	650	0.5		REQUIRED	

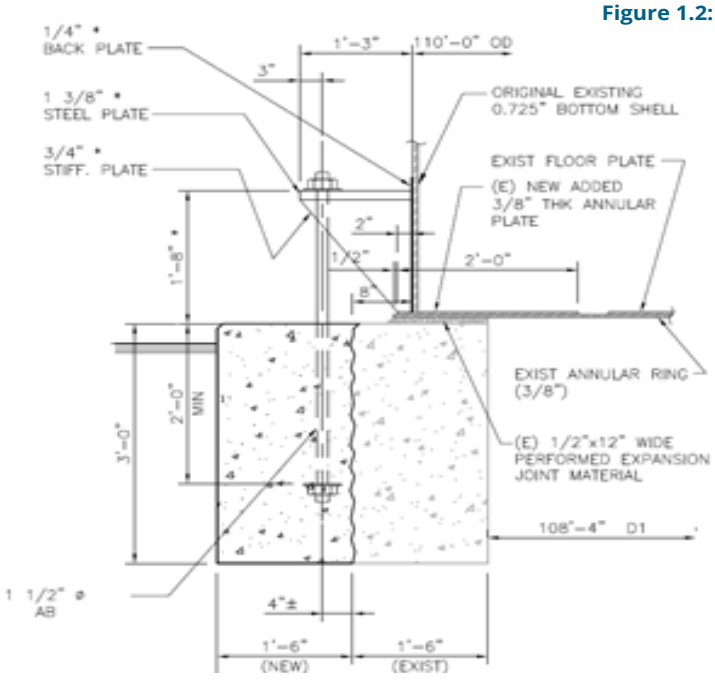
LEE & RO team members have performed seismic retrofits to several reservoirs and bring a wealth of knowledge and experience to this project. A major consideration during design will be to come up with a design that achieves the project goals without taking the reservoirs offline during the work. In case, any given reservoir must be taken offline, the construction will be phased in a manner to minimize that impact and use the rest of the system to maintain the maximum demand flow requirements. The RFP provides a proposed phasing of the construction work that will be revisited during design by LEE & RO. It will be studied and modified, as needed. As required by the RFP, LEE & RO will conduct a workshop with the District to review the phasing plan and modify it to incorporate the District's comments.
The retrofit work can broadly be summarized as follows:

Figure 1.1: Water Sloshing Due to Seismic Forces



1. ***Retrofit of Ring Wall Footing:*** LEE & RO will perform calculations to check the adequacy of the ring wall footings to confirm the requirements for retrofits at the locations shown in ***Table 1-1***. These locations are based on the study report done by MNWD . LEE & RO has also teamed up with Converse Consultants, a geotechnical engineering firm, to update the seismic parameters for the project. The original report was prepared in 2015, and seismic parameters may have been updated in subsequent code updates. During a seismic event, the forces imparted on the tank include lateral (horizontal) force and the overturning moment (uplifting) are caused by sloshing. Sloshing occurs when the lateral forces generated by a seismic event cause the water mass to shift from side to side. As sloshing occurs, the overturning moment is imparted on the tank, and the uplift force is experienced. The Sloshing Lab of the University of Rostock in Hannover performed investigations of liquid sloshing in tanks with a free liquid surface. The results of the investigation are shown in ***Figure 1.1***.

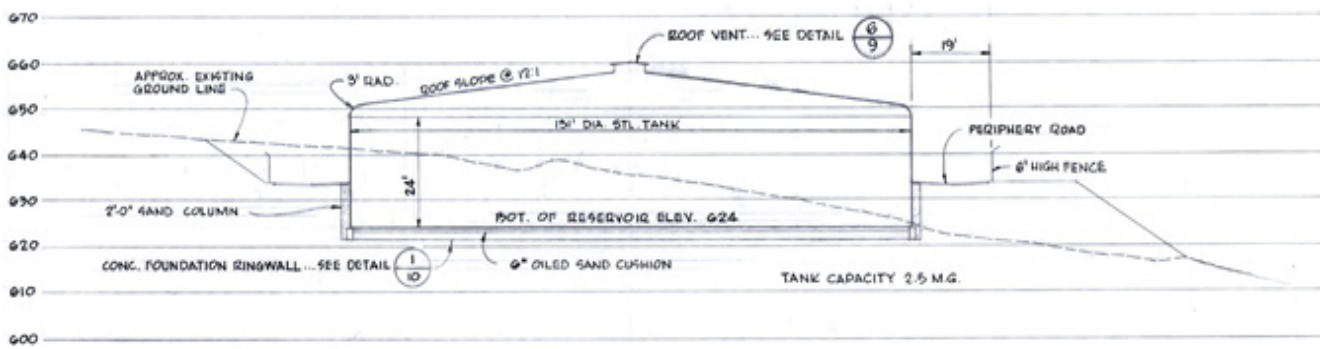
Figure 1.2: Typical Ring Wall Footing Extension Detail



Uplifting forces are, in certain cases, resisted by the weight of the tank and water alone. However, in order to comply with the current design standards, set forth in AWWA D100-11, some reservoirs may need to be retrofitted with seismic anchors. Also, structural engineers have noted that empty or significantly empty reservoirs subjected to lateral loads may overturn when compared to tanks filled with liquid. We will verify that no such overturning occurs when the reservoirs are empty. Where required, the concrete ring wall footing extension with welded seismic chairs attached to seismic anchors will be recommended. A typical ring wall footing extension detail with seismic chairs and anchors that LEE & RO had designed for another project is shown in ***Figure 1.2***. If our calculations confirm that only extension of the concrete footing will suffice, then only the ring wall footing will be extended. The Sloshing analysis and seismic anchor designs are optional tools and will only be performed if authorized by the District.

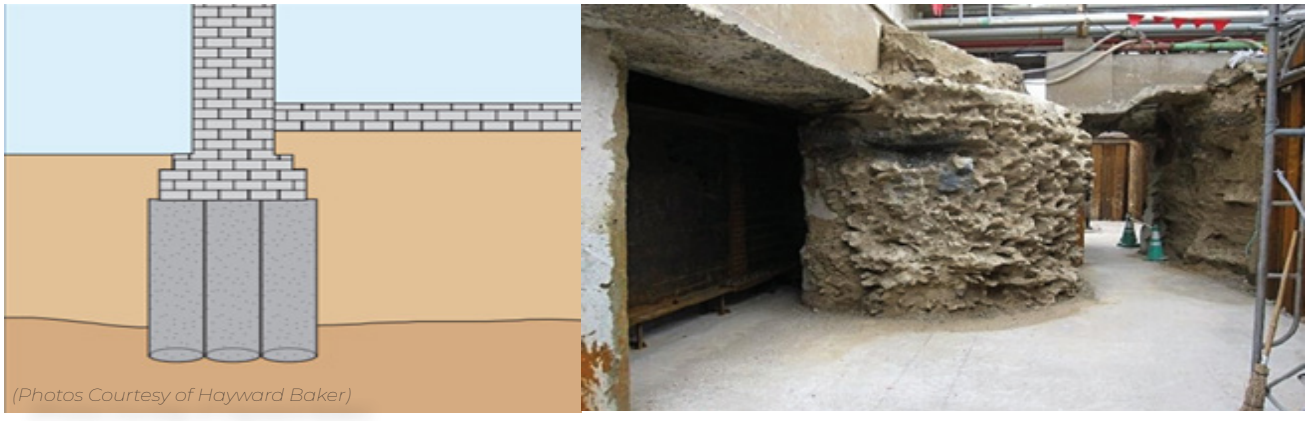
If the ring wall footing retrofits only require concrete extensions and no seismic anchors to meet seismic stability, then LEE & RO proposes to investigate using ground improvement techniques to improve the bearing capacity of the subgrade in lieu of extending the concrete ring wall. The reservoir can remain in service while the soil improvements are implemented. If seismic chairs need to be welded, they can be welded one at a time with the reservoir in service. LEE & RO has worked on similar projects with local water districts where the seismic chairs were welded to the existing reservoir while it remained in service. The water level in the reservoir needs to be maintained sufficiently to allow for the cooling of the inside of the reservoir steel wall when the chairs are being welded. This usually protects the interior coating from degradation. However, after all the welding is done, the interior needs to be inspected to ensure that there were no damages to the interior coating.

Figure 1.3: Sectional View of Saddleback Reservoir on Margureite



For partially buried reservoirs like the Saddleback reservoir on Margurite as shown in ***Figure 1.3,*** using soil improvement techniques may eliminate the need for the excavations and temporary shoring structures required in order to extend the concrete ring wall footing. Example of soil improvement technique (jet grouting or similar) is shown in ***Figure 1.4.*** Please note that this is an optional work item and will only be performed if authorized by the District.

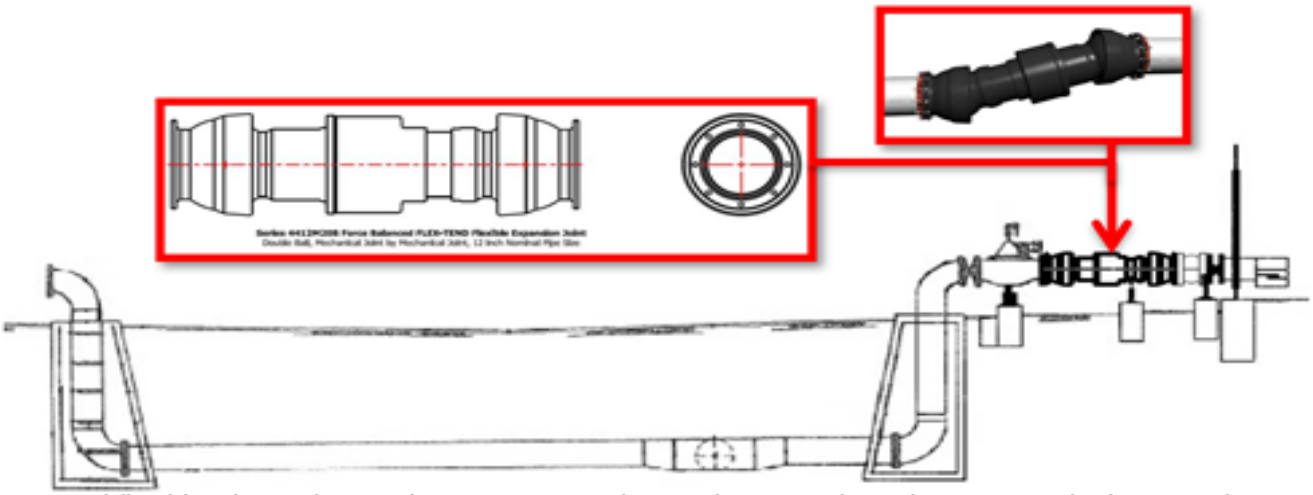
FIGURE 1.4: JET GROUTING UNDER EXISTING FOOTING



An important consideration here is to be cognizant that this project is being funded by FEMA as part of a grant-funded by the HMGP. The Project Manager with LEE & RO designated to work on this project has extensive experience with working with FEMA and on HMGP Grant projects. Due to federal funding laws, FEMA implements grant funding rules and enforces them very strictly. Hence, any deviation from the grant application will need to be approved by FEMA to ensure that grant funding eligibility is not jeopardized. If the optional work is authorized, LEE & RO will prepare a Technical Memorandum (TM) outlining the work so that the District can present it to FEMA for their approval. Based on the information provided in the RFP, LEE & RO. believes that the reservoirs can be kept in service while the ring beam additions are installed. This will be investigated in detail during the design phase.

2. ***Installation of Flexible Inlet/Outlet Coupling:*** LEE & RO will study the as-built information and make site visits to verify the existing conditions at each of the eighteen reservoirs. Based on the information collected, the requirement to install flexible inlet/outlet coupling at the locations tabulated in ***Table 1-1*** will be verified.

Figure 1.5: Typical Flexible Inlet/Outlet Coupling Detail



A typical flexible inlet/outlet coupling (EBAA Iron's Flex Tend or equivalent) that LEE & RO had previously designed for another project is shown in ***Figure 1.5.*** The force-balanced model counteracts the thrust force caused by internal water pressure via an internal restraint mechanism and provides ample axial and lateral deflection to resist the forces encountered during seismic events. There are several types of flexible couplings for pipes available. A comparison of the various flexible pipe couplings is shown in ***Table 1-2.*** LEE & RO will do a more detailed analysis of each site during the preliminary design phase to determine the which type of coupling is best suited for a given site.

TABLE 1-2: COMPARISON OF FLEXIBLE PIPE COUPLINGS

	Double-ball joint with telescoping pipe	Force-balanced double-ball joint with force-balanced telescoping pipe	Double flexible couplings with harness restraint
Advantages	**95% market share between two manufacturers – ensures competitive bids and quality**	**Overcomes self-defeating harnesses and/or no need for thrust blocks**	**Less expensive than double ball joints; commonly available from multiple manufacturers**
Disadvantages	**Harness and/or thrust blocks required**	EBAA Iron Inc. or Romac Industries Inc. only	No flexibility for longitudinal displacement; allows transverse motion only
Cost	Mid-range 18-inch $15,000 20-inch $18,000 24-inch $25,000 36-inch $131,000	More expensive than standard double-ball expansion joint. 18-inch $20,000 20-inch $24,000 24-inch $33,000 36-inch $174,300	Less expensive

Typically, the challenge for this kind of installation is figuring out the location and orientation of the flexible coupling due to site constraints. LEE & RO has designed several of these improvements and have experience in designing them in challenging situations. The recommended configurations at each site will be provided in the PDR. LEE & RO will investigate the ways to install these expansion joints by taking the reservoirs offline to perform the installation work.

3. ***Installation of Flexible Drain Coupling:*** Flexible expansion joints will be required at locations when the reservoir drain line is rigidly connected to the reservoir bottom. By providing the flexible expansion joints like EBAA Iron's Flex Tend or equivalent, independent movement between the drainpipe and the reservoir connection point will be allowed during seismic events.

FIGURE 1.6: TYPICAL FLEXIBLE COUPLING DETAIL FOR DRAIN LINE

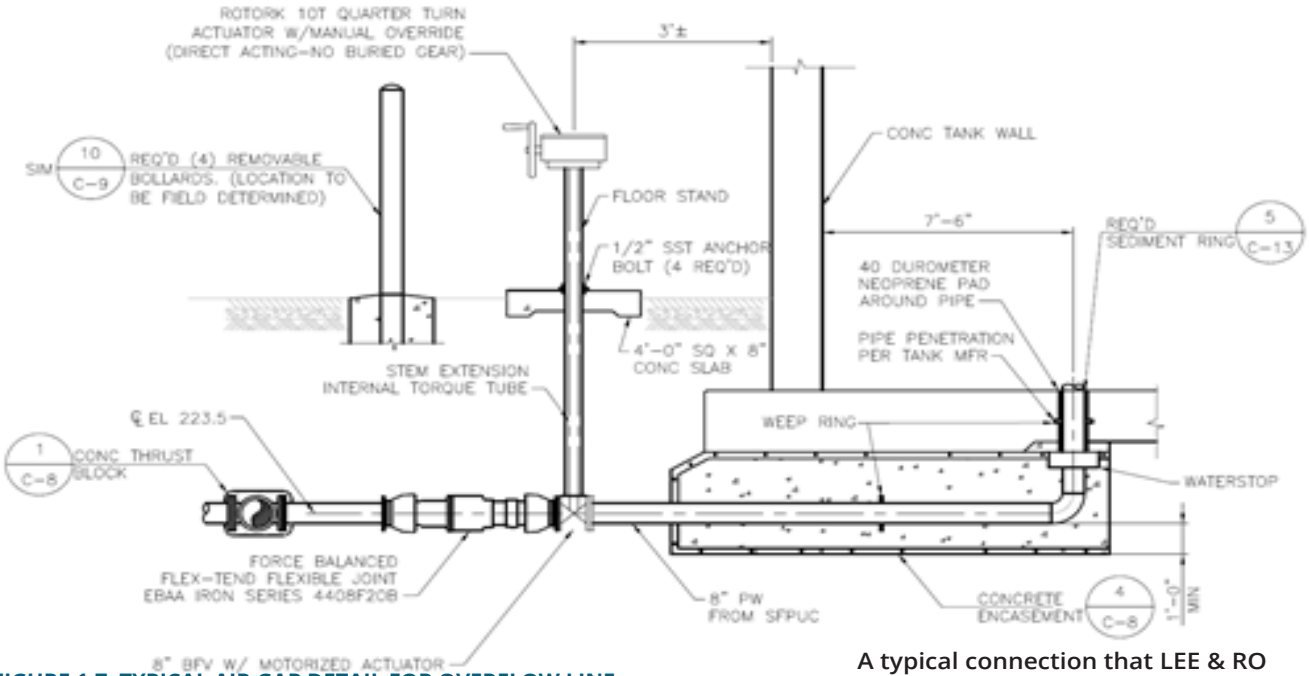
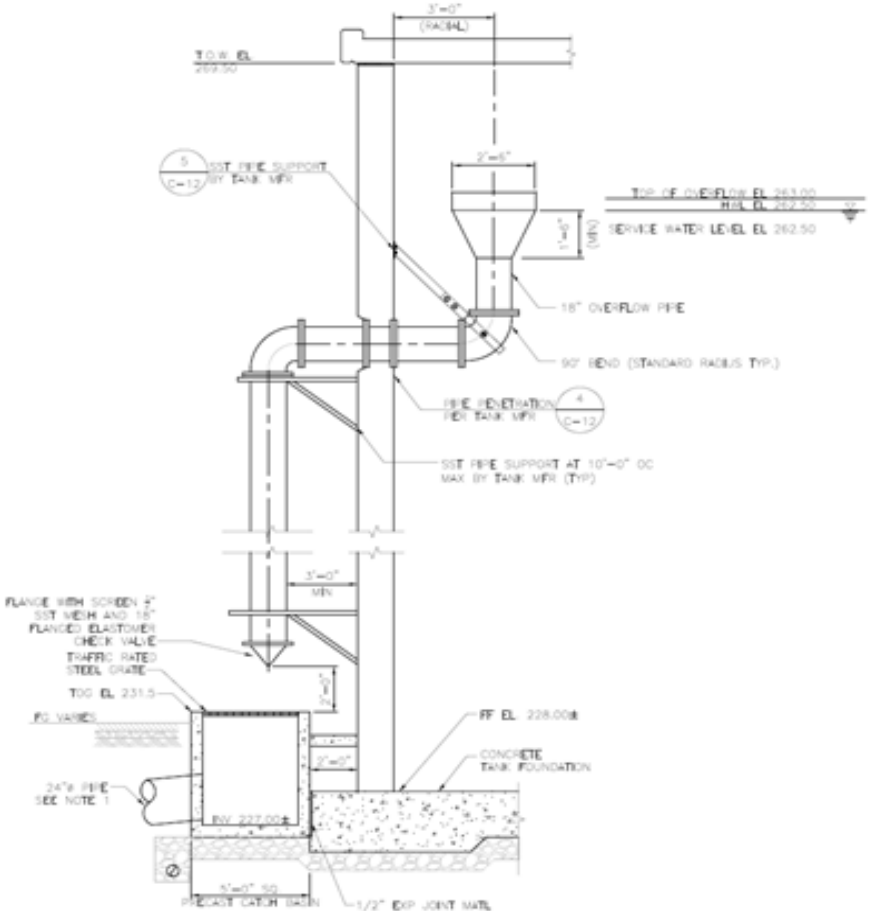


FIGURE 1.7: TYPICAL AIR GAP DETAIL FOR OVERFLOW LINE



A typical connection that LEE & RO has designed for a previous project is shown in ***Figure 1.6***. As required by the RFP, LEE & RO will investigate the feasibility of using flexible expansion joints on the drain line and flush-type clean-out door on the with a drain valve assembly for draining the tank. The feasibility and the constructibility at each site will be investigated, and the most economical and maintenance-friendly option will be recommended. For example, a flush-type clean-out door may not be a feasible option for partially buried tanks as creating permanent access to the clean-out door with the valve assembly may be cost-prohibitive or the existing site conditions may not allow it. In some cases, the drainpipe and the overflow pipe share the same outflow pipe. In this case, after the flexible coupling is installed, an air gap needs to be installed on the outflow pipe to meet current State mandated requirements. The installation of an air gap on the overflow line designed by LEE & RO for another project is shown in ***Figure 1.7.*** Depending on the location of the inlet/outlet valves,. LEE & RO. will strive to design the installation so that the reservoirs can only be taken offline during instillation and returned to service immediately after instillation and testing.

2. SCOPE

LEE & RO has studied the scope of work provided in the RFP and will follow the scope during design. The work scope from the RFP is reproduced below for the sake of completeness. Any work scope not covered in the RFP is highlighted to allow for expedited review of this proposal by District staff.

Work includes preliminary and final design; preparation of construction documents and construction cost estimates; grant requirements research and implementation into construction documents; bid phase support; and construction phase services. Proposals for the project should include and show all labor hours and labor costs by position, and all other direct costs for the required work. Consultants are encouraged to modify and/ or expand on the scope of work to demonstrate their understanding of the project and describe their project approach in detail. Work shall consist of, but shall not be limited to, the following tasks:

2.1 PROJECT ADMINISTRATION/MANAGEMENT

LEE & RO will include in the scope of work sufficient time and budget to administer the services provided. Administration will include, project kick-off meeting and site visits, project design review meetings after each submittal including a 75% submittal site visit for each reservoir to review plans (as identified in Tasks 2.7 and 2.8 below), a reservoir construction sequencing workshop with District staff, and preparation of meeting agendas and minutes for each meeting. LEE & RO Project administration will also include preparation and maintenance of the project schedule.

Deliverables: Agendas and minutes for six (6) meetings; biweekly schedule updates

2.2 RECORDS SEARCH AND RECORDS REVIEW

The Steel Reservoir Assessment study was provided by the District for reference. It is LEE & RO's understanding that the geotechnical report contained within the Steel Reservoir Assessment study is currently being updated to current structural and geotechnical codes, and that the updated report will be provided to LEE & RO prior to the project kick-off meeting. Additionally, the FEMA grant application has been provided for reference.

The District has made the following information available to LEE & RO:

A. As-Built for all 18 potable water steel reservoirs
B. Available tank structural shop drawings
C. Potable/Wastewater/Recycled Water Sectional Drawings for all reservoir sites
D. Steel Reservoir Assessment study
E. FEMA Grant Application
F. Reservoir Management Systems (RMS) Plans for Phase 1 and 2
G. Cell Carrier drawings for each site with ring wall work.

This task covers detailed review of these records. After award, LEE & RO may request additional information be provided by the District.

"Records Search" will include:

A. Monument ties and benchmark data
B. Environmental constraints
C. See Task 2.3 below regarding utility research

Deliverables: Electronic copies of all relevant information obtained from Records Search.

2.3 UTILITY RESEARCH

LEE & RO will implement a systematic approach to accurately identify and locate existing utilities in construction area. Said approach will include:

A. Submit letters to all utilities identified on USA's database

B. Coordinate with District's cell carrier representatives as it relates to the possible relocation of their facilities prior to construction. This will include the creation of maps identifying pothole locations for the cell site carriers to pothole.

C. Organize a USA meet and mark

D. Pre-mark all visible facilities during site walk-through

E. Ensure that the utilities shown on available record drawings are accurate; update as required

F. Submit preliminary construction drawings to any other affected utility owners (if any) requesting their review to ensure their facilities are correctly shown

Deliverables: Copies of any correspondence with other utility owners; drawings to indicate any recommended potholing

2.4 SURVEYING

LEE & RO will determine if a site survey is necessary to supplement the record drawings and prepare the construction plans. If determined necessary, LEE & RO will include the survey scope of work and associated fee in the proposal.

Deliverables: None

2.5 POTHOLING

Following the completion of Tasks 2.3 and 2.4 (if required) above, LEE & RO will prepare a potholing plan for locating underground utilities that may conflict with the proposed work. The plan will include a list and red-lined drawings of recommended utilities to be potholed. LEE & RO will submit this list to the District for approval prior to commencing. Potholing will be performed to verify the exact horizontal and vertical locations of all potential utility conflicts. Potholing depth will be sufficient to determine the top and bottom of the potential utility conflicts. LEE & RO will submit a pothole report to the District to document findings.

For this proposal, LEE & RO will assume that approximately twenty (20) potholes will be required.

Deliverables: List and drawings of proposed pothole locations; pothole report

2.6 GRANT REQUIREMENTS RESEARCH AND IMPLEMENTATION

Should the grant application be accepted and funding appropriated for this project, LEE & RO will prepare the construction documents to comply with all procurement requirements of the grant. Additionally, LEE & RO will prepare a list of qualified construction contractors for this project to comply with the procurement requirements.

Deliverables: Document outlining all applicable procurement requirements; list of qualified construction contractors.

2.7 PRELIMINARY DESIGN

LEE & RO's Preliminary Design will include the following items at a minimum:

- Design criteria for ring wall footings and typical details
- Recommended ring wall extension installation method(s) to maintain tank operation during installation
- Update site specific seismic parameters based on the latest code requirements
- Review and/or perform calculations for seismic stability of the reservoirs including possibility of overturning due to sloshing or effect of lateral loads on an empty reservoir
- If authorized by the District, then LEE & RO will perform analyses to see if soil improvement is a viable alternative in lieu of concrete ring wall extension. A Technical Memorandum (TM) will also be prepared if this optional work is authorized by the District. The TM will be utilized to inform CalOES of the change and to reassure that the original intent and objectives of the project to make seismic improvements are being met. In addition to the TM, the alternate design will be incorporated in the contract documents so that it can bid and constructed. Please note that this is an optional work item and is categorized as such in the man hours and fees schedules.

- Identification of facilities/appurtenances that will need relocation or protected-in-place due to the installation of the ring wall extension including but not limited to: inlet/outlet piping, overflow piping, RMS piping, radio conduits, and cell carrier conduits.
- Construction sequencing/phasing plan
- Constructibility review/discussion on the installation of ring wall extensions at partially buried reservoirs. Recommending alternate solutions to achieve the required bearing area without extensive trenching is encouraged.
- Typical details and spatial feasibility analysis for inlet/outlet flex-couplings
- Recommendation for either the installation of the flex-couplings for the drain or installation of a flush-type-cleanout door with drain, including typical details.
- Preliminary site plans
- Preliminary cost estimate
- Draft Preliminary Design Technical Memorandum (PDTM) – Draft PDTM that documents the above items.
- Final PDTM – Incorporate District comments from review of Draft PDTM or provide explanation of comment dismissal.

Deliverables:

- Five (5) hard copies and a searchable PDF copy of Draft PDTM for District review
- Five (5) signed hard copies and a searchable PDF copy of Final PDTM
-

2.8 PREPARATION OF CONTRACT DOCUMENTS

LEE & RO will prepare a complete set of Contract Documents (Construction Drawings and Specifications) for construction of the proposed facilities. LEE & RO will prepare the Contract Documents using the District's standard format, standard forms, standard agreement, standard bonds, complete General Provisions, pertinent Special Provisions, pertinent Technical Specifications, and pertinent Standard Drawings

The design will address the recommendations of the Steel Reservoir Assessment report related to seismic retrofits. LEE & RO will make three (3) submittals described as follows.

75% Submittal

Plans for this submittal will include detailed components of the design, including plans, sections, and details. All sections of the Contract Documents and Specifications will be included along with a preliminary engineer's estimate of probable construction cost (Task 2.9).

Additionally, LEE & RO's Project Manager will schedule a site visit with District staff to review the design plans for site and constructibility constraints at each reservoir location.

100% Submittal

This submittal will include the complete Construction Plans, Construction Documents and Specifications, and a final engineer's estimate of probable construction cost (Task 2.9).

The 100% submittal will incorporate all District comments from the 75% Review (or an explanation of why the comment was dismissed).

Final Contract Documents

After the District completes their review of the 100% submittal, LEE & RO will prepare Final Contract Documents. The Final Contract Documents will incorporate all District Comments from the 100% Review (or an explanation of why the comment was dismissed). The Final Contract Documents will be stamped and signed construction plans and unbound specifications for District's signatures.

After obtaining District signatures, LEE & RO will provide the District with fifteen (15) sets of bound full- size construction plans and fifteen (15) sets of bound construction specifications with 11"x17" reduced construction drawings enclosed as an exhibit.

Deliverables:

- 75% Submittal – Five (5) full size sets of construction plans and Five (5) sets of bound construction specifications with 11"x17" reduced construction drawings enclosed as an exhibit. A fully searchable PDF copy will also be submitted. The preliminary construction cost estimate will be provided with this submittal.
- 100% Submittal – Five (5) full size sets of construction plans and Five (5) sets of bound construction specifications with 11"x17" reduced construction drawings enclosed as an exhibit. A fully searchable PDF copy will also be submitted. The final construction cost estimate will be provided with this submittal.
- Final Contract Documents – One (1) full size set of stamped and signed reproducible construction plans and unbound specifications for District signature. Thereafter, fifteen (15) sets of bound full- size construction plans and fifteen (15) sets of bound construction specifications with 11"x17" reduced construction drawings enclosed as an exhibit. For the final submittal, specifications will be provided with colored pages as follows: Bid Forms – White, General Provisions – Blue, Special Provisions – Pink, and Technical Specifications – Green. A fully searchable PDF copy will also be submitted. In addition, LEE & RO will provide electronic Auto Cad files(including all reference files; NAD-83, State Plane Zone 6, NAVD-88 of all sheets).

Note: "Full size" Drawings/Plans will be 22" x 34" such that 11" x 17" prints are true half size. Also, construction drawings will be tied to the State Plane Coordinate System.

2.9 CONSTRUCTION COST ESTIMATE

LEE & RO will provide to the District an estimate of the probable construction cost for the complete project. Two formats of the estimate will be provided: (1) full detailed cost breakdown and (2) in the format of bid items prepared for the Construction Specifications. Construction cost estimates will be provided with 75% and 100% Submittals (i.e. preliminary construction cost estimate and final construction cost estimate). The final construction cost estimate will be prepared in sufficient detail that a contingency is not required.

Deliverables: Preliminary and Final Construction Cost Estimates

2.10 BID PHASE SUPPORT

During the bidding period, LEE & RO will assist with providing information and clarification of the Contract Documents to prospective bidders as requested. LEE & RO will assume two (2) addenda will be required during the bid process and shall incorporate this scope and fee into the proposal. LEE & RO will also conduct an onsite pre-bid meeting.

Deliverables: Two (2) Addenda if required; pre-bid meeting agenda and minutes

2.11 CONSTRUCTION PHASE SERVICES

During the construction of the proposed improvements, LEE & RO will provide the following construction phase services and include appropriate fees in the submitted Proposal:

A. Pre-Construction Meeting: Conduct pre-construction meeting with the District and Contractor prior to beginning construction and prepare agenda and minutes.

B. Contractor's RFI: Respond to approximately twenty (20) Requests for Information from the Contractor and the District.

C. Shop Drawing Reviews: Review and acceptance of at least thirty (30) shop drawing submittals and fifteen (15) resubmittals.

D. Site Visits: Four (4) visits of two hours as requested by District staff.

E. Record Drawings: At the conclusion of the construction, once the District provides LEE & RO with a single, consolidated set of red-lined as–built drawings, LEE & RO will prepare the final record drawings based on the same. Record drawings will be prepared in AutoCad.

Deliverables:

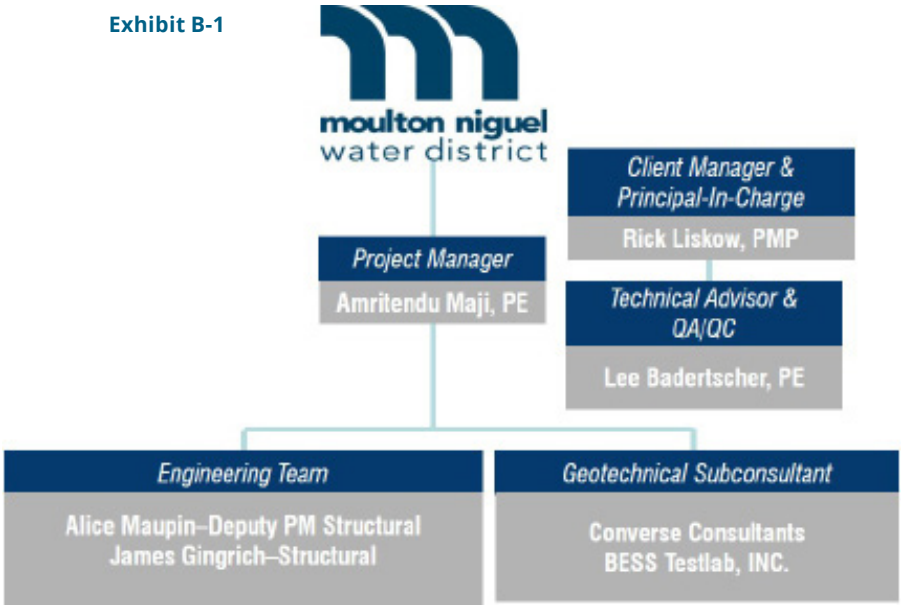
- Pre-Construction meeting agenda and minutes
- RFI responses and Submittal Review Comments.
- Three (3) full size sets of draft record drawings. Upon the District's review and approval, one (1) full size set of mylars with original signatures and one (1) full size set bond copy. In addition, LEE & RO will provide electronic files in both AutoCad (including all reference files; NAD-83, State Plane Zone 6, NAVD-88 of all sheets) and PDF.

Note: "Full size" Drawings/Plans will be 22"x34" such that 11"x17" prints are true half size.

Section B: TEAM

In this section we introduce the LEE & RO team and describe team member qualifications, roles and responsibilities for this project. LEE & RO is proposing a highly experienced project team that has worked together on many reservoir projects in recent years and has demonstrated its expertise, resourcefulness and responsiveness in addressing project challenges. The valuable lessons learned from previous projects will be employed in the execution of this project helping to keep this project on schedule and within budget. The proposed project team organization is shown in **Exhibit B-1,** which identifies the roles and responsibilities of key team members. A brief synopsis of key team members experience follows. Detailed resumes for these individuals are included in **Appendix A.**

Exhibit B-1



Amritendu Maji is a Civil Engineer and Project Manager with over 24 years of progressive experience in the planning, design, construction, and administration of public works projects. He has been responsible for preparing plans and specifications, construction cost estimates, bid documents, and permit applications for reservoirs, pump stations, site development, roadways, water & wastewater conveyance and distribution facilities including pipelines, and stormwater and flood control facilities. He has worked on numerous FEMA projects during Hurricane Katrina recovery work, and is familiar with FEMA's requirements and HMGP protocols. He also has considerable experience in hydraulics and hydraulic modeling, as well as preparation of feasibility studies and technical reports. He has provided constructibility review and QA/QC of technical reports, plans & specifications, construction cost estimates, and other bid documents. He has provided construction administration and support services including construction site visits, conducting progress meetings, review of shop drawings, responding to RFIs, analysis & preparation of change orders, start-up & commissioning and review & approval of contractors' pay requests and project closeout. He also has considerable experience in the preparation of permits including the Federal Section 404 (Clean Water Act) for work in wetlands, Section 408 (Rivers and Harbors Act) for federally constructed structures like levees and floodwalls, and permits from the State Transportation and Development offices for work in and around State and Federal Highways etc.

ALICE MAUPIN, PE, SE
DEPUTY PM & STRUCTURAL ENGINEER

Alice Maupin is a California registered civil engineer with more than 20 years of seismic structural analysis, field investigation, design, constructibility assessment, and project management experience. In her work with Metropolitan Water District of Southern California (MWD) and CalPortland Cement Company (CPC), she has produced numerous foundation designs with seismic anchorage for large diameter water tanks and concrete cement silos. Part of her graduate work at USC dealt with seismic sloshing effects on tank foundations.

JAMES GINGRICH, SE
STRUCTURAL ENGINEER

James Gingrich is a California registered structural engineer with more than 30 years of structural analysis, engineering, design, constructibility analysis, value engineering, project coordination and construction management experience. He has been the structural project manager, QA/QC reviewer, and lead structural engineer for planning, investigation and condition assessment, preparation of preliminary & final design, seismic analysis and upgrading, and construction phase engineering services for a wide variety of concrete and steel structures for water conveyance and pumping facilities, water storage, treatment and distribution facility projects for Metropolitan Water District (MWD) of Southern California. His experience and expertise include rehabilitation & retrofit engineering & designs for existing facilities. Jim recently provided the structural engineering and design for the District's 2016-17 and 2017-18 Reservoir Management Systems Replacement projects.

RICK LISKOW, PMP
CLIENT MANAGER & PRINCIPAL-IN-CHARGE

Rick has over 25 years of combined experience in the engineering and design of water and wastewater infrastructure projects. Rick has served as a project manager and project engineer on numerous water, wastewater and recycled water projects, including emergency power generation systems and electrical system evaluation and design projects. He is currently the project manager working on the design of the South wing and Aliso Creek lift station emergency generator replacement project. Rick is currently actively involved in Moulton Niguel Water District's On-Call Engineering Services Contract serving as the client manager and also serving as project manager on several task orders issued by the District, including the Del Avion Lift Station Auxiliary Generator Replacement project. Serving in the capacity of Principal-in-Charge and Client Manager, Rick will be directly responsible to the District ensuring that the District obtains responsive and quality services from the LEE & RO team.

LEE BADERTSCHER, PE
TECHNICAL ADVISOR & QA/QC

Lee Badertscher brings over 30 years of experience in planning, design, and construction of water and wastewater conveyance, pumping and treatment facilities and other public works projects. Lee is a California registered professional engineer in three separate engineering disciplines: "Civil," "Electrical," and "Control Systems." Lee is a project manager, civil & mechanical engineer, and electrical and I&C engineer, construction manager and QA/QC engineer. He has hands-on construction and start-up & commissioning experience with complex projects involving pumps, compressors, generators and associated mechanical piping systems. Typical assignments as electrical engineer included analysis, design, and construction management of low and medium voltage power distribution, lighting, emergency power systems, motor control centers, intrusion and fire alarm systems. As an I&C engineer.

Converse Consultants
Geotechnical Engineering & Consulting
Environmental & Groundwater Science
Materials Testing & Inspection Services

CONVERSE CONSULTANTS,
GEOTECHNICAL

Converse Consultants has several decades of experience providing geotechnical services during the design and construction of water treatment facilities, conveyance, storage and distribution, including Metropolitan's Perris Valley Pipeline (2005) and North and South Reaches (2007).

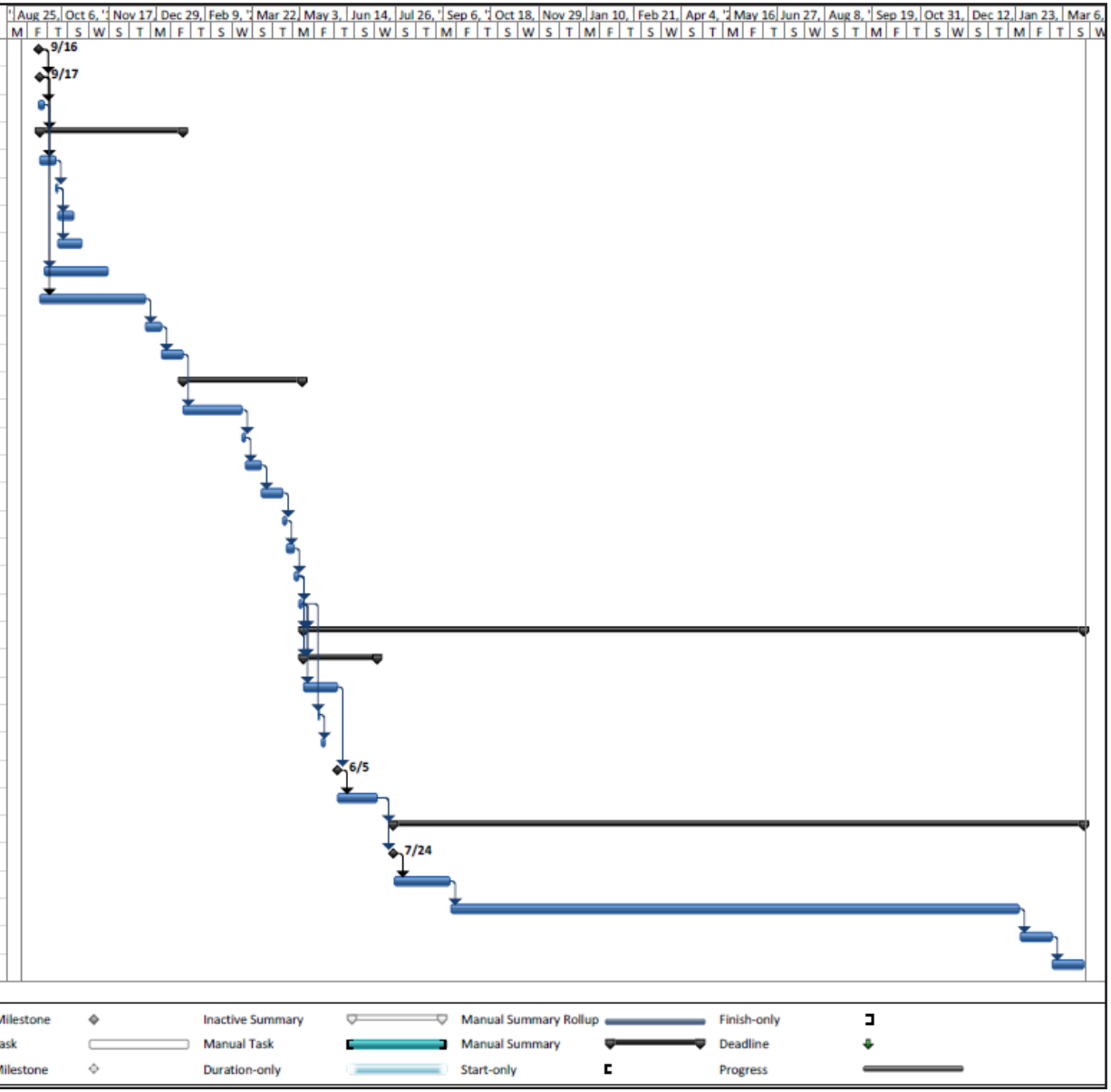
BESS
TESTLAB, INC.

BESS TESTLAB, INC. (BTL)
POTHOLING

BTL provides a full range of Subsurface Utility Engineering (SUE) including underground utility locating services to mitigate buried utility related risks associated with the design and construction of infrastructure projects. Specifically, BTL provides utility locating, concrete scanning, electromagnetic pipe locating, CCTV pipe inspection, ground penetrating radar (GPR), vacuum excavation and utility mapping services.

Section D: SCHEDULE

k Name	Duration	Start
ice to Proceed	0 days	9/16/2019
k Off Meeting	0 days	9/17/2019
rk Plan, Schedule and QA/QC Plan	5 days	9/16/2019
ase I Preliminary Design	**126 days**	**9/17/2019**
Field Data Review	14 days	9/17/2019
Verify Existing Utilities	2 days	10/1/2019
Utility Potholing	14 days	10/3/2019
Surveying and Field Measurements	21 days	10/3/2019
Geotechnical Study (Optional Work)	56 days	9/21/2019
Prepare and Submit Draft PDTM	93 days	9/17/2019
District Review of Draft PDTM	14 days	12/19/2019
Revise and Resubmit Final PDTM	19 days	1/2/2020
ase II Final Design	**105 days**	**1/21/2020**
75% Design Submittal	52 days	1/21/2020
QA/QC and Revisions to 75% Design Submittal	3 days	3/13/2020
District Review of 75% Design Submittal	14 days	3/16/2020
100% Design Submittal	19 days	3/30/2020
QA/QC and Revisions to 100% Submittal	3 days	4/18/2020
District Review of 100% Submittal	7 days	4/21/2020
Final Contract Documents Submittal	4 days	4/28/2020
QA/QC and Revisions to Final Submittal	3 days	5/2/2020
ase III Bid and Construction Services	**687 days**	**5/6/2020**
Bid Phase Services	**65 days**	**5/6/2020**
Advertise for Bid and Bid Support Activities	30 days	5/6/2020
Pre Bid Meeting	1 day	5/19/2020
Prepare Addendum	3 days	5/22/2020
Bid opening	0 days	6/5/2020
Selection of Contractor, Construction Contracts Preparation and Award	35 days	6/5/2020
Construction Support	**608 days**	**7/24/2020**
Pre-Con Meeting	0 days	7/24/2020
Mobilization, Submittals Review and Setup Work	49 days	7/25/2020
Construction	500 days	9/13/2020
Punchlist	28 days	1/27/2022
As Built Drawings and Project Closeout	28 days	2/24/2022



Unless explicitly excluded in the consultant scope, the following shall be included as a part of this contract

moulton niguel water district

REQUEST FOR PROPOSAL

TO PROVIDE

ENGINEERING CONSULTING SERVICES

FOR

POTABLE WATER STEEL RESERVOIR SEISMIC RETROFITS (Project No. 2019.030)

Proposals Due

August 20, 2019 at 5:00 p.m.

Issued By:

Moulton Niguel Water District

Issue Date
July 22, 2019

VIA EMAIL

Regarding: Moulton Niguel Water District
Request for Proposal for Engineering Consulting Services
Potable Water Steel Reservoir Seismic Retrofits
Project No. 2019.030

The Moulton Niguel Water District (District) is requesting proposals for engineering consulting services for the Potable Water Steel Reservoir Seismic Retrofits project. The services required will include preliminary and final design; preparation of construction documents and construction cost estimates; bid phase support; construction phase services; and associated services encompassing the extent of the Potable Water Steel Reservoir Seismic Retrofits project. The scope of services required is described in further detail below. **Proposals will be accepted until 5:00 p.m. on August 20, 2019, at the Moulton Niguel Water District. For personal drop-off, please use 26880 Aliso Viejo Parkway, Aliso Viejo, CA 92656. For mailing, please use P.O. Box 30203, Laguna Niguel, CA 92677.** Three (3) copies of your technical proposal and fee proposal are requested, in addition to a searchable PDF copy. Fee proposal shall be separated from technical proposal in separate sealed envelope.

1. PROJECT LOCATION, DESCRIPTION, AND BACKGROUND INFORMATION

The District owns and operates a total of 38 reservoirs as a part of their potable and recycled water distribution systems. Of the 38 reservoirs, 32 are above-grade/partially buried steel tanks with 26 tanks in the potable water system and 6 tanks in the recycled water system.

A Steel Reservoir Assessment Study was completed for the District in June of 2015. The major components of the assessment included a review of the existing information for each of the 32 steel reservoirs, a physical inspection of each reservoir, and detailed structural and seismic analysis based on current codes and standards. The assessment concluded that 18 of the 26 steel potable water reservoirs require one or more of the following improvements to comply with the current seismic codes and standards:

- Retrofit of the ring wall footing
- Installation of a flexible inlet/outlet coupling
- Installation of a flexible drain coupling

Table 1 summarizes the recommended improvements for each tank.

Table 1: Potable Water Steel Reservoir Seismic Improvements Summary Table

NAME	ADDRESS	ZONE	SIZE (MG)	RING WALL RETROFIT	INLET/OUTLET FLEX CPLNG	DRAIN FLEX CPLNG
ALISO HILLS	24773 MENDOCINO CT.	450	1.75	NEEDED		NEEDED
BEAR BRAND #1	24939 BEACON HILL LN.	650	2.5	NEEDED	NEEDED	
BEAR BRAND #2	24939 BEACON HILL LN.	650	2.5	NEEDED	NEEDED	
SADDLEBACK	27989 MARGUERITE	450	1.5	NEEDED	NEEDED	NEEDED
SEVILLE #1	23391 VIA BAHIA	850	0.5		NEEDED	NEEDED
SEVILLE #2	23391 VIA BAHIA	850	0.5		NEEDED	NEEDED
MARGUERITE	26433 DELEMOS/26433 GANIA	650	2.5	NEEDED		
PID #2	31250 PACIFIC ISLAND DR.	815	1	NEEDED	NEEDED	
RANCHO#1	29828 GOLDEN LANTERN	650	1.5	NEEDED	NEEDED	NEEDED
RANCHO#2	29828 GOLDEN LANTERN	650	1.5	NEEDED	NEEDED	NEEDED
CROWN VALLEY #3	25545 RANCHO NIGUEL RD.	450	4.3			NEEDED
ELDORADO	26475 LOPE DE VEGA DR.	650	2.25			NEEDED
WOOD CANYON	22443 PACIFIC PARK DR.	650	1			NEEDED
LA PAZ #1	26852 PRECIADOS	650	1		NEEDED	
LA PAZ #2	26852 PRECIADOS	650	1		NEEDED	
MATHIS #2	25655 NELLIE GAIL	650	1.75		NEEDED	
NELLIE GAIL	25655 NELLIE GAIL	650	4		NEEDED	NEEDED
PID #1	31540 PACIFIC ISLAND DR.	650	0.5		NEEDED	

General Requirements for Seismic Retrofits from Study:

Retrofit of the Ring Wall Footing:

Concrete ring wall footing retrofits to extend the existing footing to provide adequate bearing width to mitigate soil bearing pressure at each location. The Consultant shall verify that the new ring wall footing widths proposed in the Steel Reservoir Assessment study are in accordance with the latest seismic codes. The Consultant shall recommend a construction methodology to construct the ring wall extensions while maintaining the operations of the tank, if feasible.

Installation of Flexible Inlet/Outlet Coupling:

Flexible expansion joints (such as EBAA Iron's Flex Tend or equal) at the inlet and outlet piping to allow independent movement between the tank connection and the pipe's ground penetration. Many reservoir sites have narrow access roads around the circumference of the

tank. A spatial feasibility analysis and recommendation for the installation locations of the flexible couplings to maintain adequate access around the circumference of the tanks shall be performed by the Consultant and presented in the preliminary design report.

Installation of Flexible Drain Coupling:

Flexible expansion joints (such as EBAA Iron's Flex Tend or equal) will be installed at the drain coupling to allow independent movement between the tank connection and the drain pipe.

An alternative solution could be to install a flush-type-cleanout door on the tank with a drain valve assembly at the bottom of the door to be utilized for draining the tank. The existing drain could then be abandoned-in-place and plated over at the floor drain location. When draining the tank, District staff could connect a hose to the drain assembly on the flush-type-cleanout door and run the hose to the nearest site drain.

A feasibility analysis for both solutions and recommendation shall be performed by the Consultant and presented in the preliminary design report for District consideration.

Since a significant portion of the District's reservoirs are proposed to undergo improvements that require them to be fully drained, construction phasing must be implemented to ensure enough reservoirs are operational in each pressure zone to meet peak demands. District staff has preliminarily grouped the tanks into four construction phases depending on which zone they are in and their capacities. A summary of the phasing can be found in Table 2.

Table 2: Construction Phasing

Construction PHASING	NAME	ADDRESS	ZONE	SIZE (MG)
A	ALISO HILLS	24773 MENDOCINO CT.	450	1.75
A	BEAR BRAND #1	24939 BEACON HILL LN.	650	2.5
A	BEAR BRAND #2	24939 BEACON HILL LN.	650	2.5
A	SADDLEBACK	27989 MARGUERITE	450	1.5
A	SEVILLE #1	23391 VIA BAHIA	850	0.5
A	SEVILLE #2	23391 VIA BAHIA	850	0.5
B	MARGUERITE	26433 DELEMOS/26433 GANIA	650	2.5
B	PID #2	31250 PACIFIC ISLAND DR.	815/1050	1
B	RANCHO#1	29828 GOLDEN LANTERN	650	1.5
B	RANCHO#2	29828 GOLDEN LANTERN	650	1.5
C	CROWN VALLEY #3	25545 RANCHO NIGUEL RD.	450	4.3
C	ELDORADO	26475 LOPE DE VEGA DR.	650	2.25

C	WOOD CANYON	22443 PACIFIC PARK DR.	650	1
D	LA PAZ #1	26852 PRECIADOS	650	1
D	LA PAZ #2	26852 PRECIADOS	650	1
D	MATHIS #2	25655 NELLIE GAIL	650	1.75
D	NELLIE GAIL	25655 NELLIE GAIL	650	4
D	PID #1	31540 PACIFIC ISLAND DR.	650	0.5

The Consultant shall verify with District staff during design that the phasing schedule is still appropriate based on other current and planned reservoir capital improvement projects and incorporate the appropriate work restrictions.

The District has applied for a Hazard Mitigation Grant with Federal Emergency Management Agency (FEMA) for this project. The grant application is currently under review.

2. SCOPE OF WORK

Work includes preliminary and final design; preparation of construction documents and construction cost estimates; grant requirements research and implementation into construction documents; bid phase support; and construction phase services. Proposals for the project should include and show all labor hours and labor costs by position, and all other direct costs for the required work. Consultants are encouraged to modify and/or expand on the scope of work to demonstrate their understanding of the project and describe their project approach in detail. Work shall consist of, but shall not be limited to, the following tasks:

2.1 Project Administration/Management

The Consultant shall include in the scope of work sufficient time and budget to administer the services provided. Administration shall include, but not be limited to, project kick-off meeting and site visits, project design review meetings after each submittal including a 75% submittal site visit for each reservoir to review plans (as identified in Tasks 2.7 and 2.8 below), a reservoir construction sequencing workshop with District staff, and preparation of meeting agendas and minutes for each meeting. Project administration shall also include preparation and maintenance of the project schedule.

Deliverables: Agendas and minutes for six (6) meetings; biweekly schedule updates

2.2 Records Search and Records Review

The Steel Reservoir Assessment study is provided for reference. The geotechnical report contained within the Steel Reservoir Assessment study is currently being updated to current structural and geotechnical codes. The updated report will be provided to the selected Consultant prior to the project kick-off meeting. Additionally, the FEMA grant application is provided for reference.

The District has made the following information available for download at the link below: https://mnwd.sharefile.com/d-s05e59dc03d6404ea

A. As-Builts for all 18 potable water steel reservoirs

B. Available tank structural shop drawings

C. Potable/Wastewater/Recycled Water Sectional Drawings for all reservoir sites

D. Steel Reservoir Assessment study

E. FEMA Grant Application

F. Reservoir Management Systems (RMS) Plans for Phase 1 and 2

G. Cell Carrier drawings for each site with ring wall work.

This task covers detailed review of these records. After award, the District will attempt to locate any other information requested by the Consultant.

"Records Search" shall include, but is not limited to the following:

A. Monument ties and benchmark data

B. Environmental constraints

C. See Task 2.3 below regarding utility research

Deliverables: Electronic copies of all relevant information obtained from Records Search.

2.3 Utility Research

Implement a systematic approach to accurately identify and locate existing utilities in construction area. Said approach may include, but is not limited to the following:

A. Submit letters to all utilities identified on USA's database
B. Coordinate with District's cell carrier representatives as it relates to the possible relocation of their facilities prior to construction. This will include the creation of maps identifying pothole locations for the cell site carriers to pothole.
C. Organize a USA meet and mark

D. Pre-mark all visible facilities during site walk-through
E. Ensure that the utilities shown on available record drawings are accurate; update as required
F. Submit preliminary construction drawings to any other affected utility owners (if any) requesting their review to ensure their facilities are correctly shown

Deliverables: Copies of any correspondence with other utility owners; drawings to indicate any recommended potholing

2.4 Surveying

The Consultant shall determine if a site survey is necessary to supplement the record drawings and prepare the construction plans. If determined necessary, the Consultant shall include the survey scope of work and associated fee in their proposal.

Deliverables: None

2.5 Potholing

Following the completion of Tasks 2.3 and 2.4 (if required) above, Consultant shall prepare a potholing plan for locating underground utilities that may conflict with the proposed work. The plan shall include a list and redlined drawings of recommended utilities to be potholed. The District will approve this list prior to commencing. Potholing shall be performed to verify the exact horizontal and vertical locations of all potential utility conflicts. Potholing depth shall be sufficient to determine the top and bottom of the potential utility conflicts. Consultant shall submit a pothole report to document findings.

For this proposal, Consultant shall assume that approximately twenty (20) potholes will be required.

Deliverables: List and drawings of proposed pothole locations; pothole report

2.6 Grant Requirements Research and Implementation

Should the grant application be accepted and funding appropriated for this project, the Consultant shall prepare the construction documents to comply with all procurement requirements of the grant. Additionally, the Consultant shall prepare a list of qualified construction contractors for this project to comply with the procurement requirements.

Deliverables: Document outlining all applicable procurement requirements; list of qualified construction contractors.

2.7 Preliminary Design

Preliminary Design shall include the following items at a minimum:

- Design criteria for ring wall footings and typical details
- Recommended ring wall extension installation method(s) to maintain tank operation during installation
- Identification of facilities/appurtenances that will need relocation or protected-in-place due to the installation of the ring wall extension including but not limited to: inlet/outlet piping, overflow piping, RMS piping, radio conduits, and cell carrier conduits.
- Construction sequencing/phasing plan
- Constructability review/discussion on the installation of ring wall extensions at partially buried reservoirs. Recommending alternate solutions to achieve the required bearing area without extensive trenching is encouraged.
- Typical details and spatial feasibility analysis for inlet/outlet flex-couplings
- Recommendation for either the installation of the flex-couplings for the drain or installation of a flush-type-cleanout door with drain, including typical details.
- Preliminary site plans
- Preliminary cost estimate
- Draft Preliminary Design Technical Memorandum (PDTM) – Prepare draft PDTM that documents the above items.
- Final PDTM – Incorporate District comments from review of Draft PDTM or provide explanation of comment dismissal.

Deliverables:

- Five (5) hard copies and a searchable PDF copy of Draft PDTM for District review
- Five (5) signed hard copies and a searchable PDF copy of Final PDTM

2.8 Preparation of Contract Documents

The Consultant shall prepare a complete set of Contract Documents (Construction Drawings and Specifications) for construction of the proposed facilities. The Consultant shall prepare the Contract Documents using the District's standard format, standard forms, standard agreement, standard bonds, complete General Provisions, pertinent Special Provisions, pertinent Technical Specifications, and pertinent Standard Drawings. The District will provide the latest versions of these documents prior to the Consultant commencing Task 2.8. In general, the construction drawings, bid sheets, special provisions, and technical specifications will require a high degree of specialization.

The design shall address the recommendations of the Steel Reservoir Assessment report

related to seismic retrofits. The Consultant will be required to make the three (3) submittals described as follows.

75% Submittal

Plans for this submittal shall include detailed components of the design, including plans, sections, and details. All sections of the Contract Documents and Specifications shall be included along with a preliminary engineer's estimate of probable construction cost (Task 2.9).

Additionally, the Consultant Project Manager shall schedule a site visit with District staff to review the design plans for site and constructability constraints at each reservoir location.

100% Submittal

This submittal will include the complete Construction Plans, Construction Documents and Specifications, and a final engineer's estimate of probable construction cost (Task 2.9).

The 100% submittal shall incorporate all District comments from the 75% Review (or an explanation of why the comment was dismissed). The 100% submittal shall be ready to bid in the Consultant's opinion.

Final Contract Documents

After the District completes a cursory review of the 100% submittal, the Consultant will be instructed to prepare Final Contract Documents. The Final Contract Documents shall incorporate all District Comments from the 100% Review (or an explanation of why the comment was dismissed). The Final Contract Documents shall be stamped and signed construction plans and unbound specifications for District's signatures.

After obtaining District signatures, Consultant shall provide the District with fifteen (15) sets of bound full size construction plans and fifteen (15) sets of bound construction specifications with 11"x17" reduced construction drawings enclosed as an exhibit.

Deliverables:

- 75% Submittal – Five (5) full size sets of construction plans and Five (5) sets of bound construction specifications with 11"x17" reduced construction drawings enclosed as an exhibit. A fully searchable PDF copy will also be required. The preliminary construction cost estimate is to be provided with this submittal.
- 100% Submittal – Five (5) full size sets of construction plans and Five (5) sets of bound construction specifications with 11"x17" reduced construction drawings enclosed as an exhibit. A fully searchable PDF copy will also be required. The final construction cost estimate is to be provided with this submittal.

- Final Contract Documents – One (1) full size set of stamped and signed reproducible construction plans and unbound specifications for District signature. Thereafter, fifteen (15) sets of bound full size construction plans and fifteen (15) sets of bound construction specifications with 11"x17" reduced construction drawings enclosed as an exhibit. For the final submittal, specifications shall be provided with colored pages as follows: Bid Forms – White, General Provisions – Blue, Special Provisions – Pink, and Technical Specifications – Green. A fully searchable PDF copy will also be required. In addition, provide electronic files AutoCad (including all reference files; NAD-83, State Plane Zone 6, NAVD-88 of all sheets).

Note: "Full size" Drawings/Plans shall be 22" x 34" such that 11" x 17" prints are true half size. Also, construction drawings shall be tied to the State Plane Coordinate System.

2.9 Construction Cost Estimate

The Consultant shall provide to the District an estimate of the probable construction cost for the complete project. Two formats of the estimate shall be provided: (1) full detailed cost breakdown and (2) in the format of bid items prepared for the Construction Specifications. Construction cost estimates shall be provided with 75% and 100% Submittals (i.e. preliminary construction cost estimate and final construction cost estimate). The final construction cost estimate shall be prepared in sufficient detail that a contingency is not required.

Deliverables: Preliminary and Final Construction Cost Estimates

2.10 Bid Phase Support

During the bidding period, the Consultant shall assist with providing information and clarification of the Contract Documents to prospective bidders as requested. The Consultant shall assume two (2) addenda will be required during the bid process and shall incorporate this scope and fee into the proposal. The Consultant shall also conduct an onsite pre-bid meeting.

Deliverables: Two (2) Addenda if required; pre-bid meeting agenda and minutes

2.11 Construction Phase Services

During the construction of the proposed improvements, the Consultant shall provide the following construction phase services and include appropriate fees in the submitted Proposal:

A. Pre-Construction Meeting: Conduct pre-construction meeting with the District and Contractor prior to beginning construction and prepare agenda and minutes.

B. Contractor's RFI: Respond to approximately twenty (20) Requests for Information

from the Contractor and the District.

C. Shop Drawing Reviews: Review and acceptance of at least thirty (30) shop drawing submittals. If the Consultant anticipates that more shop drawing submittals than the above stated number will be required, the fee estimate shall state the number of shop drawings and the hours required to review and process that quantity. Consultant shall include an adequate fee amount to perform a second review of each shop drawing submittal.

D. Site Visits: Four (4) visits of two hours as requested by District staff.

E. Record Drawings: At the conclusion of the construction, the District will provide the Consultant with a single, consolidated set of red-lined as–built drawings. Consultant shall prepare the final record drawings based on the same. Record drawings shall be prepared in AutoCad.

Deliverables:

- Pre-Construction meeting agenda and minutes
- RFI responses and Submittal Review Comments.
- Three (3) full size sets of draft record drawings. Upon the District's review and approval, one (1) full size set of mylars with original signatures and one (1) full size set bond copy. In addition, provide electronic files in both AutoCad (including all reference files; NAD-83, State Plane Zone 6, NAVD-88 of all sheets) and PDF.

Note: "Full size" Drawings/Plans shall be 22"x34" such that 11"x17" prints are true half size.

3. SCHEDULE

▪ RFP Issued	July 22, 2019
▪ Pre-Proposal Meeting (Optional)	August 7, 2019, 2:00 p.m.
▪ Deadline for Questions	August 13, 2019
▪ **Proposals Due**	**August 20, 2019, 5:00 p.m.**
▪ Anticipated Board Award	September, 2019
▪ Draft PDTM	December 19, 2019
▪ Final PDTM	January 21, 2020
▪ 75% Design Submittal	March 16, 2020
▪ 100% Design Submittal	April 21, 2020
▪ Final Contract Documents	May 5, 2020

There will be an optional pre-proposal meeting on August 7, 2019 at 2:00 p.m. at the District's operations field office located at 26161 Gordon Road, Laguna Hills, CA 92653 (Building 1).

The Consultant should review the schedule in detail and propose an alternate schedule if desired. If

an alternate schedule is proposed, it should still be such that the project is ready to bid in May 2020. Consultant shall assume the following District review times:

- Draft Preliminary Design Report 2 weeks
- 75% Design 2 weeks
- 100% Design 1 week

4. PROPOSAL CONTENTS

The contents of the Proposal should contain the information summarized below, but should be limited to a maximum of twenty (20) total pages, not including appendixes. The fee estimate for the proposed project should be submitted in a separate sealed envelope.

A. Scope: Detailed scope of work and methodology that comprehensively define and describe the individual tasks. This scope of work will be used as a basis for later contract negotiations. Scope of work may be based upon, but is not limited to, the information provided in Section 2 of this Request for Proposal. If Consultant chooses to cut and paste from this RFP, please format the proposal such that any changes/additions/deletions are apparent (e.g. use colored or italicized text, etc.). The scope of work should also include a level of effort table showing specific staff and hours per each identified task. Consultants are encouraged to provide options or different approaches, where appropriate, to those listed in the scope of work of this RFP. **Consultant shall submit an anticipated list of construction drawings as part of proposal.**

B. Team: Descriptions of specific experience and capabilities of designated project manager, sub-consultants, and key support staff related to the previously outlined scope of work. Key personnel assigned to the project shall not be reassigned without prior District written approval.

C. Experience and References: Description of the project team's past record of performance on similar projects for which your firm has provided services. Include a discussion of factors such as control of costs, quality of work, and ability to meet schedules. Include client references that may be contacted by District. A minimum of five client references is required.

D. Schedule: Assurance of the firm's ability to complete all work, considering the firm's current and planned workload based on the proposed schedule. Completion of the project on schedule is critical to the success of this particular project. **Consultant shall submit an expanded WBS schedule to show tasks, milestones, and deliverables as part of proposal.**

E. Budget: Estimated level of effort (i.e. hours) that each project team member will

Exhibit 1: Fee Proposal

Category: Engineering Engineer; E7 Supervising Engineer; E6 Principal Engineer; E4 Engineer; E3 Associate Engineer; T3 Designer; T2 Associate Designer; A1 Word Processor	E8	E7	E6	E4	E3	T3	T2	A1	Total Hours	Total Labor	Other Direct Costs	Sub-Consultant Fees	TOTAL
Project Tasks	$240	$217	$196	$162	$145	$128	$112	$96					
Task 1.1: Project Administration/Management and QA/QC													
Project Management	8	24						12	44	$8,280			$8,280
Meetings (Six Meetings)		24	24		24			4	76	$13,776	$500		$14,276
Construction Sequencing Workshop		6	12		6			1	25	$4,620	$150		$4,770
Biweekly Schedule Update		8	2					2	12	$2,320	$150		$2,470
Quality Assurance/Quality Control	24	8							32	$7,496			$7,496
Subtotal Task 1.1, Project Administration/Management & QA/QC	32	70	38	0	30	0	0	19	189	$36,492	$800	$0	$37,292
Task 1.2: Records Search and Records Review													
Document Gathering and Records Review		4	18	24	24				70	$11,764			$11,764
Subtotal Task 1.2, Records Search and Records Review	0	4	18	24	24	0	0	0	70	$11,764	$0	$0	$11,764
Task 1.3: Utility Research													
Identify and Locate Existing Utilities			8	8	40				56	$8,664	$500		$9,164
Subtotal Task 1.3, Utility Research	0	0	8	8	40	0	0	0	56	$8,664	$500	$0	$9,164
Task 1.4: Surveying													
Field Measurements				36	36		36		108	$15,084	$400		$15,484
Subtotal Task 1.4, Surveying	0	0	0	36	36	0	36	0	108	$15,084	$400	$0	$15,484
Task 1.5: Potholing													
Identify and Locate Existing Utilities (Potholing Sub - Bess Testlab, for 20 potholes)		1	4	4	4				13	$2,229		$20,940	$23,169
Subtotal Task 1.5, Potholing	0	1	4	4	4	0	0	0	13	$2,229	$0	$20,940	$23,169
Task 1.6: Grant Requirements Research and Implementation													
Grant Requirements Research and Incorporation of Same into Contract Documents		8	8	4	4			2	26	$4,724			$4,724
Prepare List of Qualified Contractors		1	2	4	4			2	13	$2,029			$2,029
Subtotal Task 1.6, Grant Requirements Research and Implementation	0	9	10	8	8	0	0	4	39	$6,753	$0	$0	$6,753
Task 1.7: Preliminary Design													
Develop Design Criteria		8	4						12	$2,520			$2,520
Recommend Ring Wall Extension Installation Method to Maintain Tank Operation		8	4	4					16	$3,168			$3,168
Identification of Facilities/Appurtenances to be Relocated or Protected In Place during Construction		1	2	18	9				30	$4,830			$4,830
Construction Sequencing/Phasing Plan		18	9	4	4		4		39	$7,346			$7,346
Constructability Review/Discussion on Installation of Ring Wall Extensions at Partially Buried Reservoirs		4	12	4					20	$3,868			$3,868
Typical Details and Spatial Feasibility Analysis for inlet/outlet flex-couplings		4	9		18		18		49	$7,258			$7,258
Recommendation for either Installation of Flex-Couplings for Drain or Flush-Type Cleanout Door with Valve		2	8	8		4			22	$3,810			$3,810
Preliminary Site Plans		8	8		8				24	$4,464			$4,464
Preliminary Cost Estimate		1	4	4	9			2	20	$3,146			$3,146
Prepare Draft Preliminary Design Technical Memorandum (PDTM)		16	16	24	24		16	4	100	$16,152	$500		$16,652
Prepare Final Preliminary Design Technical Memorandum (PDTM)		8	8	12	12		6	4	50	$8,044	$500		$8,544
Subtotal Task 1.7, Preliminary Design	0	78	84	78	84	4	44	10	382	$64,606	$1,000	$0	$65,606
Task 1.8: Preparation of Contract Documents													
Prepare 75% Design Plans & Specifications		8	18	18	40	24	40	4	152	$21,916	$100		$22,016
Prepare 100% Design Plans & Specs		8	18	18	40	16	40	4	144	$20,892	$100		$20,992
Prepare Final Contract Documents		2	8	8	16	8	16	2	60	$8,626	$500		$9,126
Subtotal Task 1.8, Preparation of Contract Documents	0	18	44	44	96	48	96	10	356	$51,434	$700	$0	$52,134
Task 1.9: Construction Cost Estimate													
Prepare 75% Design Estimate		1	1	1	4				7	$1,155			$1,155
Prepare 100% Design Estimate		1	1	1	4				7	$1,155			$1,155
Prepare Final Contract Estimate		1	1	1	2				5	$865			$865
Subtotal Task 1.9, Construction Cost Estimate	0	3	3	3	10	0	0	0	19	$3,175	$0	$0	$3,175
Task 1.10: Bid Phase Support Services													
Attend Pre-Bid Meeting		4	4						8	$1,652	$75		$1,727
Prepare Addenda for Design Related Issues (Assume 2 Addenda)		6	18	12	12		4	4	56	$9,346	$100		$9,446
Subtotal Task 1.10, Bid Phase Support Services	0	10	22	12	12	0	4	4	64	$10,998	$175	$0	$11,173
Task 1.11: Construction Phase Services													
Attend Pre-Construction Meeting		4	4					2	10	$1,844	$75		$1,919
Respond to RFIs (Assume 20 RFIs @ 3 hours each plus clerical)		12	24	12	12			10	70	$11,952			$11,952
Review Shop Drawing Submittals (Assume 30 submittals @ 4 hours each plus 15 resubmittals @ 3 hours each)		30	60	45	30				165	$29,910			$29,910
Site Visits during Construction (Assume 4 site visits @ 2 hrs each)			4	4					8	$1,432	$300		$1,732
Prepare As-Built Record Drawings from Contractor Red-Line Mark-ups		2	4	2	4	8	16		36	$4,938	$300		$5,238
Subtotal Task 1.11, Construction Phase Services	0	48	96	63	46	8	16	12	289	$50,076	$675	$0	$50,751
TOTAL NOT-TO-EXCEED (EXCLUDING OPTIONAL SERVICES)	**32**	**241**	**327**	**280**	**390**	**60**	**196**	**59**	**1,585**	**$261,275**	**$4,250**	**$20,940**	**$286,465**
Task 1.12: Optional Services													
Recommendations for Soil Improvements at Eight Sites and Geotechnical Analysis	4	24	24	8	8		8	2	78	$14,416	$100	$7,200	$21,716
Update Seismic Parameters, Sloshing and Anchorage Calculations for Eight Reservoirs		24	16						40	$8,344		$2,600	$10,944
Prepare Technical Memorandum of Optional Work Performed for CalOES Review and Approval	2	4	8	16	16	8	24	8	86	$12,308			$12,308
Subtotal Task 1.12, Optional Services	6	52	48	24	24	8	32	10	204	$35,068	$100	$9,800	$44,968
TOTAL NOT-TO-EXCEED (INCLUDING OPTIONAL SERVICES)	**38**	**293**	**375**	**304**	**414**	**68**	**228**	**69**	**1,789**	**$296,343**	**$4,350**	**$30,740**	**$331,433**

VENDOR CONTACT LIST

Company Name	Company Address	Contact Person	Telephone #	E-Mail
AKM Consulting Engineers	533 Wald, Irvine CA 92618	Zeki Kayiran	(949) 753-7333	Zkayiran@akmce.com
Dudek	18500 Von 27372 Calle Arroyo, San Juan Capistrano, CA 92675	Russ Bergholz	(760) 479-4107	rbergholz@dudek.com
Lee & Ro, Inc.	1199 S. Fullerton Rd., City fo Industry, CA 91748	Rick Liskow	(626) 667-5329	Rick.Liskow@lee-ro.com
Tetra Tech	17885 Von Karman Ave., Irvine CA 92614	Tom Epperson	(949) 809-5156	Tom.Epperson@tetratech.com

moulton niguel water district

STAFF REPORT

TO: **Board of Directors** **MEETING DATE: September 12, 2019**

FROM: **Matt Collings, Assistant General Manager**
Todd Novacek, Director of Operations

SUBJECT: **2019 Report on Water Quality Relative to Public Health Goals – Public Hearing and Adoption of Report**

SUMMARY:

Issue: The District has prepared the required report on Public Health Goals for adoption by the Board of Directors.

Recommendation:

It is recommended that the Board of Directors conduct a public hearing to receive public testimony regarding the proposed adoption of the 2019 Public Health Goals Report. Upon completion of the public hearing, it is recommended that the Board of Directors take action to approve the 2019 Report On Water Quality Relative To Public Health Goals as required under the Health and Safety Code.

Fiscal Impact: None

Reviewed by Committee: Presented to the Board of Directors at the August 22, 2019 Board of Directors Meeting.

Reviewed by Legal: Yes

BACKGROUND:

In accordance with the California Health and Safety Code mandate, a Public Health Goal Report is to be prepared every three years. The previous Report was prepared and adopted by the District in 2016. The attached report is intended to provide additional information to the public regarding the District's drinking water quality, in addition to the Annual Water Quality Reports mailed to each customer during the month of June.

The Report compares the District's drinking water quality with Public Health Goals (PHGs) adopted by California Environmental Protection Agency's (EPA) Office of Environmental Health Hazard Assessment (OEHHA) and with maximum contaminant level goals (MCLGs) adopted by the EPA. PHGs and MCLGs are not enforceable standards and no action to meet them is mandated.

The District's water system complies with all of the health-based drinking water standards and maximum contaminant levels (MCLs) required by the California Department of Health Services and the EPA. No additional actions are recommended.

The law requires that a public hearing be held (which can be part of a regularly scheduled public meeting) for the purpose of accepting and responding to public comments on the report. District staff recommends that the Board of Directors conduct a public hearing to receive public testimony regarding the proposed adoption of the 2019 Public Health Goals Report. Following completion of the public hearing, it is recommended that the Board of Directors approve the 2019 Public Health Goals Report as required per the Health and Safety Code.

Attachment: 2019 Report On Water Quality Relative To Public Health Goals

MOULTON NIGUEL WATER DISTRICT
2019 REPORT ON WATER QUALITY RELATIVE TO PUBLIC HEALTH GOALS

Pursuant to SB 1307 (Calderone-Sher; effective 01/01/97) provisions were added to the California Health and Safety Code which mandate that a Public Health Goals report be prepared by July 1, 1998, and every three years thereafter. The report is intended to provide information to the public in addition to the Annual Water Quality Consumer Confidence Reports made public to each customer.

Moulton Niguel Water District's (MNWD) water system complies with all of the health-based drinking water standards and Maximum Contaminant Levels (MCLs) required by the Division of Drinking Water and the Environmental Protection Agency. MNWD is not required to make any changes, and is not proposing to make any changes or modifications that would affect the quality of water delivered to its customers.

Background:

Provisions of the California Health and Safety Code specify that water systems larger than 10,000 service connections prepare a special report if their water quality measurements have exceeded any Public Health Goals (PHGs). PHGs are non-enforceable goals established by the California Office of Environmental Health Hazard Assessment (OEHHA). The law also requires that where OEHHA has not adopted a PHG for a constituent, the water suppliers are to use the Maximum Contaminant Level Goals (MCLGs) adopted by the United States Environmental Protection Agency (EPA). Only constituents which have a California primary drinking water standard and for which either a PHG or MCLG has been set are to be addressed.

There are a few constituents that are routinely detected in water systems at levels usually well below the drinking water standards for which no PHG or MCLG has yet been adopted by the OEHHA or EPA including Total Trihalomethanes. These will be addressed in a future report once a PHG has been adopted.

What are Public Health Goals (PHGs)?:

PHGs are established by the OEHHA, which is part of the California Environment Protection Agency, and are based solely on public health risk considerations. None of the practical risk-management factors that are considered by the EPA or the Division of Drinking Water (DDW) in setting drinking water standard MCLs are considered in setting the PHGs. These factors include analytical detection capability, treatment technology available, and the associated benefits and costs of those various treatments. The PHGs are not enforceable and are not required to be met by any public water system. MCLGs are the federal equivalent to PHGs.

Water Quality Data Considered:

All of the water quality data collected in MNWD's water system between January 1, 2016 and December 31, 2018 for purposes of determining compliance with drinking water standards was considered. This data was summarized in MNWD's 2016, 2017, and 2018 Annual Water Quality Reports, which were made available to all of our customers during the months of June and July of each year.

Best Available Treatment Technology and Cost Estimates:

Both the EPA and DDW have adopted what are known as Best Available Technologies (BATs), which are the best known methods of reducing contaminant levels to the MCLs. Costs can be estimated for such technologies. However, since many PHGs and all MCLGs are set at zero or much lower than the MCL (as is the case with radiologicals), it is not always possible nor feasible to determine what treatment is needed to further reduce a constituent downward to or near the PHGs or MCLGs. In some cases, installing treatment to try and further reduce very low levels of one constituent may have adverse effects on other aspects of water quality or treatment would be cost-prohibitive to tap water consumers.

Constituents Detected That Exceed a Public Health Goals (PHG) or Maximum Contaminant Level Goals (MCLG):

The water distributed by MNWD during the period met the MCLs for these constituents. During the 2016-2018 period, our supplier detected minor levels of Gross Alpha, Gross Beta, and Uranium radiologicals, Bromate, Chlorite and non-violation Coliform Bacteria, as indicated below:

Parameter	Units	State or Federal	PHG or (MCL	Range Average	2016	2017	2018	PHG Report
Gross Alpha (particle activity)	pCi/L	15	(0)	Range e	ND – 4 ND	6.2	4.50 - 4.5	**YES**
Gross Beta (particle activity)	pCi/L	50	(0)	Range Average	4 – 6 5	ND ND	ND ND	**YES**
Uranium (particle activity)	pCi/L	20	0.43	Range Average	2 - 3 3	2 - 3 2.7	2 – 2.8 2.4	**YES**
Coliform Bacteria	%	5.0	(0)	Highest Monthly	.79	.79	.79	**YES**
Bromate	ppb	10	.01	Range Average	ND ND	1.8 - 3.0 2.3	ND – 4.7 2	**YES**
Chlorite	ppm	1	0.05	Range Average	ND ND	.05 - .60 .18	.04 - .26 .18	**YES**

pCi/L = picocuries per liter ppm = parts per million ppb = parts per billion ND = Not Detected

The following is an explanation of constituents that were detected in one or more of our drinking water sources at levels above the PHGs, or if no PHGs, above the MCLGs.

Gross Alpha (particle activity):

MNWD is in compliance with the MCLs set by the State. Although other health impacts are possible, cancer has been recognized as the major health effect of most studied radionuclides. Moreover, risk assessment procedures to estimate the cancer risk from radionuclides have been well developed. Thus cancer is the principal endpoint that will be used to evaluate the health risk from alpha particle emitters present discussion.

Gross Beta (particle activity):

Although other health impacts are possible, cancer has been recognized as the major health effect of most studied radionuclides. Moreover, risk assessment procedures to estimate the cancer risk from radionuclides have been well developed. Thus, cancer is the principal endpoint that will be used to evaluate the health risk from beta particle/photon emitters. Cancer risk estimates for exposure to beta/photon radioactivity vary with particle energy and how certain organs handle that energy.
Therefore, risk-based health protective values vary for the different beta/photon emitting isotopes.

Uranium (particle activity):

A PHG has been developed for uranium in drinking water based on its radioactivity. All isotopes of uranium are radioactive and the total radioactivity depends on the ratio of isotopes. The ionizing radiation from uranium is considered to be inherently carcinogenic. The PHG for uranium is based on the EPA's latest cancer risk calculations for uranium exposure (EPA, 1999), and recent data on ratio of uranium isotopes in California drinking water (Wong et al., 1999), from which is calculated the uranium specific activity of 0.79 pCi/µg (radioactivity output per mass unit). The resulting PHG of 0.5 ppb (0.43 pCi/L) developed for natural uranium in drinking water is based on a *de minimis* 10^{-6} lifetime cancer risk for exposure to ionizing radiation. OEHHA considers cancer risks below the *de minimis* one in a million theoretical risk to be negligible. MNWD is in compliance with the MCLs that are set by the State.

Uranium is a naturally occurring radioactive element that is ubiquitous in the earth's crust. Uranium is found in ground and surface waters due to its natural occurrence in geological formations. Uranium occurs as a trace element in many types of rocks. Because its abundance in geological formations varies from place to place, uranium is a highly variable source of contamination in drinking water.

The EPA has established a MCL for natural uranium of 30 µg/L (ppb), based on a cost-benefit analysis (EPA, 2000). The MCLG is zero. The State of California has an MCL for uranium of 20 pCi/L based on earlier studies of toxicity to the kidney in rabbits.

Coliform Bacteria:

The following discussion relates to the detection within the water system of coliform bacteria above the MCLG for coliform. MNWD collects between 124-155 samples each month for coliform bacteria analysis. Occasionally, a sample was found to be positive for coliform bacteria, but re-test samples were negative and follow up actions were

taken. A maximum of .79% of these samples was positive in any given month during the reporting period. The MCL for coliform is 5.0% positive samples of all samples analyzed per month and the MCLG is zero. MNWD complies with the requirements set by the EPA.

The reason for the coliform drinking water standard is to minimize the possibility of the water containing pathogens, which are organisms that cause waterborne disease. Because coliform is only a surrogate indicator of potential presence of pathogens, it is not possible to estimate a specific numerical health risk.

While EPA normally sets MCLGs "at a level where no known or anticipated adverse effects on persons would occur," they indicate they cannot do so with coliforms. Coliform bacteria are indicator organisms that are ubiquitous in nature and are not generally considered harmful. They are used because of the ease in monitoring and analysis. If a positive sample is found, it indicates a potential problem that needs to be investigated and follow up sampling must be performed. It is not unusual for a system to have an occasional positive sample.

Chloramines are added as a disinfectant to the water to ensure that the water is microbiologically safe. The chloramines residual levels are carefully controlled to provide optimum health protection without increasing the disinfection by-product levels. This careful balance of treatment processes is essential to continue supplying our customers with safe drinking water.

Other equally important measures that MNWD has implemented include an effective cross-connection control program, maintenance of a disinfectant residual throughout our system, an effective monitoring and surveillance program and maintaining positive pressures in our distribution system.

MNWD has installed disinfection residual systems at many of its reservoir sites and is in the process of upgrading these facilities. These systems help maintain higher disinfectant residuals throughout the entire distribution system. The total capital cost of rebuilding these systems is approximately $25.5 million dollars. MNWD's annual operating cost for providing this best available treatment technology is approximately $270,000 dollars.

MNWD's system has already taken all the steps described by DDW as "best available technology" for coliform bacteria.

Bromate

The MCL for bromate is 10 ppb, the MCLG is zero, the PHG is 0.1 ppb, and the DLR is 1 ppb. MNWD complies with the MCLs that are set by the State. Bromate is formed when water containing naturally occurring bromide is treated with ozone for disinfection. Bromate was detected in water supplied by the Metropolitan Water District of Southern California (MWD) with average concentrations ranging from ND to 4.7 ppb.

OEHHA has determined that the health risk associated with concentrations at the PHG is equivalent to 1 excess case of cancer in 1,000,000 people. The health risk associated with bromate at the MCL is equivalent to one excess cancer case per 10,000 people.
The BAT for reducing bromate levels is ozone control. MWD already operates their treatment plants with the goal of minimizing the production of bromate. However, ozone must be maintained at certain levels for proper disinfection of the water. More advanced treatment such as coagulation and filtration, granular activated carbon, or reverse

osmosis would be required to achieve levels below the PHG. If reverse osmosis was selected for bromate remediation at each affected water source, it would be a substantial increase in cost for MNWD's customers. No further treatment programs are planned at this time because:

- Bromate levels are well below the state and federal drinking water standards;
- Extraordinary construction and maintenance efforts would be required to install and operate treatment systems; and
- Treatment may not reduce existing concentrations to levels below the PHG.

Chlorite

The State of California has a chlorite MCL of 1.0 mg/L and a PHG of 0.05 mg/L. Chlorite ranged from 0.04 to 0.26 mg/L. The levels detected were always below the MCL. Chlorite is a disinfection byproduct produced in the treatment of drinking water with chlorine dioxide. MNWD complies with the requirements set by the EPA.

The PHG is based on hematological effects observed in offspring at 3 mg/kg-day and higher in a two-generation rat reproductive study. There are no acceptable carcinogenicity studies on chlorite. Several of these studies (subchronic, chronic, and developmental) reveal that oral exposure to chlorite can result in significant hematological, endocrine, reproductive, and gastrointestinal effects as well as changes in neurobehavioral development.
The best available technology (BAT) to lower the levels of Chlorite would be reverse osmosis. Since the levels are already below the MCL, reverse osmosis would be required to attempt to lower the levels to below the PHG. Please note that accurate cost estimates are difficult, if not impossible, and are highly speculative and theoretical.

Recommendations:

The drinking water quality of the Moulton Niguel Water District meets or exceeds all State of California Department of Public Health and United States Environmental Protection Agency drinking water standards set to protect public health. Additional costly treatment processes would be required to further reduce the levels of the constituents identified in this report that are already significantly below the health-based Maximum Contaminant Levels established to provide "safe drinking water." The effectiveness of the treatment processes to provide any significant reductions in constituent levels at these already low values is uncertain. The health protection benefits of these further hypothetical reductions are not at all clear and may not be quantifiable. Therefore, MNWD is not proposing any further action to implement additional water treatment processes. MNWD will continue to monitor and test drinking water on a weekly basis to ensure all water quality standards are met and to assess the performance of current treatment processes to continue to provide high-level water quality for the future.

moulton niguel water district

STAFF REPORT

TO: **Board of Directors** **MEETING DATE: September 12, 2019**

FROM: **Rod Woods, Director of Engineering**
David Larsen, Engineering Manager

SUBJECT: **On-call Construction Support Services**

SUMMARY:

Issue: Board action is required to execute agreements for Construction Support Services on an as-needed basis.

Recommendation: It is recommended that the Board of Directors authorize the General Manager or Assistant General Manager to execute three-year Construction Support Services Agreements with Jamison Engineering Contractors, Inc. and Kingmen Construction, Inc. for a total not-to-exceed amount of $750,000 each.

Fiscal Impact: The fiscal impact will depend on the amount of construction support services required. The agreements will be funded with projects from the Capital Improvement Program and the Operating Budget as needed for construction support services.

Reviewed by Committee: Yes, recommended for approval at the Technical Committee Meeting on September 3, 2019.

Reviewed by Legal: Yes

BACKGROUND:

The District recently assumed operation and maintenance responsibilities for Plant 3A. Additionally, the District operates and maintains 50 active pump stations and lift stations throughout its service area. Although rehabilitation of each facility has been planned as part of the District's Capital Improvement Program, occasional repairs and improvements are necessary to continue to ensure that reliable service is provided.

District staff periodically requires outside specialty contractor support for the repair and improvement needs of the facilities. The types of services that are required include

mechanical piping, plumbing, structural, electrical, and instrumentation repair and construction work. These agreements will facilitate the prompt deployment of qualified contractors to assist District staff with specialty work, and when emergency repairs are needed.

DISCUSSION:

The District issued a Request for Qualifications for On-Call Construction Support Services to five qualified contractors. On August 27, 2019, the District received four Statements of Qualifications (SOQs). The firms that submitted SOQs included:

- Jamison Engineering Contractors, Inc.
- Kingmen Construction, Inc.
- Pacific Hydrotech Corporation
- SS Mechanical Construction Corp.

The SOQs were evaluated considering related project experience, project team expertise, responsiveness, past performance, fees, and other unique qualifications. The proposals received were of high quality and extremely competitive. The selection committee determined that the firms that offered the overall best value to the District were Jamison Engineering Contractors, Inc. and Kingmen Construction, Inc. Both firms have provided quality services for the District in the past, have competitive rates, and are familiar with Plant 3A and the types of facilities within the District's service area.

The agreements will be managed on a work order basis or be called upon for emergency work. Individual work orders issued pursuant to this agreement are not expected to exceed $150,000. With the exception of emergency work, quotations will be requested from the approved vendors.

Staff is recommending that the Board of Directors authorize the General Manager or Assistant General Manager to execute three-year Construction Support Services Agreements with Jamison Engineering Contractors, Inc. and Kingmen Construction, Inc. for total not-to-exceed agreement amounts of $750,000 each.

Attachments:

1. On-call Construction Support Services Agreement with Jamison Engineering, Inc.
2. On-call Construction Support Services Agreement with Kingmen Construction, Inc.
3. Vendor Contact List

ON-CALL CONSTRUCTION SUPPORT SERVICES AGREEMENT
BETWEEN
MOULTON NIGUEL WATER DISTRICT AND
JAMISON ENGINEERING CONTRACTORS, INC.
CONTRACT NO. OM19-20.024a

This Agreement (the "Agreement") is made and entered into on _____ ("Effective Date") by and between the Moulton Niguel Water District ("District") and Jamison Engineering Contractors, Inc. ("Contractor"). District and Contractor are sometimes individually referred to as "Party" and collectively as "Parties" in this Agreement.

RECITALS

A. District requires individual construction projects to be performed in certain areas throughout the District on an as-needed on-call basis. This Agreement, as well as each Work Order issued pursuant to Section 1, establishes the terms and procedures that will apply to this Work.

B. The objective of this Agreement is for District to authorize Contractor to provide construction support Work on an on-call basis related to service, repair and construction of DISTRICT facilities.

NOW, THEREFORE, District and Contractor for the consideration stated herein agree as follows:

1. SCOPE OF SERVICES; PRICE; PERFORMANCE STANDARDS

1.1 Contractor shall perform construction support services (the "Work") in accordance with the general standards set forth in attached Exhibit A ("Scope of Work) and the other terms of this Agreement from time to time as directed by District.

1.2 As the need for Work arises, as determined by District, District's representative shall issue Contractor a written work order ("Work Order") as set worth in Exhibit B. In response to District's request, Contractor shall deliver a written cost quote indicating: (a) Contractor's availability to perform the Work; (b) the not-to-exceed price to perform the Work requested in accordance with the Rate Schedule shown in Exhibit C hereto and incorporated herein by this reference; and (c) the estimated time for performance of the Work. A Notice to Proceed ("NTP") will be issued by District to Contractor following the acceptance of the Work.

1.3. In some cases, circumstances may not allow time to perform the Work Order process described above. In such cases, a District representative will contact Contractor and request that Contractor perform construction Work on a time and materials basis in accordance with the Rate Schedule and the terms and conditions of this Agreement.

1.4. Contractor's Rate Schedule shall include all labor, supervision, materials, equipment, supplies, tools, incidentals, taxes, profit, overhead, bonding, traffic control, and insurance necessary to mobilize, complete the Work, demobilize and provide cleanup and restoration of construction and work sites.

1.5. Contractor acknowledges and agrees that District does not guarantee any minimum or maximum amount of Work, and District may use other contractors for the Work, in

its sole discretion. This Agreement, including all attached Exhibits, as well as the terms and conditions of any municipal permits or licenses issued or applicable in connection with the Work, if any, form the Agreement between the Parties. Contractor shall provide all labor, materials, tools, equipment, supplies, utilities and transportation services required to perform the Work, subject to compliance with the Agreement requirements, and complete all Work in a thorough, professional and workmanlike manner, and in accordance with generally accepted industry standards, and to the satisfaction of District.

1.6. The Work shall be done in accordance with the Scope of Work, the Work Order issued for each individual repair project during the term of this Agreement, and the permitting or other requirements of any governmental entity within whose jurisdiction the Work is performed, which are by this reference incorporated into this Agreement. It shall be the Contractor's responsibility to ascertain and keep informed of all such existing and future requirements of other governmental entities concerning the Work performed under this Agreement, including acquisition of necessary permits and licenses by municipalities related to repair work in public right of way and payment of the fees or costs thereof.

1.7 Contractor shall provide a list of any subcontractors to District prior to commencement of Work. Any subcontractor must meet the approval of District. Costs for subcontracted work shall be paid as invoiced by subcontractor plus five percent (5%) markup for administrative costs.

1.8 The Work shall be completed in accordance with all local, state and federal rules, regulations and codes applicable to health and safety. Contractor shall be solely and completely responsible for conditions of the Work sites, including safety of all persons and property during performance of the Work. Contractor's operations for the Work shall be conducted so as to provide maximum safety to Contractor's employees, District's representatives, and in compliance with all safety laws, rules and regulations of the State, federal, and local agencies. It is Contractor's responsibility to have a current safety program on file with District prior to commencement of any work under this Agreement.

1.9 Contractor shall conduct its operations so as to offer the least possible obstruction and inconvenience to the public, and shall have under construction no greater length or amount of work that it can prosecute properly with due regard to the rights of the public. Convenient access to driveways, houses and buildings along the line of work shall be maintained and temporary crossings shall be provided and maintained in good condition. Not more than one crossing or intersecting street or road shall be closed at any one time. Contractor shall provide and maintain such fences, barriers, directional signs, lights and flagmen as are necessary to give adequate warning to the public at all times of any dangerous conditions to be encountered as a result of the work and to give directions to the public. Contractor shall comply with all terms of any permits issued by public agencies for the work.

2. COMPENSATION

2.1 District agrees to compensate Contractor for Work performed in accordance with Exhibit C ("Rate Schedule"). Total compensation under the Agreement shall not exceed **Seven Hundred Fifty Thousand Dollars ($750,000)** without prior written approval by District.

2.2 CONTRACTOR is required to prepare and submit a daily work log to DISTRICT's representative on-site, unless otherwise waived in writing by the DISTRICT Representative. The daily work log shall be submitted each day and be signed off by both Parties. The daily

work log will be used to verify CONTRACTOR's invoices for a work order based on time and materials payment. At a minimum, the work log should list each employee, classification, and hours worked each day; the type of equipment used on-site each day, hours of operation; and a brief summary of Work performed.

2.3 Contractor shall submit itemized invoices with supporting documentation including but not limited to, daily logs described above, period of work, paid receipts and invoices to validate the charges for each invoice. District shall pay invoices within thirty (30) days of receipt. Payments shall be subject to review for compliance by District with the requirements of this Agreement.

3. TERM OF AGREEMENT AND TERMINATION

3.1 This Agreement shall commence on the Effective Date and continue for a period of three (3) years, unless earlier terminated as provided herein.

3.2 Either Party may terminate this Agreement by providing written notice to the other Party ten (10) business days in advance of the date of termination; provided. District may terminate the Agreement without any advance notice in the event Contractor is in material breach of any of the terms of this Agreement, as determined by District in its discretion. Any termination by Contractor shall not be effective as to any Work previously performed hereunder, or any Work being undertaken at the time of such termination by Contractor, and shall only apply prospectively. Contractor remains responsible for the completion of any Work still outstanding under a work order in accordance with the terms of this Agreement and work order. Contractor's indemnity and warranty obligations as to any work order, as well as any outstanding obligations of Contractor at the time of any termination, shall survive the expiration or termination of this Agreement. On District's termination, Contractor will be entitled to the reasonable value of the Work performed for which it has not received prior compensation under a work order, subject to any offset from such payment representing District's damages from any material breach of the terms of this Agreement by Contractor or as otherwise provided for under Section 2. The foregoing provisions are in addition to and not in limitation of any other rights or remedies available to District.

4. PUBLIC WORKS AND PREVAILING WAGE

4.1 Contractor is aware of the requirements of California Labor Code Section 1720 et seq., and 1770 et seq., as well as California Code of Regulations, Title 8, Section 16000 et seq., ("Prevailing Wage Laws"), which require the payment of prevailing wage rates and the performance of other requirements on "public works" and "maintenance" projects. Since the Work is being performed as part of an applicable "public works" or "maintenance" project, as defined by the Prevailing Wage Laws, and since the total compensation is $1,000 or more, Contractor agrees to fully comply with such Prevailing Wage Laws. A copy of these prevailing wage rates are on file with the Department of Industrial Relations and can be found online with the State of California at http://www.dir.ca.gov/dlsr/pwd.C Contractor shall make copies of the prevailing rates of per diem wages for each craft, classification or type of worker needed to execute the Work available to interested parties upon request, and shall post copies at Contractor's principal place of business and at the project site. Contractor shall defend, indemnify and hold the District, its officials, officers, employees and agents free and harmless from any claim or liability arising out of any failure or alleged failure to comply with the Prevailing Wage Laws. Contractor and any subcontractor shall forfeit a penalty of up to $200 per calendar day or portion thereof for each worker paid less than the prevailing wage rates.

4.2 Contractor's attention is directed to the provisions in section 1777.5 and 1777.6 of the Labor Code concerning the employment of apprentices by the Contractor or any subcontractor under the Contractor. It shall be the responsibility of the Contractor to effectuate compliance on the part of itself and any subcontractors with the requirements for employment of apprentices. Information relative to apprenticeship standards, wage schedules, and other requirements may be obtained from the Director of Industrial Relations, ex-officio the Administrator of Apprenticeship, San Francisco, California, or from the Division of Apprenticeship Standards and its branch offices.

4.3 Pursuant to Labor Code section 1776, the Contractor and each subcontractor shall maintain weekly certified payroll records showing the name, address, social security number, work classification, straight time and overtime hours paid each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker or other employee employed in connection with the work. Contractor shall certify under penalty of perjury that records maintained and submitted by Contractor are true and accurate. Contractor shall also require subcontractor(s) to certify weekly payroll records under penalty of perjury. In the event of noncompliance with the requirements of this Section, the Contractor shall have ten (10) days in which to comply subsequent to receipt of written notice specifying any item or actions necessary to achieve compliance with this section. If Contractor or subcontractor does not comply after such ten (10)-day period, the Contractor shall, as a penalty to District, forfeit One Hundred Dollars ($100) for each day, or portion thereof, for each worker until strict compliance is effectuated.

4.4 This Project is subject to compliance monitoring and enforcement by the Department of Industrial Relations ("DIR"). It shall be the Contractor's sole responsibility to evaluate and pay the cost of complying with all labor compliance requirements under this Agreement and applicable law. Any stop orders issued by the DIR against Contractor or any subcontractor that affect Contractor's performance of Work, including any delay, shall be Contractor's sole responsibility. Any delay arising out of or resulting from such stop orders shall be considered Contractor caused delay subject to any applicable liquidated damages and shall not be compensable by the District. Contractor shall defend, indemnify and hold the District, its officials, officers, employees and agents free and harmless from any claim or liability arising out of stop orders issued by the DIR against Contractor or any subcontractor.

4.5 In accordance with Labor Code section 1771.4, the Contractor and each subcontractor shall furnish the certified payroll records directly to the DIR on a weekly basis and in the format prescribed by the DIR, which may include electronic submission. Contractor shall comply with all requirements and regulations from the DIR relating to labor compliance monitoring and enforcement.

4.6 Contractor shall post, at appropriate conspicuous points on the work site, a schedule showing all determined general prevailing wage rates and all authorized deductions, if any, from unpaid wages actually earned.

4.7 Pursuant to Labor Code sections 1725.5 and 1771.1, the Contractor and its subcontractors must be registered with the DIR prior to the execution of a contract to perform public works. By entering into this Agreement, Contractor represents that it is aware of the registration requirement and is currently registered with the DIR. Contractor shall maintain a current registration for the duration of the Agreement. Contractor shall further include the requirements of Labor Code sections 1725.5 and 1771.1 in any subcontract and ensure that all

subcontractors are registered at the time this Agreement is entered into and maintain registration for the duration of the Agreement. Contractor's DIR Registration No. is 1000007376.

5. BONDS

5.1 Before commencing performance of the Work contracted for hereunder, Contractor shall furnish Payment and Performance bonds (the "Bonds") as required by Section 9550 of the Civil Code, for 100% of the contract value, from a single surety licensed and admitted in the State of California and acceptable to the District in the District's sole discretion. Contractor shall deliver all Bonds required hereunder to the District prior to the commencement of Work.

5.2 Should, in District's sole opinion, any bond become insufficient or any surety be found to be unsatisfactory, Contractor shall renew or replace the effected bond within (ten) 10 days of receiving notice from District. In the event the surety or Contractor intends to reduce or cancel any required bond, at least thirty (30) days prior written notice shall be given to the District, and Contractor shall post acceptable replacement bonds at least ten (10) days prior to expiration of the original bonds. No further payments shall be deemed due or will be made under this Contract until any replacement bonds required by this Section are accepted by the District. To the extent, if any, that the Total Contract Price is increased in accordance with the Contract, Contractor shall, upon request of the District, cause the amount of the bond to be increased accordingly and shall promptly deliver satisfactory evidence of such increase to the District. If Contractor fails to furnish any required bond, the District may terminate the Contract for cause.

5.3 Contractor shall use District's forms, which are attached hereto as Exhibit D ("Payment Bond"), and Exhibit E ("Performance Bond") for the Bonds.

6. INSURANCE

6.1 In addition to the requirements set forth herein, during the entire term of the Agreement, Contractor will pay for and maintain, in full force and effect, all insurance required by District. Contractor shall not commence Work under the Agreement until it has obtained all insurance required by the Agreement and shall be provided by Contractor with the Contractor's executed copy of this Agreement.

6.2 The general liability and business automobile insurance will be comprehensive in form, and extend through the term of this Agreement and on a 'per occurrence' basis. All policies will have a clause providing that thirty (30) calendar days written notice will be given to District prior to any cancellation of such policies. All insurance will be issued and underwritten by insurance companies having an AM Best rating of no less than "A- VII". *All policies shall name Moulton Niguel Water District, City of Aliso Viejo, City of Dana Point, City of Laguna Hills, City of Laguna Niguel, City of Mission Viejo, and each of their directors, elected officials, officers, employees and agents,* and any other public entities issuing permits for entry in public right of way to perform the Work, and owners of record of all property on which entry will be made to perform the Work as additional insureds thereunder ("Additional Insureds"). All of the policies of insurance provided hereunder shall be primary insurance and not contribute with any other insurance maintained by the Additional Insureds, and the insurer shall waive all rights of subrogation and contribution it may have against the Additional Insureds; these requirements shall be set forth in endorsements to policies. In the event any of said policies of insurance are

canceled, Contractor shall, prior to the cancellation date, submit new evidence of insurance in conformance with this Section 10 to District.

6.3 Commercial general liability in a combined limit of not less than $1,000,000 per occurrence, $2,000,000 aggregate with such aggregate to apply separately to the Work. Commercial General Liability insurance coverage shall be equivalent to Insurance Services Office Form CG 00 01. Included in such insurance shall be contractual coverage sufficiently broad to insure the matters set forth in Section 12 of this Agreement, **as well as the subrogation, primary insurance/non-contribution and Additional Insureds terms and endorsements described under subsection (c) above**. This insurance shall name the Additional Insureds using ISO endorsement CG 20 10 11 85, or both CG 20 10 and CG 23 37 forms if later revisions are used.

6.4 Business automobile insurance with liability limits of not less than $1,000,000 each accident. The policy shall include coverage for owned, non-owned, and hired vehicles, **and include the subrogation, primary insurance/non-contribution and Additional Insureds terms and endorsements.**

6.5 Worker's compensation insurance as required by State laws, and employer's liability insurance with limits not less than $1,000,000 each accident and $1,000,000 for disease per employs, **which must include a waiver of subrogation.**

6.6 Contractor shall furnish District with certificates of insurance and endorsements effecting coverage required by this Contract on forms satisfactory to the District. The certificates and endorsements for each insurance policy shall be signed by a person authorized by that insurer to bind coverage on its behalf and shall be on forms approved by the District. All certificates and endorsements must be received and approved by the District before work commences. The District reserves the right to require complete, certified copies of all required insurance policies, at any time.

6.7 All subcontractors shall meet the requirements of this Section before commencing Work. Contractor shall furnish separate certificates and endorsements for each subcontractor. Subcontractor policies of General Liability insurance shall name the District, its officials, employees, agents and authorized volunteers as additional insureds using form ISO 20 38 04 13 or endorsements providing the exact same coverage. All coverages for subcontractors shall be subject to all of the requirements stated herein except as otherwise agreed to by the District in writing.

6.8 Contractor shall report to the District, in addition to Contractor's insurer, any and all insurance claims submitted by Contractor in connection with the Work under this Contract.

6.9 Nothing in the insurance requirements set forth in this Agreement or under the bonding terms is to be construed as limiting the liability of Contractor or Contractor's insurers or sureties. Contractor agrees that the provisions of this Section 10 shall not be construed as limiting in any way the extent to which Contractor may be held responsible for the payment of damages or other costs to District, or any persons or property, resulting from Contractor's activities or the activities of any person or persons for which Contractor is otherwise responsible, including Contractor's subcontractors, if any.

7. INDEMNIFICATION

7.1 To the fullest extent permitted by law, Contractor shall hold harmless, indemnify, and defend, including the duty and cost to defend as provided by Section 2778 of the California Civil Code, District and its directors, officers, employees, engineers and representatives as well as all public agencies issuing permits in connection with the Work, and all property owners of the Work site ("indemnitees"), from liability, claims, damages, demands, actions, attorney's fees, costs and expenses arising out of the performance of the Work under this Agreement, or actual or alleged non-performance, or the furnishing of materials by Contractor or its subcontractors, including but not limited to, claims by the Contractor or Contractor's employees for damages to person or property, except for the sole negligence or willful misconduct or active negligence of the District, its directors, officers, engineers, employees and representatives.

7.2 In furtherance of Contractor's obligations in this Section 5, Contractor shall defend itself and the indemnitees against any and all liabilities, claims, losses, damages, actions, attorney's fees, costs and expenses arising out of the performance of the Work, or actual or alleged non-performance, or the furnishing of materials by Contractor or its subcontractors, including but not limited to claims by the Contractor or Contractor'S employees for damages to person or property.

7.3 This indemnity obligation shall survive the termination or expiration of the Agreement and the completion of any Work pursuant to any work order, or otherwise.

8. WARRANTY

8.1 Contractor fully warrants and guarantees, for a period of three hundred sixty-five (365) days from the date of "final acceptance" (as defined in section 2.4) of any work by District ("Warranty Period"), that: (1) all goods, materials, and equipment supplied are new, are of first class material and workmanship and are free from defects; and (2) that all work will be of good quality, performed to the standard of care customary in Contractor's trade or profession. Under this guarantee, Contractor shall repair and replace any and all work, together with any other work which may be displaced in so doing, that does not meet the terms above under (1) and (2) within the Warranty Period, without expense whatsoever to District and with ordinary wear and tear and unusual abuse or neglect excepted. Neither District inspection nor failure to inspect shall relieve Contractor of any obligation hereunder. If in District's opinion, any article, material or work fails to conform to specifications or is otherwise defective, Contractor shall promptly replace same at Contractor's expense. No acceptance or payment by District shall constitute a waiver of the foregoing, and nothing herein shall exclude or limit any manufacturers, suppliers or other express warranties, or warranties implied by law.

8.2 Contractor will post a warranty bond pursuant to the terms of Section 4 for the Warranty Period. In the event of Contractor's failure to comply with the above-mentioned conditions within seven (7) days after being notified in writing, District may proceed to have the work repaired or replaced and made good at the expense of Contractor who agrees to pay the cost of and charges therefore immediately on demand, or District may tender demand to the surety under the warranty bond. If, in the opinion of District, defective work creates a dangerous condition or requires immediate correction or attention to prevent further loss to District or to prevent interruption of operations of District, District will attempt to give the notice required by this Section 6. If Contractor cannot be contacted or does not comply with District request for correction within a reasonable time as determined by District, or the warranty bond surety does not respond, District may, notwithstanding the provisions of this Section 6, proceed to make

such correction or provide such attention, and the costs of such corrections or attention shall be charged against Contractor. Such action by District will not relieve Contractor of the guarantees provided in this Section 6 or elsewhere in the Agreement.

8.3 This section does not in any way limit the warranty on any items for which a longer warranty is specified or on any items for which Contractor or a manufacturer or supplier gives a warranty for a longer period. Contractor agrees to furnish District, and assign over to District as required, all appropriate warranty certificates upon completion of the work. No warranty whether provided for in this Section 6 or elsewhere shall in any way limit the liability of Contractor or its sureties or insurers under the indemnity or insurance provisions of the Agreement. This warranty obligation shall survive the termination or expiration of the Agreement as to all completed work.

9. RECORDS

8.1 Contractor shall preserve and retain any and all records of or related to the Work, including all records of or related to this Agreement and the Work and obligations contained herein, for a period of no less than four (4) years commencing upon final payment to Contractor under the Agreement or, if an examination, review or audit is commenced but not completed within such period, until such examination, review or audit has been completed.

9.2 Pursuant to Government Code Section 8546.7, the State has the right to examine, review, audit and/or copy such records during the three (3) year period following final work order and payment to Contractor pursuant to this Agreement. Contractor, upon request, shall make the records of the Work available for the purposes described in this Section 7 at all reasonable times during the period Contractor is required to preserve and maintain such records.

10. CLAIMS

10.1 The claim terms set forth in this Agreement shall apply to those claims governed by Public Contract Code Section 20104 *et seq.* arising out of this Agreement.

10.2 In accordance with Public Contract Code Section 9201, District shall timely notify Contractor if District receives any third-party claim relating to the Work, or this Agreement. District shall be entitled to recover from Contractor District's reasonable costs incurred in providing such notification.

10.3 In the event of any declaratory or other legal or equitable action instituted between District and Contractor in connection with this Agreement, the prevailing Party shall be entitled to recover from the losing Party all of its attorneys fees, and costs and expenses.

11. GENERAL TERMS

11.1 This Agreement, including all documents and exhibits and appendices attached hereto, or incorporated herein by reference, and the executed work orders represent the entire agreement between District and Contractor and supersedes all prior negotiations, representations or agreements, either written or oral, including any previous agreements or contracts between the Parties to the extent the same are inconsistent with the terms hereof.

11.2 This Agreement shall not be considered modified, altered, changed, or amended in any respect unless documented in writing and signed by both Parties.

11.3 This Agreement shall be interpreted according to the laws of the State. In the event of any legal action to enforce or interpret this Agreement, the sole and exclusive venue shall be a court of competent jurisdiction located in Orange County, California, and the Parties hereto agree to and do hereby submit to the jurisdiction of such court, notwithstanding Code of Civil Procedure 394.

11.4 All notices hereunder and communications regarding interpretation of the terms of the Contract or changes thereto shall be provided by the mailing thereof by registered or certified mail, return receipt requested, postage prepaid and addressed as follows:

DISTRICT:	**CONTRACTOR:**
Moulton Niguel Water District	Jamison Engineering Contractors, Inc.
P.O. Box 30203	2525 S. Yale Street
Laguna Niguel, CA 92607	Santa Ana, CA 92704
Attn: Director of Engineering	Attn: Andrew Jamison

Any notice so given shall be considered received by the other Party three (3) days after deposit in the U.S. Mail as stated above and addressed to the Party at the above address. Actual notice shall be deemed adequate notice on the date actual notice occurred, regardless of the method of service.

11.5 If any section of this Agreement as applied to either Party or to any circumstance shall be adjudged by a court of competent jurisdiction to be void or enforceable for any reason, the same shall in no way affect (to the maximum extent permissible by law) any other provision of this Agreement, the application of any such provision under circumstances different from those adjudicated by the court, or the validity or enforceability of this Agreement as a whole.

11.6 Contractor shall not, either voluntarily or by action of law, assign or transfer this Contract or any obligation, right, title or interest assumed by Contractor herein without the prior written consent of District. If Contractor attempts an assignment or transfer of this Contract or any obligation, right, title or interest herein, District may, at its option, terminate and revoke the Contract and shall thereupon be relieved from any and all obligations to Contractor or its assignee or transferee.

11.7 No addition to or modification of any provision contained in the Agreement shall be effective unless fully set forth in a writing signed by both District and Contractor.

11.8 The failure of either Party to request performance in accordance with the terms of this Agreement shall not be deemed a waiver of the right to enforce the terms of this Agreement.

11.9 Contractor is an independent Contractor under this Agreement and not an employee of District. The personnel of Contractor are comprised of persons experienced in the work associated with the Services in all aspects.

11.10 All documents or other information developed or received by Contractor and related to the Work shall be delivered to District as the property of District.

11.12 Each Party represents and warrants this Agreement is valid and binding, is duly authorized by appropriate corporate or approving action, and that the person initialing this Agreement has the authority to bind such Party to this Agreement

11.13 This Agreement may be executed in counterparts, each of which, when executed and delivered, shall be an original and both of which together shall constitute one instrument, with the same force and effect as though all signatures appeared on a single document.

Each person signing this Agreement represents and warrants that he or she has been duly authorized by appropriate action of the Party he or she represents to execute, and thereby bind such Party to, this Agreement. This Agreement may be executed in counterparts, each of which, when executed and delivered, shall be an original and both of which together shall constitute one instrument, with the same force and effect as though all signatures appeared on a single document.

MOULTON NIGUEL WATER DISTRICT:	**JAMISON ENGINEERING CONTRACTORS, INC.**
By: _____	By: _____ (Authorized Representative of Contractor)
Printed Name: _____	Printed Name: _____
Title: _____	Title: _____
Dated: _____	Dated: _____

Exhibit A
Scope of Work

On-Call Construction Support Services

The Contractor shall be prepared and required to provide ethical, professional and quality work in the best interests of the public and District (personnel and property) in conformance with current regulatory standards. The Contractor will be expected to perform work as described below. All work shall be performed in accordance with District design guidelines, standard specifications, engineering (project) drawings and specifications.

A. **Mechanical Systems:** Installation, demolition, replacement, testing, and repair work associated with mechanical systems, including, but is not limited to, pumping systems, air handling systems, fans, HVAC units, clarifier components, digester components, blowers, engines, valves, boilers, and other mechanical systems.

B. **Piping Systems:** Installation, demolition, replacement, testing, and repair of underground and above-ground piping systems. This work generally includes, but is not limited to, installing piping, trenching and backfilling of buried pipe systems, valves, coating, lining, bypass piping, bypass pumping, sewage drainage, paving, related appurtenances and other items of work needed to construct, repair, or replace a fully functioning piping system. Typical District piping systems include, but are not limited to, sewer piping (lateral, trunk, force-main, etc.), water piping, storm-water piping, gas piping, air conveyance piping, and chemical piping.

C. **Electrical Systems:** Installation, demolition, replacement, testing, and repair work associated with electrical systems. This work generally includes, but is not limited to, work associated with instrumentation systems, circuit systems, motors, fiber-optics, analyzer systems, control systems, programming, and other electrical-type systems. Work includes replacing, repairing or modifying associated electrical equipment and appurtenant equipment required to install functioning systems.

D. **Instrumentation Systems:** Installation, demolition, replacement, and repair of MNWD Instrumentation systems. This work generally includes, but is not limited to, transducers, gauges, monitors, meters, probes, programming, and associated systems. Work includes replacing, repairing, testing, calibrating or modifying associated instrumentation equipment and appurtenant equipment required to install functioning systems.

E. **Structural Repairs and Replacements:** Installation, demolition, replacement, and repair of District's structural systems. This work generally includes replacing, repairing, removing, and installing, among other work items, concrete, wood, steel systems, beam systems, roofing systems, supports and associated systems. This work consists of, but is not limited to, vertical and horizontal concrete flatwork, structural steel, timber and wood structures, brickwork, masonry, platforms, scaffolding, decks, and associated systems. Work also consists of structural analysis of said systems, general reinforcement, seismic reinforcement and other items not listed.

F. **Site Work Repairs and Replacements:** Installation, demolition, replacement, and repair of site-systems. This work generally includes replacing, repairing, removing, and installing, among other work items, site soil, pavement, and associated systems. This work generally includes, but is not limited to, asphaltic concrete, walkways, railings, base course, sub-base, pavement patching, concrete curb and gutter, irrigation systems, sidewalk, driveway, garden walls, sprinkler systems, retaining walls, drainage systems, parking areas, street lighting and other typical yard or site items and systems.

Exhibit B

Work Order Form (Sample)

Work Order Form

[To be executed by OWNER and CONTRACTOR prior to commencement of work; again by OWNER for formal acceptance of completed work]

This Work Order is executed pursuant to the "**AGREEMENT FOR ON-CALL CONSTRUCTION SUPPORT SERVICES BETWEEN MOULTON NIGUEL WATER DISTRICT AND Jamison Engineering Contractors. Inc.** (Contract No. OM19-20.024) dated _____, 2019 ("Agreement"). The Agreement terms are fully incorporated in this Work Order. Terms used in this Work Order have the same meanings given in the Agreement.

I. PRIOR TO COMMENCEMENT OF WORK

Work Order No.: _____

Work Description: _____

_____

Work Location: (address/intersection, City) _____

_____

Estimated Work Cost: (attach quote/proposal) $_____

Estimated Time for Completion: _____

Notice to Proceed Given: [Date] _____ [By] _____

ACKNOWLEDGED AND AGREED:

OWNER'S REPRESENTATIVE:	CONTRACTOR'S REPRESENTATIVE:
Sign:_____	Sign:_____
Print Name:_____	Print Name:_____

II. OWNER'S ACCEPTANCE OF COMPLETED WORK

Actual Work Cost: (attach backup information as required) $_____

OWNER accepts all work completed under this Work Order on the date below, subject to all terms of the Agreement.

OWNER'S REPRESENTATIVE:

Sign:_____ Date:_____

Director, Officer, AGM, or GM

Exhibit C
Rate Schedule

Jamison Engineering
Contractors, Inc.
2525 S. Yale Street, Santa Ana, CA 92704
(714) 434-9196 Fax: (714) 434-3762

RATE SHEETS

Rates are effective for
6/01/2018 – 6/30/2021

	ST
Craft/Laborer	118.00
Craft/Leadsmen	128.00
Craft/Foremen	159.00
Supervisor	169.00
Project Manager	199.00
Consultant	250.00
Crane Operator	158.00
Welder Fabricator	200.00

Admin: 95.00/hr.
Travel 35.00/hr.

EQUIPMENT RATES:

	Hourly
Crane	150.00
Combo Tool Truck	72.00
Mechanic's Truck	87.00
Ford Stake bed Truck	52.00
Dump Truck	97.00
Utility Truck (Pick up)	42.00
Confined Space Entry Equipment/SCBA	94.00
Trailer Mounted Manhole Blower	80.00
Water (Buffalo) Trailer	42.00
Trailer Mounted Compressor w/ 30 & 90 lb. Jackhammers	50.00
Welding Trailer	42.00

26 KV Generator	37.00	
4” Pump: Submersible	37.00	
6” Pump: Submersible	48.00	
4” Discharge Hose	20.00/50 ft.	Minimum
6” Discharge Hose	40.00/50 ft.	Minimum
2” submersible Pump (electric)	15.00	
1-1/2” x 50’ Flood Hose	19.00	Minimum
Garden Hose Pump	2.00	
Diaphragm Pump	14.00	
Concrete Saw (walk behind)	43.00	
Chain Saw	18.00	
Gas Power Cut-Off Demo Saw	19.00	
Chop Saw	49.00	Minimum
Vibe- Plate	20.00	
Rotor Hammer	14.00	
Wacker	22.00	
Power Puff	19.00	
Generator-small	14.00	
Transit	89.00	
Grade Level Laser	24.00	
Laser Level	72.00	Minimum
Line Unit	154.00	Minimum
Extension Ladder	22.00 (14’-36’)	Minimum
Cement Mixer	18.00	

Porta Power	9.00	
Pole Hole Auger	17.00	
24'-Self Contained Confined Space/ Office Trailer	225.00	Minimum
Car & Enclosed Utility Trailers	65.00	Minimum
Office Trailer	25.00	Minimum
Magnetic Base Drill	12.00	
Core Drill W/ 1 Bit	23.00	
Fire Monitor	14.00	
Canopy/EZ-Up	45.00	Minimum
6" GAS FLAP	88.00	------
10" GAS FLAP	115.00	------
Coveralls	9.00	Minimum
Gloves	2.00	Minimum

ALL JOBS ARE A 4 HOUR MINIMUM

NOTE: Rates **DO NOT** include travel charges, delivery charges, fuel charges or environmental charges.

All Materials, Rentals, Outside Services, Fuel, Permits, Licenses and Bonds will be Cost + 15%.

Exhibit D

Payment Bond

PAYMENT BOND

KNOW ALL PERSONS BY THESE PRESENTS:

THAT WHEREAS, the Moulton Niguel Water District (hereinafter referred to as "District") has awarded to Jamison Engineering Contractors, Inc, (hereinafter referred to as the "Contractor") an agreement for On-Call Construction Support Services (hereinafter referred to as the "Project").

WHEREAS, the work to be performed by the Contractor is more particularly set forth in the Contract Documents for the Project dated _____, (hereinafter referred to as "Contract Documents"), the terms and conditions of which are expressly incorporated herein by reference; and

WHEREAS, Principal is required to furnish a bond in connection with the contract described above; providing that if Principal or any of its Subcontractors shall fail to pay for any materials, provisions, provender, equipment, or other supplies used in, upon, for or about the performance of the work contracted to be done, or for any work or labor done thereon of any kind, or for amounts due under the Unemployment Insurance Code or for any amounts required to be deducted, withheld, and paid over to the Employment Development Department from the wages of employees of Principal and its Subcontractors with respect to such work or labor the Surety on this bond will pay for the same to the extent hereinafter set forth.

NOW THEREFORE, we, the Principal and _____ as Surety, are held and firmly bound unto the District in the penal sum of _____ Dollars ($_____) lawful money of the United States of America, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that if Principal, his or its subcontractors, heirs, executors, administrators, successors or assigns, shall fail to pay any of the persons named in Section 9100 of the Civil Code, fail to pay for any materials, provisions or other supplies, used in, upon, for or about the performance of the work contracted to be done, or for any work or labor thereon of any kind, or amounts due under the Unemployment Insurance Code with respect to work or labor performed under the contract, or for any amounts required to be deducted, withheld, and paid over to the Employment Development Department or Franchise Tax Board from the wages of employees of the contractor and his subcontractors pursuant to Section 18663 of the Revenue and Taxation Code, with respect to such work and labor the Surety or Sureties will pay for the same, in an amount not exceeding the sum herein above specified, and also, in case suit is brought upon this bond, all litigation expenses incurred by the District in such suit, including reasonable attorneys' fees, court costs, expert witness fees and investigation expenses.

This bond shall inure to the benefit of any of the persons named in Section 9100 of the Civil Code so as to give a right of action to such persons or their assigns in any suit brought upon this bond.

It is further stipulated and agreed that the Surety on this bond shall not be exonerated or released from the obligation of this bond by any change, extension of time for performance, addition,

alteration or modification in, to, or of any contract, plans, specifications, or agreement pertaining or relating to any scheme or work of improvement herein above described, or pertaining or relating to the furnishing of labor, materials, or equipment therefore, nor by any change or modification of any terms of payment or extension of the time for any payment pertaining or relating to any scheme or work of improvement herein above described, nor by any rescission or attempted rescission or attempted rescission of the contract, agreement or bond, nor by any conditions precedent or subsequent in the bond attempting to limit the right of recovery of claimants otherwise entitled to recover under any such contract or agreement or under the bond, nor by any fraud practiced by any person other than the claimant seeking to recover on the bond and that this bond be construed most strongly against the Surety and in favor of all persons for whose benefit such bond is given, and under no circumstances shall Surety be released from liability to those for whose benefit such bond has been given, by reason of any breach of contract between the District and original contractor or on the part of any obligee named in such bond, but the sole conditions of recovery shall be that claimant is a person described in Section 9100 of the Civil Code, and has not been paid the full amount of his claim.

The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract to be performed thereunder, shall in any way affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of Contract, including but not limited to the provisions of Sections 2819 and 2845 of the California Civil Code.

IN WITNESS WHEREOF, two (2) identical counterparts of this instrument, each of which shall for all purposes be deemed an original thereof, have been duly executed by the Principal and Surety above named, on the _____ day of _____ 20_____ the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative pursuant to authority of its governing body.

(Corporate Seal of Principal,
if corporation)

_____
Principal (Property Name of Contractor)

By _____
(Signature of Contractor)

(Seal of Surety)

_____
Surety

By _____
Attorney in Fact

Signatures of those signing for the Contractor and Surety must be notarized and evidence of corporate authority attached. A Power-of-Attorney authorizing the person signing on behalf of the Surety to do so must be attached hereto.

Exhibit E
Performance Bond

PERFORMANCE BOND

KNOW ALL PERSONS BY THESE PRESENTS:

THAT WHEREAS, the Moulton Niguel Water District (hereinafter referred to as "District") has awarded to Jamison Engineering Contractors, Inc, (hereinafter referred to as the "Contractor") an agreement for On-Call Construction Support Services (hereinafter referred to as the "Project").

WHEREAS, the work to be performed by the Contractor is more particularly set forth in the Contract Documents for the Project dated _____, (hereinafter referred to as "Contract Documents"), the terms and conditions of which are expressly incorporated herein by reference; and

WHEREAS, the Contractor is required by the Contract Documents to perform the terms thereof and to furnish a bond for the faithful performance of the Contract Documents.

NOW, THEREFORE, we, _____, the undersigned Contractor and _____ as Surety, a corporation organized and duly authorized to transact business under the laws of the State of California, are held and firmly bound unto the District in the sum of _____ DOLLARS, ($_____), the sum being not less than one hundred percent (100%) of the total amount of the Contract, for which amount well and truly to be made, we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that, if the Contractor, his or its heirs, executors, administrators, successors or assigns, shall in all things stand to and abide by, and well and truly keep and perform the covenants, conditions and agreements in the Contract Documents and any alteration thereof made as therein provided, on its part, to be kept and performed at the time and in the manner therein specified, and in all respects according to their intent and meaning; and shall faithfully fulfill all obligations including the one-year guarantee of all materials and workmanship; and shall indemnify and save harmless the District, its officers and agents, as stipulated in the Contract Documents, then this obligation shall become null and void; otherwise it shall be and remain in full force and effect.

As a condition precedent to the satisfactory completion of the Project, unless otherwise provided for in the Contract Documents, the guarantee obligation shall hold good for a period of one (1) year after the acceptance of the work by District, during which time if Contractor shall fail to make full, complete, and satisfactory repair and replacements and totally protect the District from loss or damage resulting from or caused by defective materials or faulty workmanship the above obligation in penal sum thereof shall remain in full force and effect. However, anything in this paragraph to the contrary notwithstanding, the obligations of Surety hereunder shall continue so long as any obligation of Contractor remains. Nothing herein shall limit District's rights or the Contractor or Surety's obligations under the Contract, law or equity, including, but not limited to, California Code of Civil Procedure section 337.15.

As a part of the obligation secured hereby and in addition to the face amount specified therefor, there shall be included costs and reasonable expenses and fees including reasonable attorney's fees, incurred by the District in enforcing such obligation.

Whenever Contractor shall be, and is declared by the District to be, in default under the Contract Documents, the Surety shall remedy the default pursuant to the Contract Documents, or shall promptly, at the District's option:

1. Take over and complete the Project in accordance with all terms and conditions in the Contract Documents; or

2. Obtain a bid or bids for completing the Project in accordance with all terms and conditions in the Contract Documents and upon determination by Surety of the lowest responsive and responsible bidder, arrange for a Contract between such bidder, the Surety and the District, and make available as work progresses sufficient funds to pay the cost of completion of the Project, less the balance of the contract price, including other costs and damages for which Surety may be liable. The term "balance of the contract price" as used in this paragraph shall mean the total amount payable to Contractor by the District under the Contract and any modification thereto, less any amount previously paid by the District to the Contractor and any other set offs pursuant to the Contract Documents.

3. Permit the District to complete the Project in any manner consistent with California law and make available as work progresses sufficient funds to pay the cost of completion of the Project, less the balance of the contract price, including other costs and damages for which Surety may be liable. The term "balance of the contract price" as used in this paragraph shall mean the total amount payable to Contractor by the District under the Contract and any modification thereto, less any amount previously paid by the District to the Contractor and any other set offs pursuant to the Contract Documents.

Surety expressly agrees that the District may reject any contractor or subcontractor which may be proposed by Surety in fulfillment of its obligations in the event of default by the Contractor.

Surety shall not utilize Contractor in completing the Project nor shall Surety accept a bid from Contractor for completion of the Project if the District, when declaring the Contractor in default, notifies Surety of the District's objection to Contractor's further participation in the completion of the Project.

The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract to be performed thereunder, shall in any way affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of Contract, including but not limited to the provisions of Sections 2819 and 2845 of the California Civil Code.

IN WITNESS WHEREOF, we have hereunto set our hands and seals this _____ day of _____, 20___.

_____
CONTRACTOR/PRINCIPAL

_____
Name

By_____

SURETY:

By: _____
Attorney-In-Fact

Signatures of those signing for the Contractor and Surety must be notarized and evidence of corporate authority attached.

The rate of premium on this bond is _____ per thousand. The total amount of premium charges, $_____.
(The above must be filled in by corporate attorney.)

THE FOLLOWING INFORMATION IS MANDATORY

Any claims under this bond may be addressed to:

(Name and Address of Surety) _____

_____

_____

(Name and Address of Agent or Representative for service of process in California, if different from above) _____

_____

_____

(Telephone number of Surety and Agent or Representative for service of process in California) _____

(11-2015)

ON-CALL CONSTRUCTION SUPPORT SERVICES AGREEMENT
BETWEEN
MOULTON NIGUEL WATER DISTRICT AND
KINGMEN CONSTRUCTION, INC.
CONTRACT NO. OM19-20.024b

This Agreement (the "Agreement") is made and entered into on _____ ("Effective Date") by and between the Moulton Niguel Water District ("District") and Kingmen Construction, Inc. ("Contractor"). District and Contractor are sometimes individually referred to as "Party" and collectively as "Parties" in this Agreement.

RECITALS

A. District requires individual construction projects to be performed in certain areas throughout the District on an as-needed on-call basis. This Agreement, as well as each Work Order issued pursuant to Section 1, establishes the terms and procedures that will apply to this Work.

B. The objective of this Agreement is for District to authorize Contractor to provide construction support Work on an on-call basis related to service, repair and construction of DISTRICT facilities.

NOW, THEREFORE, District and Contractor for the consideration stated herein agree as follows:

1. SCOPE OF SERVICES; PRICE; PERFORMANCE STANDARDS

1.1 Contractor shall perform construction support services (the "Work") in accordance with the general standards set forth in attached Exhibit A ("Scope of Work) and the other terms of this Agreement from time to time as directed by District.

1.2 As the need for Work arises, as determined by District, District's representative shall issue Contractor a written work order ("Work Order") as set worth in Exhibit B. In response to District's request, Contractor shall deliver a written cost quote indicating: (a) Contractor's availability to perform the Work; (b) the not-to-exceed price to perform the Work requested in accordance with the Rate Schedule shown in Exhibit C hereto and incorporated herein by this reference; and (c) the estimated time for performance of the Work. A Notice to Proceed ("NTP") will be issued by District to Contractor following the acceptance of the Work.

1.3. In some cases, circumstances may not allow time to perform the Work Order process described above. In such cases, a District representative will contact Contractor and request that Contractor perform construction Work on a time and materials basis in accordance with the Rate Schedule and the terms and conditions of this Agreement.

1.4. Contractor's Rate Schedule shall include all labor, supervision, materials, equipment, supplies, tools, incidentals, taxes, profit, overhead, bonding, traffic control, and insurance necessary to mobilize, complete the Work, demobilize and provide cleanup and restoration of construction and work sites.

1.5. Contractor acknowledges and agrees that District does not guarantee any minimum or maximum amount of Work, and District may use other contractors for the Work, in

its sole discretion. This Agreement, including all attached Exhibits, as well as the terms and conditions of any municipal permits or licenses issued or applicable in connection with the Work, if any, form the Agreement between the Parties. Contractor shall provide all labor, materials, tools, equipment, supplies, utilities and transportation services required to perform the Work, subject to compliance with the Agreement requirements, and complete all Work in a thorough, professional and workmanlike manner, and in accordance with generally accepted industry standards, and to the satisfaction of District.

1.6. The Work shall be done in accordance with the Scope of Work, the Work Order issued for each individual repair project during the term of this Agreement, and the permitting or other requirements of any governmental entity within whose jurisdiction the Work is performed, which are by this reference incorporated into this Agreement. It shall be the Contractor's responsibility to ascertain and keep informed of all such existing and future requirements of other governmental entities concerning the Work performed under this Agreement, including acquisition of necessary permits and licenses by municipalities related to repair work in public right of way and payment of the fees or costs thereof.

1.7 Contractor shall provide a list of any subcontractors to District prior to commencement of Work. Any subcontractor must meet the approval of District. Costs for subcontracted work shall be paid as invoiced by subcontractor plus five percent (5%) markup for administrative costs.

1.8 The Work shall be completed in accordance with all local, state and federal rules, regulations and codes applicable to health and safety. Contractor shall be solely and completely responsible for conditions of the Work sites, including safety of all persons and property during performance of the Work. Contractor's operations for the Work shall be conducted so as to provide maximum safety to Contractor's employees, District's representatives, and in compliance with all safety laws, rules and regulations of the State, federal, and local agencies. It is Contractor's responsibility to have a current safety program on file with District prior to commencement of any work under this Agreement.

1.9 Contractor shall conduct its operations so as to offer the least possible obstruction and inconvenience to the public, and shall have under construction no greater length or amount of work that it can prosecute properly with due regard to the rights of the public. Convenient access to driveways, houses and buildings along the line of work shall be maintained and temporary crossings shall be provided and maintained in good condition. Not more than one crossing or intersecting street or road shall be closed at any one time. Contractor shall provide and maintain such fences, barriers, directional signs, lights and flagmen as are necessary to give adequate warning to the public at all times of any dangerous conditions to be encountered as a result of the work and to give directions to the public. Contractor shall comply with all terms of any permits issued by public agencies for the work.

2. COMPENSATION

2.1 District agrees to compensate Contractor for Work performed in accordance with Exhibit C ("Rate Schedule"). Total compensation under the Agreement shall not exceed **Seven Hundred Fifty Thousand Dollars ($750,000)** without prior written approval by District.

2.2 CONTRACTOR is required to prepare and submit a daily work log to DISTRICT's representative on-site, unless otherwise waived in writing by the DISTRICT Representative. The daily work log shall be submitted each day and be signed off by both Parties. The daily

work log will be used to verify CONTRACTOR's invoices for a work order based on time and materials payment. At a minimum, the work log should list each employee, classification, and hours worked each day; the type of equipment used on-site each day, hours of operation; and a brief summary of Work performed.

2.3 Contractor shall submit itemized invoices with supporting documentation including but not limited to, daily logs described above, period of work, paid receipts and invoices to validate the charges for each invoice. District shall pay invoices within thirty (30) days of receipt. Payments shall be subject to review for compliance by District with the requirements of this Agreement.

3. TERM OF AGREEMENT AND TERMINATION

3.1 This Agreement shall commence on the Effective Date and continue for a period of three (3) years, unless earlier terminated as provided herein.

3.2 Either Party may terminate this Agreement by providing written notice to the other Party ten (10) business days in advance of the date of termination; provided. District may terminate the Agreement without any advance notice in the event Contractor is in material breach of any of the terms of this Agreement, as determined by District in its discretion. Any termination by Contractor shall not be effective as to any Work previously performed hereunder, or any Work being undertaken at the time of such termination by Contractor, and shall only apply prospectively. Contractor remains responsible for the completion of any Work still outstanding under a work order in accordance with the terms of this Agreement and work order. Contractor's indemnity and warranty obligations as to any work order, as well as any outstanding obligations of Contractor at the time of any termination, shall survive the expiration or termination of this Agreement. On District's termination, Contractor will be entitled to the reasonable value of the Work performed for which it has not received prior compensation under a work order, subject to any offset from such payment representing District's damages from any material breach of the terms of this Agreement by Contractor or as otherwise provided for under Section 2. The foregoing provisions are in addition to and not in limitation of any other rights or remedies available to District.

4. PUBLIC WORKS AND PREVAILING WAGE

4.1 Contractor is aware of the requirements of California Labor Code Section 1720 et seq., and 1770 et seq., as well as California Code of Regulations, Title 8, Section 16000 et seq., ("Prevailing Wage Laws"), which require the payment of prevailing wage rates and the performance of other requirements on "public works" and "maintenance" projects. Since the Work is being performed as part of an applicable "public works" or "maintenance" project, as defined by the Prevailing Wage Laws, and since the total compensation is $1,000 or more, Contractor agrees to fully comply with such Prevailing Wage Laws. A copy of these prevailing wage rates are on file with the Department of Industrial Relations and can be found online with the State of California at http://www.dir.ca.gov/dlsr/pwd.C Contractor shall make copies of the prevailing rates of per diem wages for each craft, classification or type of worker needed to execute the Work available to interested parties upon request, and shall post copies at Contractor's principal place of business and at the project site. Contractor shall defend, indemnify and hold the District, its officials, officers, employees and agents free and harmless from any claim or liability arising out of any failure or alleged failure to comply with the Prevailing Wage Laws. Contractor and any subcontractor shall forfeit a penalty of up to $200 per calendar day or portion thereof for each worker paid less than the prevailing wage rates.

4.2 Contractor's attention is directed to the provisions in section 1777.5 and 1777.6 of the Labor Code concerning the employment of apprentices by the Contractor or any subcontractor under the Contractor. It shall be the responsibility of the Contractor to effectuate compliance on the part of itself and any subcontractors with the requirements for employment of apprentices. Information relative to apprenticeship standards, wage schedules, and other requirements may be obtained from the Director of Industrial Relations, ex-officio the Administrator of Apprenticeship, San Francisco, California, or from the Division of Apprenticeship Standards and its branch offices.

4.3 Pursuant to Labor Code section 1776, the Contractor and each subcontractor shall maintain weekly certified payroll records showing the name, address, social security number, work classification, straight time and overtime hours paid each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker or other employee employed in connection with the work. Contractor shall certify under penalty of perjury that records maintained and submitted by Contractor are true and accurate. Contractor shall also require subcontractor(s) to certify weekly payroll records under penalty of perjury. In the event of noncompliance with the requirements of this Section, the Contractor shall have ten (10) days in which to comply subsequent to receipt of written notice specifying any item or actions necessary to achieve compliance with this section. If Contractor or subcontractor does not comply after such ten (10)-day period, the Contractor shall, as a penalty to District, forfeit One Hundred Dollars ($100) for each day, or portion thereof, for each worker until strict compliance is effectuated.

4.4 This Project is subject to compliance monitoring and enforcement by the Department of Industrial Relations ("DIR"). It shall be the Contractor's sole responsibility to evaluate and pay the cost of complying with all labor compliance requirements under this Agreement and applicable law. Any stop orders issued by the DIR against Contractor or any subcontractor that affect Contractor's performance of Work, including any delay, shall be Contractor's sole responsibility. Any delay arising out of or resulting from such stop orders shall be considered Contractor caused delay subject to any applicable liquidated damages and shall not be compensable by the District. Contractor shall defend, indemnify and hold the District, its officials, officers, employees and agents free and harmless from any claim or liability arising out of stop orders issued by the DIR against Contractor or any subcontractor.

4.5 In accordance with Labor Code section 1771.4, the Contractor and each subcontractor shall furnish the certified payroll records directly to the DIR on a weekly basis and in the format prescribed by the DIR, which may include electronic submission. Contractor shall comply with all requirements and regulations from the DIR relating to labor compliance monitoring and enforcement.

4.6 Contractor shall post, at appropriate conspicuous points on the work site, a schedule showing all determined general prevailing wage rates and all authorized deductions, if any, from unpaid wages actually earned.

4.7 Pursuant to Labor Code sections 1725.5 and 1771.1, the Contractor and its subcontractors must be registered with the DIR prior to the execution of a contract to perform public works. By entering into this Agreement, Contractor represents that it is aware of the registration requirement and is currently registered with the DIR. Contractor shall maintain a current registration for the duration of the Agreement. Contractor shall further include the requirements of Labor Code sections 1725.5 and 1771.1 in any subcontract and ensure that all

subcontractors are registered at the time this Agreement is entered into and maintain registration for the duration of the Agreement. Contractor's DIR Registration No. is 1000057502.

5. BONDS

5.1 Before commencing performance of the Work contracted for hereunder, Contractor shall furnish Payment and Performance bonds (the "Bonds") as required by Section 9550 of the Civil Code, for 100% of the contract value, from a single surety licensed and admitted in the State of California and acceptable to the District in the District's sole discretion. Contractor shall deliver all Bonds required hereunder to the District prior to the commencement of Work.

5.2 Should, in District's sole opinion, any bond become insufficient or any surety be found to be unsatisfactory, Contractor shall renew or replace the effected bond within (ten) 10 days of receiving notice from District. In the event the surety or Contractor intends to reduce or cancel any required bond, at least thirty (30) days prior written notice shall be given to the District, and Contractor shall post acceptable replacement bonds at least ten (10) days prior to expiration of the original bonds. No further payments shall be deemed due or will be made under this Contract until any replacement bonds required by this Section are accepted by the District. To the extent, if any, that the Total Contract Price is increased in accordance with the Contract, Contractor shall, upon request of the District, cause the amount of the bond to be increased accordingly and shall promptly deliver satisfactory evidence of such increase to the District. If Contractor fails to furnish any required bond, the District may terminate the Contract for cause.

5.3 Contractor shall use District's forms, which are attached hereto as Exhibit D ("Payment Bond"), and Exhibit E ("Performance Bond") for the Bonds.

6. INSURANCE

6.1 In addition to the requirements set forth herein, during the entire term of the Agreement, Contractor will pay for and maintain, in full force and effect, all insurance required by District. Contractor shall not commence Work under the Agreement until it has obtained all insurance required by the Agreement and shall be provided by Contractor with the Contractor's executed copy of this Agreement.

6.2 The general liability and business automobile insurance will be comprehensive in form, and extend through the term of this Agreement and on a 'per occurrence' basis. All policies will have a clause providing that thirty (30) calendar days written notice will be given to District prior to any cancellation of such policies. All insurance will be issued and underwritten by insurance companies having an AM Best rating of no less than "A- VII". *All policies shall name Moulton Niguel Water District, City of Aliso Viejo, City of Dana Point, City of Laguna Hills, City of Laguna Niguel, City of Mission Viejo, and each of their directors, elected officials, officers, employees and agents,* and any other public entities issuing permits for entry in public right of way to perform the Work, and owners of record of all property on which entry will be made to perform the Work as additional insureds thereunder ("Additional Insureds"). All of the policies of insurance provided hereunder shall be primary insurance and not contribute with any other insurance maintained by the Additional Insureds, and the insurer shall waive all rights of subrogation and contribution it may have against the Additional Insureds; these requirements shall be set forth in endorsements to policies. In the event any of said policies of insurance are

canceled, Contractor shall, prior to the cancellation date, submit new evidence of insurance in conformance with this Section 10 to District.

6.3 Commercial general liability in a combined limit of not less than $1,000,000 per occurrence, $2,000,000 aggregate with such aggregate to apply separately to the Work. Commercial General Liability insurance coverage shall be equivalent to Insurance Services Office Form CG 00 01. Included in such insurance shall be contractual coverage sufficiently broad to insure the matters set forth in Section 12 of this Agreement, **as well as the subrogation, primary insurance/non-contribution and Additional Insureds terms and endorsements described under subsection (c) above**. This insurance shall name the Additional Insureds using ISO endorsement CG 20 10 11 85, or both CG 20 10 and CG 23 37 forms if later revisions are used.

6.4 Business automobile insurance with liability limits of not less than $1,000,000 each accident. The policy shall include coverage for owned, non-owned, and hired vehicles, **and include the subrogation, primary insurance/non-contribution and Additional Insureds terms and endorsements.**

6.5 Worker's compensation insurance as required by State laws, and employer's liability insurance with limits not less than $1,000,000 each accident and $1,000,000 for disease per employs, **which must include a waiver of subrogation.**

6.6 Contractor shall furnish District with certificates of insurance and endorsements effecting coverage required by this Contract on forms satisfactory to the District. The certificates and endorsements for each insurance policy shall be signed by a person authorized by that insurer to bind coverage on its behalf and shall be on forms approved by the District. All certificates and endorsements must be received and approved by the District before work commences. The District reserves the right to require complete, certified copies of all required insurance policies, at any time.

6.7 All subcontractors shall meet the requirements of this Section before commencing Work. Contractor shall furnish separate certificates and endorsements for each subcontractor. Subcontractor policies of General Liability insurance shall name the District, its officials, employees, agents and authorized volunteers as additional insureds using form ISO 20 38 04 13 or endorsements providing the exact same coverage. All coverages for subcontractors shall be subject to all of the requirements stated herein except as otherwise agreed to by the District in writing.

6.8 Contractor shall report to the District, in addition to Contractor's insurer, any and all insurance claims submitted by Contractor in connection with the Work under this Contract.

6.9 Nothing in the insurance requirements set forth in this Agreement or under the bonding terms is to be construed as limiting the liability of Contractor or Contractor's insurers or sureties. Contractor agrees that the provisions of this Section 10 shall not be construed as limiting in any way the extent to which Contractor may be held responsible for the payment of damages or other costs to District, or any persons or property, resulting from Contractor's activities or the activities of any person or persons for which Contractor is otherwise responsible, including Contractor's subcontractors, if any.

7. INDEMNIFICATION

7.1 To the fullest extent permitted by law, Contractor shall hold harmless, indemnify, and defend, including the duty and cost to defend as provided by Section 2778 of the California Civil Code, District and its directors, officers, employees, engineers and representatives as well as all public agencies issuing permits in connection with the Work, and all property owners of the Work site ("indemnitees"), from liability, claims, damages, demands, actions, attorney's fees, costs and expenses arising out of the performance of the Work under this Agreement, or actual or alleged non-performance, or the furnishing of materials by Contractor or its subcontractors, including but not limited to, claims by the Contractor or Contractor's employees for damages to person or property, except for the sole negligence or willful misconduct or active negligence of the District, its directors, officers, engineers, employees and representatives.

7.2 In furtherance of Contractor's obligations in this Section 5, Contractor shall defend itself and the indemnitees against any and all liabilities, claims, losses, damages, actions, attorney's fees, costs and expenses arising out of the performance of the Work, or actual or alleged non-performance, or the furnishing of materials by Contractor or its subcontractors, including but not limited to claims by the Contractor or Contractor'S employees for damages to person or property.

7.3 This indemnity obligation shall survive the termination or expiration of the Agreement and the completion of any Work pursuant to any work order, or otherwise.

8. WARRANTY

8.1 Contractor fully warrants and guarantees, for a period of three hundred sixty-five (365) days from the date of "final acceptance" (as defined in section 2.4) of any work by District ("Warranty Period"), that: (1) all goods, materials, and equipment supplied are new, are of first class material and workmanship and are free from defects; and (2) that all work will be of good quality, performed to the standard of care customary in Contractor's trade or profession. Under this guarantee, Contractor shall repair and replace any and all work, together with any other work which may be displaced in so doing, that does not meet the terms above under (1) and (2) within the Warranty Period, without expense whatsoever to District and with ordinary wear and tear and unusual abuse or neglect excepted. Neither District inspection nor failure to inspect shall relieve Contractor of any obligation hereunder. If in District's opinion, any article, material or work fails to conform to specifications or is otherwise defective, Contractor shall promptly replace same at Contractor's expense. No acceptance or payment by District shall constitute a waiver of the foregoing, and nothing herein shall exclude or limit any manufacturers, suppliers or other express warranties, or warranties implied by law.

8.2 Contractor will post a warranty bond pursuant to the terms of Section 4 for the Warranty Period. In the event of Contractor's failure to comply with the above-mentioned conditions within seven (7) days after being notified in writing, District may proceed to have the work repaired or replaced and made good at the expense of Contractor who agrees to pay the cost of and charges therefore immediately on demand, or District may tender demand to the surety under the warranty bond. If, in the opinion of District, defective work creates a dangerous condition or requires immediate correction or attention to prevent further loss to District or to prevent interruption of operations of District, District will attempt to give the notice required by this Section 6. If Contractor cannot be contacted or does not comply with District request for correction within a reasonable time as determined by District, or the warranty bond surety does not respond, District may, notwithstanding the provisions of this Section 6, proceed to make

such correction or provide such attention, and the costs of such corrections or attention shall be charged against Contractor. Such action by District will not relieve Contractor of the guarantees provided in this Section 6 or elsewhere in the Agreement.

8.3 This section does not in any way limit the warranty on any items for which a longer warranty is specified or on any items for which Contractor or a manufacturer or supplier gives a warranty for a longer period. Contractor agrees to furnish District, and assign over to District as required, all appropriate warranty certificates upon completion of the work. No warranty whether provided for in this Section 6 or elsewhere shall in any way limit the liability of Contractor or its sureties or insurers under the indemnity or insurance provisions of the Agreement. This warranty obligation shall survive the termination or expiration of the Agreement as to all completed work.

9. RECORDS

8.1 Contractor shall preserve and retain any and all records of or related to the Work, including all records of or related to this Agreement and the Work and obligations contained herein, for a period of no less than four (4) years commencing upon final payment to Contractor under the Agreement or, if an examination, review or audit is commenced but not completed within such period, until such examination, review or audit has been completed.

9.2 Pursuant to Government Code Section 8546.7, the State has the right to examine, review, audit and/or copy such records during the three (3) year period following final work order and payment to Contractor pursuant to this Agreement. Contractor, upon request, shall make the records of the Work available for the purposes described in this Section 7 at all reasonable times during the period Contractor is required to preserve and maintain such records.

10. CLAIMS

10.1 The claim terms set forth in this Agreement shall apply to those claims governed by Public Contract Code Section 20104 *et seq.* arising out of this Agreement.

10.2 In accordance with Public Contract Code Section 9201, District shall timely notify Contractor if District receives any third-party claim relating to the Work, or this Agreement. District shall be entitled to recover from Contractor District's reasonable costs incurred in providing such notification.

10.3 In the event of any declaratory or other legal or equitable action instituted between District and Contractor in connection with this Agreement, the prevailing Party shall be entitled to recover from the losing Party all of its attorneys fees, and costs and expenses.

11. GENERAL TERMS

11.1 This Agreement, including all documents and exhibits and appendices attached hereto, or incorporated herein by reference, and the executed work orders represent the entire agreement between District and Contractor and supersedes all prior negotiations, representations or agreements, either written or oral, including any previous agreements or contracts between the Parties to the extent the same are inconsistent with the terms hereof.

11.2 This Agreement shall not be considered modified, altered, changed, or amended in any respect unless documented in writing and signed by both Parties.

11.3 This Agreement shall be interpreted according to the laws of the State. In the event of any legal action to enforce or interpret this Agreement, the sole and exclusive venue shall be a court of competent jurisdiction located in Orange County, California, and the Parties hereto agree to and do hereby submit to the jurisdiction of such court, notwithstanding Code of Civil Procedure 394.

11.4 All notices hereunder and communications regarding interpretation of the terms of the Contract or changes thereto shall be provided by the mailing thereof by registered or certified mail, return receipt requested, postage prepaid and addressed as follows:

DISTRICT:

Moulton Niguel Water District
P.O. Box 30203
Laguna Niguel, CA 92607
Attn: Director of Engineering

CONTRACTOR:

Kingmen Construction, Inc.
4200 Chino Hills Parkway
Suite 135/221
Chino Hills, CA 91709
Attn: Neil Nehmens

Any notice so given shall be considered received by the other Party three (3) days after deposit in the U.S. Mail as stated above and addressed to the Party at the above address. Actual notice shall be deemed adequate notice on the date actual notice occurred, regardless of the method of service.

11.5 If any section of this Agreement as applied to either Party or to any circumstance shall be adjudged by a court of competent jurisdiction to be void or enforceable for any reason, the same shall in no way affect (to the maximum extent permissible by law) any other provision of this Agreement, the application of any such provision under circumstances different from those adjudicated by the court, or the validity or enforceability of this Agreement as a whole.

11.6 Contractor shall not, either voluntarily or by action of law, assign or transfer this Contract or any obligation, right, title or interest assumed by Contractor herein without the prior written consent of District. If Contractor attempts an assignment or transfer of this Contract or any obligation, right, title or interest herein, District may, at its option, terminate and revoke the Contract and shall thereupon be relieved from any and all obligations to Contractor or its assignee or transferee.

11.7 No addition to or modification of any provision contained in the Agreement shall be effective unless fully set forth in a writing signed by both District and Contractor.

11.8 The failure of either Party to request performance in accordance with the terms of this Agreement shall not be deemed a waiver of the right to enforce the terms of this Agreement.

11.9 Contractor is an independent Contractor under this Agreement and not an employee of District. The personnel of Contractor are comprised of persons experienced in the work associated with the Services in all aspects.

11.10 All documents or other information developed or received by Contractor and related to the Work shall be delivered to District as the property of District.

11.12 Each Party represents and warrants this Agreement is valid and binding, is duly authorized by appropriate corporate or approving action, and that the person initialing this Agreement has the authority to bind such Party to this Agreement

11.13 This Agreement may be executed in counterparts, each of which, when executed and delivered, shall be an original and both of which together shall constitute one instrument, with the same force and effect as though all signatures appeared on a single document.

Each person signing this Agreement represents and warrants that he or she has been duly authorized by appropriate action of the Party he or she represents to execute, and thereby bind such Party to, this Agreement. This Agreement may be executed in counterparts, each of which, when executed and delivered, shall be an original and both of which together shall constitute one instrument, with the same force and effect as though all signatures appeared on a single document.

MOULTON NIGUEL WATER DISTRICT:	**KINGMEN CONSTRUCTION, INC.:**
By: _____	By: _____ (Authorized Representative of Contractor)
Printed Name: _____	Printed Name: _____
Title: _____	Title: _____
Dated: _____	Dated: _____

Exhibit A

Scope of Work

On-Call Construction Support Services

The Contractor shall be prepared and required to provide ethical, professional and quality work in the best interests of the public and District (personnel and property) in conformance with current regulatory standards. The Contractor will be expected to perform work as described below. All work shall be performed in accordance with District design guidelines, standard specifications, engineering (project) drawings and specifications.

A. **Mechanical Systems:** Installation, demolition, replacement, testing, and repair work associated with mechanical systems, including, but is not limited to, pumping systems, air handling systems, fans, HVAC units, clarifier components, digester components, blowers, engines, valves, boilers, and other mechanical systems.

B. **Piping Systems:** Installation, demolition, replacement, testing, and repair of underground and above-ground piping systems. This work generally includes, but is not limited to, installing piping, trenching and backfilling of buried pipe systems, valves, coating, lining, bypass piping, bypass pumping, sewage drainage, paving, related appurtenances and other items of work needed to construct, repair, or replace a fully functioning piping system. Typical District piping systems include, but are not limited to, sewer piping (lateral, trunk, force-main, etc.), water piping, storm-water piping, gas piping, air conveyance piping, and chemical piping.

C. **Electrical Systems:** Installation, demolition, replacement, testing, and repair work associated with electrical systems. This work generally includes, but is not limited to, work associated with instrumentation systems, circuit systems, motors, fiber-optics, analyzer systems, control systems, programming, and other electrical-type systems. Work includes replacing, repairing or modifying associated electrical equipment and appurtenant equipment required to install functioning systems.

D. **Instrumentation Systems:** Installation, demolition, replacement, and repair of MNWD Instrumentation systems. This work generally includes, but is not limited to, transducers, gauges, monitors, meters, probes, programming, and associated systems. Work includes replacing, repairing, testing, calibrating or modifying associated instrumentation equipment and appurtenant equipment required to install functioning systems.

E. **Structural Repairs and Replacements:** Installation, demolition, replacement, and repair of District's structural systems. This work generally includes replacing, repairing, removing, and installing, among other work items, concrete, wood, steel systems, beam systems, roofing systems, supports and associated systems. This work consists of, but is not limited to, vertical and horizontal concrete flatwork, structural steel, timber and wood structures, brickwork, masonry, platforms, scaffolding, decks, and associated systems. Work also consists of structural analysis of said systems, general reinforcement, seismic reinforcement and other items not listed.

F. **Site Work Repairs and Replacements:** Installation, demolition, replacement, and repair of site-systems. This work generally includes replacing, repairing, removing, and installing, among other work items, site soil, pavement, and associated systems. This work generally includes, but is not limited to, asphaltic concrete, walkways, railings, base course, sub-base, pavement patching, concrete curb and gutter, irrigation systems, sidewalk, driveway, garden walls, sprinkler systems, retaining walls, drainage systems, parking areas, street lighting and other typical yard or site items and systems.

Exhibit B

Work Order Form

Work Order Form

[To be executed by OWNER and CONTRACTOR prior to commencement of work; again by OWNER for formal acceptance of completed work]

This Work Order is executed pursuant to the "**AGREEMENT FOR ON-CALL CONSTRUCTION SUPPORT SERVICES BETWEEN MOULTON NIGUEL WATER DISTRICT AND KINGMEN CONSTRUCTION, INC.** (Contract No. OM19-20.024b) dated _____, 2019 ("Agreement"). The Agreement terms are fully incorporated in this Work Order. Terms used in this Work Order have the same meanings given in the Agreement.

I. PRIOR TO COMMENCEMENT OF WORK

Work Order No.: _____

Work Description: _____

_____

Work Location: (address/intersection, City) _____

_____

Estimated Work Cost: (attach quote/proposal) $_____

Estimated Time for Completion: _____

Notice to Proceed Given: [Date] _____ [By] _____

ACKNOWLEDGED AND AGREED:

OWNER'S REPRESENTATIVE:	CONTRACTOR'S REPRESENTATIVE:
Sign:_____	Sign:_____
Print Name:_____	Print Name:_____

II. OWNER'S ACCEPTANCE OF COMPLETED WORK

Actual Work Cost: (attach backup information as required) $_____

OWNER accepts all work completed under this Work Order on the date below, subject to all terms of the Agreement.

OWNER'S REPRESENTATIVE:

Sign:_____ Date:_____
Director, Officer, AGM, or GM

Exhibit C

Rate Schedule

Kingmen Construction, Inc. Schedule of Billable Rates (July 2019 – June 2020) [1] [2]
Prevailing Wage Projects

Labor Rates (per hour)[3]:

Project Manager……$125

Project Engineer……$75

Administration……$50

Superintendent (working or non-working)……$120

Equipment Operator (Group 8)……$107.28 Straight Time
$156.04 Overtime

Mason……$86.51 Straight Time
$125.10 Overtime

Carpenter……$88.67 Straight Time
$128.37 Overtime

Labor (Group 4)……$83.18 Straight Time
$120.06 Overtime

Truck Rates (per hour):

F-350 – 550 Crew Truck……$30

F-150 Foreman Truck……$25

Other Costs

Material and equipment utilized and not scheduled herein will be billed at cost incurred + 15%
If a payment and performance bond is requested it will be billed at cost +5%
Subcontractors will be billed at cost +5% per the standard agreement
Labor shall be an 8-hour minimum unless specifically discussed and agreed to before beginning the specific task order

[1] Rates listed herein are "Billable Rates" and include all applicable mark-up and costs

[2] Rates exclude payment and performance bond costs

[3] Foreman rates (when applicable) will be billed at the base rates contained herein plus the applicable foreman premium dictated by DIR

Kingmen Construction, Inc. Schedule of Billable Rates (July 2020 – June 2021) [1] [2]
Prevailing Wage Projects

Labor Rates (per hour)[3]:

Project Manager……$125

Project Engineer……$75

Administration……$50

Superintendent (working or non-working)……$120

Equipment Operator (Group 8)……$110.71 Straight Time
$161.17 Overtime

Mason……$89.11 Straight Time
$128.99 Overtime

Carpenter……$91.47 Straight Time
$132.57 Overtime

Labor (Group 4)……$86.12 Straight Time
$124.48 Overtime

Truck Rates (per hour)[4]:

F-350 – 550 Crew Truck……$30+

F-150 Foreman Truck……$25+

Other Costs

Material and equipment utilized and not scheduled herein will be billed at cost incurred + 15%
If a payment and performance bond is requested it will be billed at cost +5%
Subcontractors will be billed at cost +5% per the standard agreement
Labor shall be an 8-hour minimum unless specifically discussed and agreed to before beginning the specific task order

[1] Rates listed herein are "Billable Rates" and include all applicable mark-up and costs

[2] Rates exclude payment and performance bond costs

[3] Foreman rates will be billed at the base rates contained herein plus the applicable foreman premium dictated by DIR

[4] In order to determine vehicle rates for 2020 forward, Kingmen will use the established 2019 rate and escalate it at the same percentage that the Cal-Trans rates escalate for the same classification of vehicle for the same period of time.

Kingmen Construction, Inc. Schedule of Billable Rates (July 2021 – June 2022) [1] [2]
Prevailing Wage Projects

Labor Rates (per hour)[3]:

Project Manager……$130

Project Engineer……$78

Administration……$55

Superintendent (working or non-working)……$125

Equipment Operator (Group 8)……$116.17 Straight Time
$169.27 Overtime

Mason……$93.54 Straight Time
$135.56 Overtime

Carpenter……$95.95 Straight Time
$139.20 Overtime

Labor (Group 4)……$90.72 Straight Time
$131.29 Overtime

Truck Rates (per hour)[4]:

F-350 – 550 Crew Truck……$30+

F-150 Foreman Truck……$25+

Other Costs

Material and equipment utilized and not scheduled herein will be billed at cost incurred + 15%
If a payment and performance bond is requested it will be billed at cost +5%
Subcontractors will be billed at cost +5% per the standard agreement
Labor shall be an 8-hour minimum unless specifically discussed and agreed to before beginning the specific task order

[1] Rates listed herein are "Billable Rates" and include all applicable mark-up and costs

[2] Rates exclude payment and performance bond costs

[3] Foreman rates will be billed at the base rates contained herein plus the applicable foreman premium dictated by DIR

[4] In order to determine vehicle rates for 2021 forward, Kingmen will use the established 2019 rate and escalate it at the same percentage that the Cal-Trans rates escalate for the same classification of vehicle for the same period of time.

Kingmen Construction, Inc. Schedule of Billable Rates (July 2022 – June 2023) [1] [2]
Prevailing Wage Projects

Labor Rates (per hour)[3]:

Project Manager……$132

Project Engineer……$80

Administration……$57

Superintendent (working or non-working)……$127

Equipment Operator (Group 8)……$119.38 Straight Time
$174.09 Overtime

Mason……$96.75 Straight Time
$140.38 Overtime

Carpenter……$99.16 Straight Time
$144.02 Overtime

Labor (Group 4)……$93.93 Straight Time
$136.11 Overtime

Truck Rates (per hour)[4]:

F-350 – 550 Crew Truck……$30+

F-150 Foreman Truck……$25+

Other Costs

Material and equipment utilized and not scheduled herein will be billed at cost incurred + 15%
If a payment and performance bond is requested it will be billed at cost +5%
Subcontractors will be billed at cost +5% per the standard agreement
Labor shall be an 8-hour minimum unless specifically discussed and agreed to before beginning the specific task order

[1] Rates listed herein are "Billable Rates" and include all applicable mark-up and costs

[2] Rates exclude payment and performance bond costs

[3] Foreman rates will be billed at the base rates contained herein plus the applicable foreman premium dictated by DIR

[4] In order to determine vehicle rates for 2022 forward, Kingmen will use the established 2019 rate and escalate it at the same percentage that the Cal-Trans rates escalate for the same classification of vehicle for the same period of time.

Exhibit D
Payment Bond

PAYMENT BOND

KNOW ALL PERSONS BY THESE PRESENTS:

THAT WHEREAS, the Moulton Niguel Water District (hereinafter referred to as "District") has awarded to Kingmen construction, Inc, (hereinafter referred to as the "Contractor") an agreement for On-Call Construction Support Services (hereinafter referred to as the "Project").

WHEREAS, the work to be performed by the Contractor is more particularly set forth in the Contract Documents for the Project dated _____, (hereinafter referred to as "Contract Documents"), the terms and conditions of which are expressly incorporated herein by reference; and

WHEREAS, Principal is required to furnish a bond in connection with the contract described above; providing that if Principal or any of its Subcontractors shall fail to pay for any materials, provisions, provender, equipment, or other supplies used in, upon, for or about the performance of the work contracted to be done, or for any work or labor done thereon of any kind, or for amounts due under the Unemployment Insurance Code or for any amounts required to be deducted, withheld, and paid over to the Employment Development Department from the wages of employees of Principal and its Subcontractors with respect to such work or labor the Surety on this bond will pay for the same to the extent hereinafter set forth.

NOW THEREFORE, we, the Principal and _____ as Surety, are held and firmly bound unto the District in the penal sum of _____ Dollars ($_____) lawful money of the United States of America, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that if Principal, his or its subcontractors, heirs, executors, administrators, successors or assigns, shall fail to pay any of the persons named in Section 9100 of the Civil Code, fail to pay for any materials, provisions or other supplies, used in, upon, for or about the performance of the work contracted to be done, or for any work or labor thereon of any kind, or amounts due under the Unemployment Insurance Code with respect to work or labor performed under the contract, or for any amounts required to be deducted, withheld, and paid over to the Employment Development Department or Franchise Tax Board from the wages of employees of the contractor and his subcontractors pursuant to Section 18663 of the Revenue and Taxation Code, with respect to such work and labor the Surety or Sureties will pay for the same, in an amount not exceeding the sum herein above specified, and also, in case suit is brought upon this bond, all litigation expenses incurred by the District in such suit, including reasonable attorneys' fees, court costs, expert witness fees and investigation expenses.

This bond shall inure to the benefit of any of the persons named in Section 9100 of the Civil Code so as to give a right of action to such persons or their assigns in any suit brought upon this bond.

It is further stipulated and agreed that the Surety on this bond shall not be exonerated or released from the obligation of this bond by any change, extension of time for performance, addition,

alteration or modification in, to, or of any contract, plans, specifications, or agreement pertaining or relating to any scheme or work of improvement herein above described, or pertaining or relating to the furnishing of labor, materials, or equipment therefore, nor by any change or modification of any terms of payment or extension of the time for any payment pertaining or relating to any scheme or work of improvement herein above described, nor by any rescission or attempted rescission or attempted rescission of the contract, agreement or bond, nor by any conditions precedent or subsequent in the bond attempting to limit the right of recovery of claimants otherwise entitled to recover under any such contract or agreement or under the bond, nor by any fraud practiced by any person other than the claimant seeking to recover on the bond and that this bond be construed most strongly against the Surety and in favor of all persons for whose benefit such bond is given, and under no circumstances shall Surety be released from liability to those for whose benefit such bond has been given, by reason of any breach of contract between the District and original contractor or on the part of any obligee named in such bond, but the sole conditions of recovery shall be that claimant is a person described in Section 9100 of the Civil Code, and has not been paid the full amount of his claim.

The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract to be performed thereunder, shall in any way affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of Contract, including but not limited to the provisions of Sections 2819 and 2845 of the California Civil Code.

IN WITNESS WHEREOF, two (2) identical counterparts of this instrument, each of which shall for all purposes be deemed an original thereof, have been duly executed by the Principal and Surety above named, on the _____ day of _____ 20_____ the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative pursuant to authority of its governing body.

(Corporate Seal of Principal,
if corporation)

_____
Principal (Property Name of Contractor)

By _____
(Signature of Contractor)

(Seal of Surety)

_____
Surety

By _____
Attorney in Fact

Signatures of those signing for the Contractor and Surety must be notarized and evidence of corporate authority attached. A Power-of-Attorney authorizing the person signing on behalf of the Surety to do so must be attached hereto.

Exhibit E
Performance Bond

PERFORMANCE BOND

KNOW ALL PERSONS BY THESE PRESENTS:

THAT WHEREAS, the Moulton Niguel Water District (hereinafter referred to as "District") has awarded to Kingmen Construction, Inc, (hereinafter referred to as the "Contractor") an agreement for On-Call Construction Support Services (hereinafter referred to as the "Project").

WHEREAS, the work to be performed by the Contractor is more particularly set forth in the Contract Documents for the Project dated _____, (hereinafter referred to as "Contract Documents"), the terms and conditions of which are expressly incorporated herein by reference; and

WHEREAS, the Contractor is required by the Contract Documents to perform the terms thereof and to furnish a bond for the faithful performance of the Contract Documents.

NOW, THEREFORE, we, _____, the undersigned Contractor and _____ as Surety, a corporation organized and duly authorized to transact business under the laws of the State of California, are held and firmly bound unto the District in the sum of _____ DOLLARS, ($_____), the sum being not less than one hundred percent (100%) of the total amount of the Contract, for which amount well and truly to be made, we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that, if the Contractor, his or its heirs, executors, administrators, successors or assigns, shall in all things stand to and abide by, and well and truly keep and perform the covenants, conditions and agreements in the Contract Documents and any alteration thereof made as therein provided, on its part, to be kept and performed at the time and in the manner therein specified, and in all respects according to their intent and meaning; and shall faithfully fulfill all obligations including the one-year guarantee of all materials and workmanship; and shall indemnify and save harmless the District, its officers and agents, as stipulated in the Contract Documents, then this obligation shall become null and void; otherwise it shall be and remain in full force and effect.

As a condition precedent to the satisfactory completion of the Project, unless otherwise provided for in the Contract Documents, the guarantee obligation shall hold good for a period of one (1) year after the acceptance of the work by District, during which time if Contractor shall fail to make full, complete, and satisfactory repair and replacements and totally protect the District from loss or damage resulting from or caused by defective materials or faulty workmanship the above obligation in penal sum thereof shall remain in full force and effect. However, anything in this paragraph to the contrary notwithstanding, the obligations of Surety hereunder shall continue so long as any obligation of Contractor remains. Nothing herein shall limit District's rights or the Contractor or Surety's obligations under the Contract, law or equity, including, but not limited to, California Code of Civil Procedure section 337.15.

As a part of the obligation secured hereby and in addition to the face amount specified therefor, there shall be included costs and reasonable expenses and fees including reasonable attorney's fees, incurred by the District in enforcing such obligation.

Whenever Contractor shall be, and is declared by the District to be, in default under the Contract Documents, the Surety shall remedy the default pursuant to the Contract Documents, or shall promptly, at the District's option:

1. Take over and complete the Project in accordance with all terms and conditions in the Contract Documents; or

2. Obtain a bid or bids for completing the Project in accordance with all terms and conditions in the Contract Documents and upon determination by Surety of the lowest responsive and responsible bidder, arrange for a Contract between such bidder, the Surety and the District, and make available as work progresses sufficient funds to pay the cost of completion of the Project, less the balance of the contract price, including other costs and damages for which Surety may be liable. The term "balance of the contract price" as used in this paragraph shall mean the total amount payable to Contractor by the District under the Contract and any modification thereto, less any amount previously paid by the District to the Contractor and any other set offs pursuant to the Contract Documents.

3. Permit the District to complete the Project in any manner consistent with California law and make available as work progresses sufficient funds to pay the cost of completion of the Project, less the balance of the contract price, including other costs and damages for which Surety may be liable. The term "balance of the contract price" as used in this paragraph shall mean the total amount payable to Contractor by the District under the Contract and any modification thereto, less any amount previously paid by the District to the Contractor and any other set offs pursuant to the Contract Documents.

Surety expressly agrees that the District may reject any contractor or subcontractor which may be proposed by Surety in fulfillment of its obligations in the event of default by the Contractor.

Surety shall not utilize Contractor in completing the Project nor shall Surety accept a bid from Contractor for completion of the Project if the District, when declaring the Contractor in default, notifies Surety of the District's objection to Contractor's further participation in the completion of the Project.

The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract to be performed thereunder, shall in any way affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of Contract, including but not limited to the provisions of Sections 2819 and 2845 of the California Civil Code.

IN WITNESS WHEREOF, we have hereunto set our hands and seals this _____ day of _____, 20___.

_____
CONTRACTOR/PRINCIPAL

_____
Name

By_____

SURETY:

By: _____
Attorney-In-Fact

Signatures of those signing for the Contractor and Surety must be notarized and evidence of corporate authority attached.

The rate of premium on this bond is _____ per thousand. The total amount of premium charges, $_____.
(The above must be filled in by corporate attorney.)

THE FOLLOWING INFORMATION IS MANDATORY

Any claims under this bond may be addressed to:

(Name and Address of Surety) _____

_____

_____

(Name and Address of Agent or Representative for service of process in California, if different from above) _____

_____

_____

(Telephone number of Surety and Agent or Representative for service of process in California) _____

VENDOR CONTACT LIST

Company Name	Company Address	Contact Person	Telephone #	E-Mail
Jamison Engineering Contractors, Inc.	2525 S. Yale Street Santa Ana, CA 92704	Don Jamison	(714) 434-9196	Jamisoneng@msn.com
Kingmen Construction, Inc.	4200 Chino Hills Parkway, Suite 135/221 Chino Hills, CA 91709	Neil Nehmens	(909-529-1747	nnehmens@kingmenconstruction.com
Pacific Hydrotech Corporation	314 E. 3rd Street Perris, CA 92570	J. Kirk Harns	(951) 943-8803	kharns@pachydro.com
SS Mechanical Construction Corp.	26561 Jacinto Drive Mission Viejo, CA 92692	John Whelan	(714) 847-1317	John@ssmechanical.com

moulton niguel water district

STAFF REPORT

TO: **Board of Directors** **MEETING DATE: September 12, 2019**

FROM: **Todd Novacek, Director of Operations**
Doug Zytkewicz, Superintendent of Customer Service

SUBJECT: **Fiscal Year 2019-20 Meter Maintenance and Replacement Program**

SUMMARY:

Issue: Board action is required to authorize the procurement of meters for the Fiscal Year 2019-20 Meter Maintenance and Replacement Program.

Recommendation: It is recommended that the Board of Directors authorize meter and meter-related purchases for an amount not-to-exceed $1,240,000 for Fiscal Year 2019-20.

Fiscal Impact: Sufficient funds are included in the approved Fiscal Year 2019-20 Operating Budget.

Reviewed by Committee: Yes, recommended for approval at the Technical Committee Meeting on September 3, 2019.

Reviewed by Legal: Not Applicable.

BACKGROUND:

The District has 55,089 meters that provide potable and recycled water meter reading services to the District's customers. Customer Service staff maintains, repairs, and replaces these meters on an on-going basis as part of the District's meter maintenance and replacement program. A proactive program ensures customer meters are providing accurate reads, which can help inform customers of potential leak issues while minimizing any unaccounted water.

Based on past replacement rates and experience, staff estimates approximately 1,050 meters will need to be replaced during the fiscal year because of maintenance-related activity, including 800 residential meters and 250 irrigation meters. In addition to regular maintenance, District staff also performs meter replacements of obsolete and worn-out meters. Staff has identified 1,290 commercial meters (1.5”-2”) that are due for meter replacement. The meters proposed to be replaced are 15 to 22 years old, which is consistent with recommendations set by the American Water Works Association for replacement of meters.

Meters are also sold to the public when new developments are constructed or when customers up-size their services. Approximately 100 meters were sold to the public last fiscal year. Staff does not anticipate a significant change in public meter sales in the upcoming fiscal year as there are a limited number of vacant, un-metered parcels within the District’s boundary. Staff estimates 100 new meters that range in size ¾” to 2” will be required for public meter purchases in Fiscal Year 2019-20.

Table 1 summarizes the estimated number of meters required to be purchased for Fiscal Year 2019-20.

Table 1
Meters to Be Purchased

Meter Maintenance Program	
- Residential	800
- Irrigation	250
Public Meter Purchases	100
Commercial 1-1/2 – 2” Meters	1,290
TOTAL	**2,440**

DISCUSSION:

Staff compiled a list of meter specifications based on the District’s requirements for meter quality, functionality, and compatibility, and issued a Request for Quotations (RFQ) to five (5) pre-qualified meter distributor/manufacturers that were capable of meeting the District’s specifications: Aqua-Metric (Sensus), Badger Meter, iFlow Energy Solutions (Kamstrup), Ferguson, (Neptune), and Core & Main (Master Meter). After receiving the RFQ and assessing all requirements, Badger chose not to submit quotes due to lack of product availability and conflicts with functional specification capabilities. The price quotes from the four qualified meter manufacturers are listed in Table 2.

Table 2 Manufacturer & Type	**¾-inch Meter**	**1-inch Meter**	**1½-inch Meter**	**2-inch Meter**
iFlow Energy Solutions (Kamstrup)	$151.61	$222.15	**$467.20**	**$617.43**
Aqua-Metric (Sensus)	**$136.16**	**$166.49**	**$320.51**	**$384.62**
Ferguson (Neptune)	$161.00	$172.00	$430.00	$460.00
Core & Main (Master Meter)	No Bid	No Bid	No bid	$625.00

(Prices do not include 7.75% Sales Tax)

For residential meters, staff is recommending the purchase of ¾-inch and 1-inch meters and parts from Aqua-Metric (Sensus). The District has had good success with the Sensus meter, and it continues to provide good performance and value. The 1½-inch and 2-inch meters and parts from iFlowEnergy Solutions (Kamstrup) is recommended for commercial applications. These Kamstrup meters can read water consumption at very low flows, which can often be seen in commercial applications. The 1½-inch and 2-inch irrigation meters are recommended to remain the Sensus meters from Aqua-Metric. Each of these manufacturers meet or exceed the latest AWWA standards for meter requirements and are all compatible with the District's Advanced Meter Infrastructure (AMI) program.

Staff's meter purchase recommendation for Fiscal Year 2019-20 is detailed in Table 3.

Table 3 Meter Purchase Recommendations			
Description	**Supplier**	**Estimated Quantity**	**Estimated Cost**
Commercial Meter Replacement	iFlow Energy Solutions (1-½ " and 2")	1.290	$796,485
Meter System Maintenance	Aqua-Metric	800 (600 /3/4") (200 /1")	$114,994
Irrigation Meter Replacement	Aqua-Metric	250	$96,155
New meter sales	Aqua-Metric / iFlow Energy Solutions	100 (25 ea. Size)	$28,861
Miscellaneous Parts and Equipment, including handheld devices and large meters for pilot testing.			$203,000
		TOTAL	**$1,240,000**

The proposed authorization includes the procurement of several miscellaneous meters and meter-related equipment. District staff is proposing to replace the existing meter reading and programing handheld devices. These devices are used in the daily activities of reading residential meter routes and programing AMI meters. District staff has also identified multiple large commercial meter settings that are due for replacement this year. These large 8" commercial meters service an existing multi-family development and are 20 years old. For this application, District staff is proposing a pilot test of a new residential Ally meter. This new meter has the capability of providing remote alarms for flow, pressure and temperature, and provides the ability to open and close the meter remotely. The pilot test will help to demonstrate the opportunities for utilizing this meter at other applications within the District's distribution system.

moulton niguel water district

STAFF REPORT

TO: **Board of Directors** **MEETING DATE: September 3, 2019**

FROM: **Matt Collings, Assistant General Manager**
Drew Atwater, Director of Finance and Water Resources

SUBJECT: **Memorandum of Understanding for Huntington Beach Ocean Desalter**

SUMMARY:

Issue: Orange County Water District (OCWD) and the District are considering a Memorandum of Understanding (MOU) to confirm non-binding interest in the proposed Huntington Beach Ocean Desalter from local retail water agencies.

Recommendation: It is recommended that the Board of Directors approve the Memorandum of Understanding between Orange County Water District and Moulton Niguel Water District regarding non-binding interest in the Huntington Beach Ocean Desalter.

Fiscal Impact: No fiscal impact.

Reviewed by Committee: Yes, recommended for approval at the Technical Committee Meeting on September 3, 2019.

Reviewed by Legal: Yes

BACKGROUND:

The Orange County Water District (OCWD) has entered into a term sheet with Poseidon Resources Inc. (Poseidon) for potential development of an ocean desalter to be located in Huntington Beach. Currently, Poseidon is in the process of obtaining the remaining permits for the project. Once all permits have been obtained, OCWD will consider entering into a water purchase agreement with Poseidon for product water from the Huntington Beach Ocean Desalter.

Concurrently, OCWD is identifying options for delivering water within the Orange County groundwater basin, as well as alternatives to deliver product water to water agencies in South Orange County, including the District. As part of that process, OCWD has requested that local agencies in South Orange County interested in

participating in further evaluating delivery of product water from the project enter into a MOU.

DISCUSSION:

A draft MOU has been developed in cooperation with OCWD staff and has also been reviewed by legal counsel. The draft MOU expresses the District's interest in obtaining approximately 2,000 acre-feet of product water from the project. The District will continue to support OCWD's efforts to develop the project and work with OCWD to identify options for delivery of product water to South Orange County. The attached MOU does not obligate the District to enter into a water purchase agreement but does commit the District to work with OCWD on developing terms for a water purchase agreement for consideration by the District's Board of Directors and OCWD, if the project proceeds to that point.

As such, staff is recommending that the Board of Directors approve the Memorandum of Understanding with Orange County Water District.

Attachment: Draft Memorandum of Understanding with Orange County Water District

MEMORANDUM OF UNDERSTANDING BETWEEN ORANGE COUNTY WATER DISTRICT AND MOULTON NIGUEL WATER DISTRICT

This MEMORANDUM OF UNDERSTANDING (MOU) is entered as of _____ by and between the ORANGE COUNTY WATER DISTRICT, a special governmental district organized and existing pursuant to the Orange County Water District Act, Chapter 924, Statutes of 1933, as amended ("OCWD"), and the Moulton Niguel Water District, an independent special district pursuant to the California Water District Law, Division 13, of the Water Code of the State of California ("Agency").

RECITALS

A. Whereas: Orange County is located in a semi-arid area, it is essential that all reasonable efforts be put forth to develop new local water supply sources to support the local community and economy; and
B. Whereas: A significant amount of all drinking water currently used within Orange County is imported from the Colorado River and Northern California. These sources of imported water are vulnerable to drought, natural disasters, environmental concerns, and regulatory restrictions; and
C. Whereas: The proposed Poseidon Resources Huntington Beach Ocean Desalination Project ("Project") offers the water community an opportunity to reduce the Orange County's need for imported water; and
D. Whereas: OCWD has approved a non-binding Term Sheet with Poseidon Resources for OCWD to potentially partner with Poseidon Resources in developing the Project. Under the Term Sheet, OCWD is responsible for developing the necessary plan to store and distribute the Project water; and
E. Whereas: OCWD is soliciting input from water purveyors on the interest in obtaining water from the Project;
F. Whereas: MNWD operates a public water system to deliver potable water to its customers and has identified ocean desalination as a potential future source of water supply in its Long-Range Water Reliability Plant;
G. Whereas: OCWD will begin preparing a Project distribution plan that may include MNWD and other potential participants interested in obtaining water from the Project, along with necessary CEQA environmental documents necessary to support the Project; and
H. Whereas: OCWD will ultimately consider approval of the CEQA documents and a water purchase agreement with Poseidon Resources wherein OCWD would receive water from the Project; and
I. Whereas: MNWD has an interest in water supply from the Project and, given favorable development of a distribution plan and associated costs, will work with OCWD to develop and consider approval of a parallel water purchase agreement whereby MNWD could commit to OCWD to receive water from the Project for 30 years.

NOW, THEREFORE, in consideration of the facts recited above and the covenants, conditions and promises contained herein, and subject to this MOU taking effect in accordance with the terms and conditions below, OCWD and the Agency hereby agree as follows:

SECTION 1 MNWD COMMITMENTS

1.1. MNWD shall support OCWD's efforts to develop the Project to the extent of MNWD's commitments set forth herein.

1.2. MNWD shall help develop and consider a water purchase agreement with OCWD in the future that, if approved, would commit Agency to receive 2,000 acre-feet per year. An exact delivery schedule, with exact amounts of flow commitments, would be developed for the Agency's water purchase agreement.

1.3. The water purchase agreement between OCWD and MNWD would generally align with the final water purchase agreement OCWD will negotiate with Poseidon Resources.

1.4 MNWD will pay the actual unit cost to produce and deliver Project water minus any grants and subsidies received that offset the total cost of the Project. Such payment calculations and obligations would be set forth in a potential water purchase agreement with the Agency.

1.5 MNWD will engage in discussions on Project water distribution plans and support efforts to evaluate cost-effective alternatives to deliver Project water to MNWD and other project participants;

1.6 MNWD commits to negotiate in good faith a water purchase agreement for the delivery of water from the Project with OCWD in accordance with the principles established in this MOU but maintains its sole and absolute discretion to not enter into a future water purchase agreement with OCWD and to not otherwise participate in the Project.

SECTION 2 OCWD COMMITMENTS

2.1. OCWD shall work closely with Poseidon Resources to develop the Project.

2.2. OCWD will work closely with Poseidon Resources to ensure the quality of the water provided by the Project will meet all MNWD requirements and comply with all applicable drinking water standards.

2.3. OCWD will work closely with MNWD to develop and design a distribution plan for Project water that meets the needs and requirements of Agency.

2.4. OCWD will prepare the necessary CEQA documents to support the Project.

2.5. OCWD will work with MNWD to prepare a water purchase agreement for Agency to obtain deliveries of water from the Project.

2.6. OCWD shall defend, indemnify and hold MNWD, and its officers, harmless from and against any legal actions, that may be asserted or claimed by any person or entity arising out of the approval, performance or implementation of this MOU by Agency or its officers.

2.7. OCWD commits to negotiate in good faith a future water purchase agreement with MNWD if OCWD and Poseidon Resources enter into a water purchase agreement.

2.8. OCWD maintains its discretion to not enter into a future water purchase agreement with Poseidon Resources.

SECTION 3 MISCELLANEOUS

3.1. Effective Date; Term. This MOU shall become effective on _____ and shall continue for a term of five years or until a water purchase agreement between MNWD and OCWD is executed, whichever occurs first.

3.2. Notices. Any notice, instrument, payment or document required to be given or delivered under this Agreement shall be given or delivered by personal delivery or by depositing the same in a United States Mail depository, first class postage prepaid, and addressed as follows:

If to OCWD: Orange County Water District
PO Box 8300
18700 Ward Street
Fountain Valley, CA 92708
Attn: General Manager

If to MNWD: Moulton Niguel Water District
P.O. Box 30203
Laguna Niguel, CA 92607
Attn: General Manager

IN WITNESS WHEREOF the parties have executed this MOU as of the date first written above.

APPROVED AS TO FORM:

RUTAN & TUCKER, LLP

By: _____
Joel D. Kuperberg
General Counsel, OCWD

ORANGE COUNTY WATER DISTRICT

By: _____
Vicente Sarmiento, President

By: _____
Michael R. Markus, General Manager

APPROVED AS TO FORM:

Moulton Niguel Water District

By:_____

Attest:

By:

_____

Agency Attorney

By: _____

moulton niguel water district

STAFF REPORT

TO: **Board of Directors** **MEETING DATE: September 12, 2019**

FROM: **Drew Atwater, Director of Finance & Water Resources**

SUBJECT: **Reduction of Long-Term Liabilities**

SUMMARY:

Issue: Board action is required to pay off outstanding state loans that release restricted bond reserves and reduce outstanding annual debt obligations of the District.

Recommendation:

It is recommended that the Board of Directors:

1. Approve the resolution entitled, "Authorizing Payment of the Remaining Principal and Accrued Interest for the Purchase Price of the Sewer Rehabilitation Project-Phase 1 from the California Infrastructure and Economic Development Bank (CIEDB 02-026)".

2. Approve the resolution entitled, "Authorizing Payment of Remaining Principal on a Zero-Interest Rate Option for A State Water Resources Control Board State Revolving Fund ("SRF") Loan for the Reclamation Phase IV Expansion Project (SRF 120)".

3. Approve the resolution entitled, "Authorizing Payment of Remaining Principal and Accrued Interest for the Purchase Price of the Clor-Tec Phase 2 Project from the California Infrastructure and Economic Development Bank (CIEDB 01-020)".

Fiscal Impact: Paying off outstanding state loans will be a net positive financial impact by reducing liabilities, decreasing annual debt payments and increasing unrestricted cash balances.

Reviewed by Committee: Yes, recommended for approval at the Administration Committee Meeting on September 4, 2019.

Reviewed by Legal: Yes

BACKGROUND:

The District currently has three outstanding state loans, two from the California Infrastructure and Economic Development Bank and one from the State Water Resources Control Board under the State Revolving Fund program. The outstanding principal for each loan is shown in the table below:

Loan	Outstanding Principal
CIEDB 01-120	$329,447
CIEDB 02-126	$222,054
SWRCB 120	$3,553,485

The current outstanding principal on the loans is $3,983,649.49 after the current September 2019 payment. The District included language in its latest 2019 Revenue Bonds which refunded the 2009 Build America Bonds to release the restricted bond reserve once all District state loans have been paid off. The current 2019 Revenue Bond reserve is approximately $4.5 M fluctuating slightly with interest earnings and fair market value.

DISCUSSION:

Given the current bond reserve amount for the 2019 Revenue Bonds (approximately $4.5 M) is greater than the outstanding loan principal (approximately $4 M), District staff is recommending that the Board authorize the General Manager to submit letters to both CIEDB and SWRCB to take the requisite actions to pay off the outstanding loans. Additional benefits to the District include removing the need of a bond reserve for future new money issuances, as well as decreasing outstanding debt to improve the District's debt coverage ratio which is a key metric for the District's credit rating.

Attachments:

1. Resolution entitled, "Authorizing Payment of the Remaining Principal and Accrued Interest for the Purchase Price of the Sewer Rehabilitation Project-Phase 1 from the California Infrastructure and Economic Development Bank (CIEDB 02-026)".
2. Resolution entitled, "Authorizing Payment of Remaining Principal on a Zero-Interest Rate Option for A State Water Resources Control Board State Revolving Fund ("SRF") Loan for the Reclamation Phase IV Expansion Project (SRF 120)".
3. Resolution entitled, "Authorizing Payment of Remaining Principal and Accrued Interest for the Purchase Price of the Clor-Tec Phase 2 Project from the California Infrastructure and Economic Development Bank (CIEDB 01-020)".

RESOLUTION NO. 19-___

RESOLUTION OF THE BOARD OF DIRECTORS OF THE MOULTON NIGUEL WATER DISTRICT AUTHORIZING PAYMENT OF REMAINING PRINCIPAL AND ACCRUED INTEREST FOR THE PURCHASE PRICE OF THE SEWER REHABILITATION PROJECT-PHASE I FROM THE CALIFORNIA INFRASTRUCTURE AND ECONOMIC DEVELOPMENT BANK (CIEDB 02-026)

WHEREAS, the California Infrastructure and Economic Development Bank ("CIEDB") administers a financing program to assist local governments with the financing of "Public Development Facilities," as described in Section 63000 et seq. of the California Government Code;

WHEREAS, pursuant to Resolution No. 02-01, dated February 21, 2002, the Moulton Niguel Water District ("MNWD") submitted an application in an amount not-to-exceed $1.75 million to the CIEDB for the financing of MNWD's 2002 Sewer Rehabilitation Project ("Project") for the repair and rehabilitation of 27 sewer pipe reaches at 18 locations throughout MNWD. The CIEDB approved MNWD's application on February 26, 2002;

WHEREAS, pursuant to Resolution No. 02-02, dated April 18, 2002, MNWD entered into an Installment Sale Agreement with the CIEDB (the "Installment Sale Agreement") which was a condition of receiving financing under the CIEDB program for the Project;

WHEREAS, pursuant to Resolution No. 03-34, dated September 18, 2003, MNWD took action to modify the sewer facilities comprising the Project, thereby reducing the cost of the Project and the corresponding purchase obligation under the Installment Sale Agreement from $1,742,000 to $1,251,700, for a total revised financing cost of $1,354,870. Resolution No. 03-34 also authorized MNWD to enter into that certain First Amendment to the Installment Sales Agreement with the CIEDB, dated as of August 21, 2003, in order to: (a) revise the Project; (b) revise the principal amount being financed; and (c) to modify certain administrative, reporting and disclosure obligations of MNWD thereunder:

WHEREAS, the Installment Sale Agreement, and accompanying documents, provide for the optional prepayment of the principal of the Purchase Price as well as paying off the remaining principal and accrued interest upon providing notice to the CIEDB;

WHEREAS, MNWD desires to exercise its right to pay off the remaining principal and accrued interest for payment of the Purchase Price and to otherwise satisfy all remaining obligations to the CIEDB in regard to the Project.

NOW, THEREFORE the Board of Directors of the Moulton Niguel Water District, does hereby **RESOLVE, DETERMINE** and **ORDER** as follows:

Section 1. MNWD does hereby approve paying off the remaining principal and accrued interest for payment of the Purchase Price and to otherwise satisfy all remaining obligations to the CIEDB in regard to the Project including, but not limited to, submitting the required notice and payment to the CIEDB.

Section 2. The General Manager and her designees are each hereby authorized and directed, in the name of and on behalf of MNWD, to take any and all steps, and to review and approve and to execute and deliver, any and all documents which they deem necessary or appropriate in order to effectuate the purpose of this Resolution including, but not limited to, submitting the required notice to the CIEDB and submitting the required payments to the CIEDB.

APPROVED, SIGNED and **ADOPTED** this 12th day of September, 2019.

MOULTON NIGUEL WATER DISTRICT

_____
President/Vice President
MOULTON NIGUEL WATER DISTRICT
and of the Board of Directors thereof

_____
Secretary/Assistant Secretary
MOULTON NIGUEL WATER DISTRICT
and of the Board of Directors thereof

RESOLUTION NO. 19-___

RESOLUTION OF THE BOARD OF DIRECTORS OF THE MOULTON NIGUEL WATER DISTRICT AUTHORIZING PAYMENT OF REMAINING PRINCIPAL ON A ZERO-PERCENT INTEREST RATE OPTION FOR A STATE WATER RESOURCES CONTROL BOARD STATE REVOLVING FUND ("SRF") LOAN FOR THE RECLAMATION PHASE IV EXPANSION PROJECT (SRF 120)

WHEREAS, pursuant to Resolution No. 97-4, dated April 17, 1997, the Moulton Niguel Water District ("MNWD") submitted an application with the State Water Resources Control Board ("SWRCB") for a State Revolving Fund Loan ("1997 SRF Loan") in the amount of up to $22,000,000 for the design and construction of the MNWD Reclamation Phase IV Expansion Project ("Project"). The SWRCB subsequently approved the 1997 SRF Loan;

WHEREAS, pursuant to Resolution No. 97-33, dated November 20, 1997, MNWD authorized certain actions in order to meet the terms and conditions of the 1997 SRF Loan including the following: (a) contribution of a State match share; (b) payment of an administrative fee; (c) establishment of a State match account; (d) authorization of certifications to be provided with progress payments; and (e) provision of copies of canceled checks to document payments on a quarterly basis;

WHEREAS, pursuant to Resolution No. 98-35, dated November 19, 1998, MNWD took action to establish a separate fund entitled "Capital Reserve Fund – SRF Loan, Water Reclamation Phase IV Expansion Project and authorized deposits equal to 0.5% of the principal amount of the 1997 SRF Loan which is deemed to be the "Reserve Requirement" for the 1997 SRF Loan;

WHEREAS, the 1997 SRF Loan, and accompanying documents, provide the opportunity for paying off the outstanding amount of the 1997 SRF Loan upon completing certain requirements;

WHEREAS, MNWD desires to exercise its right to pay off the outstanding amount of the 1997 SRF Loan and to otherwise satisfy all remaining obligations to the SWRCB in regard to the 1997 SRF Loan.

NOW, THEREFORE the Board of Directors of the Moulton Niguel Water District, does hereby **RESOLVE, DETERMINE** and **ORDER** as follows:

Section 1. MNWD does hereby approve paying off the outstanding amount of the 1997 SRF Loan and otherwise satisfying all remaining obligations to the SWRCB in regard to the 1997 SRF Loan.

Section 2. The General Manager and her designees are each hereby authorized and directed, in the name of and on behalf of MNWD, to take any and all steps, and to review and approve and to execute and deliver, any and all documents which they deem necessary or

appropriate in order to effectuate the purpose of this Resolution including, but not limited to, submitting any required notice to the SWRCB and submitting the required payments to the SWRCB.

APPROVED, SIGNED and **ADOPTED** this 12th day of September, 2019.

MOULTON NIGUEL WATER DISTRICT

_____
President/Vice President
MOULTON NIGUEL WATER DISTRICT
and of the Board of Directors thereof

_____
Secretary/Assistant Secretary
MOULTON NIGUEL WATER DISTRICT
and of the Board of Directors thereof

RESOLUTION NO. 19-___

RESOLUTION OF THE BOARD OF DIRECTORS OF THE MOULTON NIGUEL WATER DISTRICT AUTHORIZING PAYMENT OF REMAINING PRINCIPAL AND ACCRUED INTEREST FOR THE PURCHASE PRICE OF THE CLOR TEC PHASE 2 PROJECT FROM THE CALIFORNIA INFRASTRUCTURE AND ECONOMIC DEVELOPMENT BANK (CIEDB 01-020)

WHEREAS, the California Infrastructure and Economic Development Bank ("CIEDB") administers a financing program to assist local governments with the financing of "Public Development Facilities," as described in Section 63000 et seq. of the California Government Code;

WHEREAS, pursuant to Resolution No. 01-37, dated August 16, 2001, the Moulton Niguel Water District ("MNWD") submitted an application in an amount not-to-exceed $1.7 million to the CIEDB for the financing of MNWD's Clor Tec Phase 2 ("Project") for a chloramine-injection water treatment system for MNWD's reservoir facilities. The CIEDB approved MNWD's application on November 9, 2001;

WHEREAS, pursuant to Resolution No. 02-03, dated April 18, 2002, MNWD entered into an Installment Sale Agreement with the CIEDB (the "Installment Sale Agreement") which was a condition of receiving financing under the CIEDB program for the Project;

WHEREAS, the Installment Sale Agreement, and accompanying documents, provide for the optional prepayment of the principal of the Purchase Price as well as paying off the remaining principal and accrued interest upon providing notice to CIEDB;

WHEREAS, MNWD desires to exercise its right to pay off the remaining principal and accrued interest for payment of the Purchase Price and to otherwise satisfy all remaining obligations to CIEDB in regard to the Project.

NOW, THEREFORE the Board of Directors of the Moulton Niguel Water District, does hereby **RESOLVE, DETERMINE** and **ORDER** as follows:

Section 1. MNWD does hereby approve paying off the remaining principal and accrued interest for payment of the Purchase Price and to otherwise satisfy all remaining obligations to the CIEDB in regard to the Project including, but not limited to, submitting the required notice and payment to the CIEDB.

Section 2. The General Manager and her designees are each hereby authorized and directed, in the name of and on behalf of MNWD, to take any and all steps, and to review and approve and to execute and deliver, any and all documents which they deem necessary or appropriate in order to effectuate the purpose of this Resolution including, but not limited to, submitting the required notice to the CIEDB and submitting the required payments to the CIEDB.

APPROVED, SIGNED and **ADOPTED** this 12th day of September, 2019.

MOULTON NIGUEL WATER DISTRICT

_____
President/Vice President
MOULTON NIGUEL WATER DISTRICT
and of the Board of Directors thereof

_____
Secretary/Assistant Secretary
MOULTON NIGUEL WATER DISTRICT
and of the Board of Directors thereof

moulton niguel water district

STAFF REPORT

TO: **Board of Directors** **MEETING DATE: September 12, 2019**

FROM: **Drew Atwater, Director of Finance and Water Resources**

SUBJECT: **Metropolitan Future Supply Actions Program Interagency Agreements**

SUMMARY:

Issue: Staff requires Board action to approve agreements for the funding of a "Smart Watershed Network" project in the Aliso Watershed.

Recommendation:

It is recommended that the Board of Directors:

1. Authorize the General Manager or Assistant General Manager to execute the agreement with the Municipal Water District of Orange County for Future Supply Action Program funding.

2. Authorize the General Manager or Assistant General Manager to execute the agreement with the County of Orange to implement the Smart Watershed Network project for a program cost of $411,508.

Fiscal Impact: Available funds are in the Water Efficiency Fund.

Reviewed by Committee: Yes, recommended for approval at the Administrative Committee Meeting on September 4, 2019.

Reviewed by Legal**:** Yes.

Background:

Urban runoff sends pollution into waterways and sensitive habitats. This stream of dirt, chemicals and fertilizers can cause serious harm to watersheds, wildlife, and

marine ecosystems. Eventually, polluted runoff reaches California's coast, a vital economic and environmental resource.

Even as polluted urban runoff affects so many, no one entity has responsibility to address this widespread problem. Cities and the County of Orange oversee storm drains and flood control channels, maintain streets and sidewalks. Homeowners use water, supplied by retail water agencies.

The District under the Board's leadership is reviewing and addressing this environmental challenge with its OC Stormwater Watershed Collaboration. This public-private collaboration is voluntarily combatting urban runoff through shared data, open communication, environmental education, and public outreach.

The District brought together the County of Orange, Orange County Coastkeeper, Laguna Bluebelt Coalition, and the Cities of Laguna Niguel, Laguna Hills, Aliso Viejo, Mission Viejo, and Dana Point to sign a historic Memorandum of Understanding to address both inefficient water usage and dry weather runoff.

This same pollutant stream also presents a potential resource recovery opportunity. MNWD currently has available wastewater treatment capacity beyond existing dry weather wastewater flows. This is not unique to MNWD and presents a regional opportunity throughout southern California. The key gap today is getting high resolution watershed data to understand flow and salt balance to support integration of storm and wastewater infrastructure at opportune seasonal times. With watershed-scale knowledge of locations, magnitudes, and patterns of flow in storm drains, the District can plan and implement storm drain diversion projects where appropriate while also monitoring the effectiveness of water conservation approaches.

The District has an existing investment in an Advanced Meter Infrastructure (AMI) system which is a fixed-structure based meter management communication system. Meter consumption data is transmitted and used for billing and assisting customers with questions regarding their water use as well as providing automated leak alerts. The AMI system can also be used to acquire real-time dry weather and storm water runoff flow and salinity data.

Discussion:

This project builds on historical investments in AMI and cloud-based collaborative platforms and expands watershed flow and water quality monitoring capabilities to enable a "smart watershed network." This watershed network can support integrated planning and decision-making related to water conservation, resource recovery, and water quality protection efforts.

To enable the development of this network, this project proposes two primary elements:

- Development of a permanently-deployed, continuous flow monitoring network at outfalls and major confluences within the storm drain network connected via the District's AMI network. This will also include probes to continuously monitor salinity to provide data for salt balance accounting.
- Development of a cloud-based data management, integration and analytics space to support planning, outreach, and decision making based on data feeds and applied algorithms, which can serve as a reference for other agencies.

Proposed partners for the project include:

- County of Orange
- UC Irvine Water Center
- Southern California Stormwater Monitoring Coalition
- Southern California Coastal Water Research Project
- California Data Collaborative
- Laguna Bluebelt Coalition
- Orange County Coastkeeper
- City of Laguna Niguel
- City of Laguna Hills
- City of Aliso Viejo
- City of Mission Viejo
- City of Dana Point

Cost share for the application is as follows:

- Moulton Niguel Water District 25%
- County of Orange 25%
- Metropolitan Water District of Southern California 50%

The resulting network and analysis space will provide a framework for obtaining, managing, and analyzing watershed-scale flow and salt concentration datasets in a manner that can be spatially and temporally related to water meter data. With this capability, the system can be used to support decision making at multiple scales. For example, the datasets will support analysis of discrete low flow diversion projects at an individual sub-watershed scale to evaluate incremental increases in water recovery and progress toward water quality goals. It could also be used to evaluate system-scale strategies around low flow and small storm diversion, including impacts system capacity and benefits related to water supply, salt balance, and pollutant load reduction. Staff recommends that the Board of Directors authorize the General

Manager or Assistant General Manager to execute the agreement with the Municipal Water District of Orange County for Future Supply Action Program funding.

Attachments:

1. Agreement with the Municipal Water District of Orange County for Future Supply Actions Program Funding
2. Agreement with the County of Orange entitled “Interagency Cost Sharing Agreement Smart Watershed Network”

DRAFT FSA AGREEMENT TEMPLATE – 3-29-19

AGREEMENT

BETWEEN

MUNICIPAL WATER DISTRICT OF ORANGE COUNTY
AND
MOULTON NIGUEL WATER DISTRICT

FUTURE SUPPLY ACTIONS FUNDING PROGRAM

_____

Table of Contents

Paragraph……Page

Contract Cover Page

Explanatory Recitals.....

Terms of Agreement.....

1. Scope of Work.....

2. Time and Term.....

3. Agreement Administrators.....

4. Independent Contractor.....

5. Consultants and Sub-consultants.....

6. Metropolitan's Maximum Amount Payable and Reimbursement Procedure.....

7. Billings and Payments.....

8. Reporting Requirements.....

9. Business Outreach Program.....

10. Successors and Assignment.....

11. Use of Materials.....

12. Intellectual Property.....

13. Nonuse of Intellectual Property of Third Parties.....

14. Representations.....

15. Legal Requirements.....

16. Guarantee and Warranty.....

17. Access to Metropolitan Premises.....

18. Indemnity.....

19. Insurance.....

20. Audit.....

21. Equal Employment Opportunity, Affirmative Action, and Notification of Employee Rights Under the NLRA .....

22. Prohibited Relationships with Sanctioned Countries and Persons .....

23. Conflict of Interest and Gift Restrictions .....

24. Use of Metropolitan's Name .....

25. Termination .....

26. Force Majeure Events .....

27. Notices .....

28. Severability.....

29. Jurisdiction and Venue .....

30. Waiver .....

31. Entire Agreement.....

32. Joint Drafting .....

Signature Page .....

Exhibit A- Scope of Work .....

Exhibit B- Sample Invoice.....

Exhibit C – Semi-annual Progress Reports.....

Exhibit D – Final Report Format.....

Exhibit F – ACORD Form or Equivalent .....

MUNICIPAL WATER DISTRICT OF ORANGE COUNTY

FOR FUTURE SUPPLY ACTIONS FUNDING PROGRAM

This Agreement is between THE MUNICIPAL WATER DISTRICT OF ORANGE COUNTY, hereinafter referred to as MWDOC, and the MOULTON NIGUEL WATER DISTRICT, hereinafter referred to as MNWD.

Explanatory Recitals

1. MWDOC is a wholesale water supplier and resource planning agency that serves Orange County. Local water supplies meet more than half of Orange County's total water demand. To meet the remaining demand, MWDOC, as a member agency of the Metropolitan Water District of Southern California, hereinafter referred to as Metropolitan , purchases imported water from the Colorado River and the State Water Project via Metropolitan,, and distributes this water to MWDOC's 28 member agencies.

2. Metropolitan, through its Future Supply Actions Funding Program (FSA Funding Program), provides funding to it's member agencies for technical studies or pilot projects that reduce barriers to future production of recycled water, stormwater, seawater desalination, and groundwater resources, and released a 2018 Request for Proposals (RFP) for Future Supply Actions Funding Program, dated July 6, 2018. MNWD, through MWDOC, submitted a proposal and was selected through this RFP process. MWDOC and MNWD agree to enter into this Agreement for **SMART WATERSHED NETWORK**, hereinafter referred to as Study.

3. MWDOC desires to enter into this Agreement with MNWD, and MNWD desires to perform the work according to the terms set forth hereinafter.

Terms of Agreement

1. Scope of Work

a. MWDOC, hereby engages MNWD to perform the work described in detail in the Scope of Work, Costs, and Schedule attached hereto as Exhibit A.

b. MNWD must provide study deliverables according to the Reporting Schedule as set forth in Exhibit A, Section 8.0. Each task identified in Exhibit A shall have a clearly defined deliverable, date for completion of task and associated cost for each task.

c. MNWD may adjust task descriptions, task budget amounts, and task Progress Schedules in Exhibit A, from time to time, upon written notice to and approval by MWDOC and Metropolitan; however, MNWD must certify that any such adjustments do not materially change the basic scope of work, the Reporting Schedule, the scheduled final Study completion date, and/or the Maximum Cost to MWDOC and Metropolitan as identified in this Agreement.

d. MNWD shall be responsible for verifying completion of a consultant's or sub-consultants work in accordance with Exhibit A.

2. Time and Term

Time is of the essence in the performance of services under this Agreement. This Agreement is in effect from March XX, 2019 through February 28, 2021, subject to earlier termination pursuant to Section 27 below.

3. Agreement Administrators

a. In performing the work under this Agreement, MNWD shall coordinate all contact to Metropolitan through MWDOC's Agreement Administrators. For purposes of this Agreement, MWDOC designates Dr. Melissa Baum-Haley and Chris Lingad as MWDOC's Agreement Administrators. MWDOC reserves the right to change this designation upon written notice to MNWD.

b. For purposes of this Agreement, MNWD designates [MR./MS. NAME] as the Agreement Administrator for MNWD. MNWD reserves the right to change this designation upon written notice to MWDOC and Metropolitan.

4. Independent Contractor

MNWD agrees to complete the Scope of Work detailed in Exhibit A under this Agreement in the capacity of an independent contractor, and neither MNWD and/or its

participating entities, consultants, and sub-consultants nor any of their employees shall be considered to be an employee or agent of MWDOC and/or Metropolitan. Participating entities are other public and private entities, separate from MNWD, which MNWD has indicated are participating in the Study, as identified in Exhibit A.

5. Consultants and Sub-consultants

a. MNWD shall be responsible to MWDOC and Metropolitan for all work to be performed under this Agreement. All consultants and sub-consultants and their billing rates shall be approved by MNWD and shall be reflected in consultant and sub-consultant invoices submitted by MNWD to MWDOC. MNWD shall be liable and accountable for any and all payments or other compensation to all consultants and sub-consultants performing services under any MNWD agreement that is necessary and applicable to the performance and completion of this Agreement. MWDOC and Metropolitan shall not be liable for any payment or other compensation for any consultants or sub-consultants.

b. MNWD's contracts with consultants and sub-consultants shall require consultants and sub-consultant to maintain Workers' Compensation and Automobile Liability insurance, as required by the State of California, and shall include the following articles: Intellectual Property, Nonuse of Intellectual Property of Third Parties, Audit, Indemnity and Equal Employment Opportunity and Affirmative Actions as set forth in this Agreement.

c. As applicable, MNWD's use of consultants and sub-consultants shall adhere to the requirements of Metropolitan's Business Outreach Program as provided herein.

6. Metropolitan's Maximum Amount Payable and Reimbursement Procedure

a. Metropolitan's payment for the study is not to exceed **$205,754** or fifty (50) percent of the total cost expended per task as established in Exhibit A, whichever is less. MNWD shall be responsible for all costs in excess of Metropolitan's match payment.

b. MNWD must include documentation in the invoice that it did reimburse responsible parties for the costs incurred during the invoice period. The invoice should include a cover letter with a brief summary of the work completed under the costs invoiced and a discussion of any milestones reached or problems encountered during the period invoiced.

c. For each invoice, Metropolitan will pay up to seventy-five (75) percent of eligible reimbursable costs and will withhold twenty-five (25) percent of eligible reimbursable costs in retention until a final report is submitted and accepted by both MWDOC and Metropolitan. MNWD shall promptly notify the MWDOC Agreement Administrators, in writing for relay to Metropolitan, when fees and expenses incurred under this Agreement have reached **$154,300** (75% of maximum amount allowable).

d. In-kind services are not eligible for reimbursement and shall not be included in MNWD invoices to MWDOC for relay to Metropolitan. In-kind services include, but are not limited to, work performed by staff of MNWD or staff of MNWD's participating entities contributing funding to Study and related expenses (e.g., travel, overhead, etc.).

e. Eligible costs include work starting no earlier than March XX, which is in compliance with the requirements of this Agreement and as set forth in Exhibit A.

f. All invoices related to the Study must be submitted by MNWD to MWDOC for relay to Metropolitan by February 28, 2021 to be considered for payment under the provisions of this agreement. Invoices received after March 13, 2021 will not be paid unless Metropolitan, in its sole discretion, grants MWDOC, in writing, an extension of time to complete the work and submit its invoices.

7. Billings and Payments

a. MNWD shall submit monthly invoices to MWDOC for relay to Metropolitan's Accounts Payable Section. The monthly invoices shall be submitted to Melissa Baum-Haley at mbaum-haley@mwdoc.com and Chris Lingad at clingad@mwdoc.com. In the event MNWD has an address change, infomation must be submitted in writing to accounting@mwdoc.com. Without proper notification of an address change, MNWD's invoice payment may be delayed.

b. The individual listed in the Agreement as MNWD's Agreement Administrator or the General Manager shall sign and certify the invoice to be true and correct to the best of his/her knowledge. MNWD's invoices shall include the following information:

i. MNWD's name and mailing address, the Study name and Metropolitan's agreement number, the beginning and ending billing dates, the maximum

amount payable, a summary of costs for the current invoice, the amount due for this invoice, and cumulative total amount previously invoiced. A sample invoice is included in this Agreement as Exhibit B.

ii. MNWD's consultant and sub-consultant labor charges shall be itemized by date of service, employee name, title/classification, corresponding labor rate, number of hours worked, description of work performed, total amount due for labor charges, and shall include the following affirmation:

"*By signing this invoice, consultant certifies that the billing hours and work described herein are an accurate and correct record of services performed for Metropolitan and/or MWDOC under this Agreement and these hours have not been billed on any other client invoices."*

iii. Invoices shall itemize allowable expenses and include purchase receipts for which reimbursement is being sought for any items over Ten Dollars ($10.00). Attached receipts should itemize each cost and provide descriptive information so that expenses are separately identified.

iv. MNWD shall attach a copy of each consultant and sub-consultant invoice for which reimbursement is sought. Consultant's and sub-consultants invoices shall set forth the actual rates and expenses charged to MNWD.

c. Subject to the approval of the Metropolitan Agreement Administrator, Metropolitan shall make payment to MWDOC and, in turn, MWDOC will provide payment to MNWD in the form of either a credit on MWDOC's water bill to MNWD or a check made payable to MNWD. Method of payment shall be at MWDOC's discretion. Metropolitan will reject incomplete and inaccurate MNWD invoices and will return such invoices to MWDOC within 60 days after the date of the invoice. In such cases of rejected invoices, MNWD must submit a new, corrected invoice with a new invoice number and new date. Metropolitan will not approve payment to MWDOC and, in turn, MWDOC will not provide payment to MNWD until a full, complete, and accurate invoice has been submitted and approved by Metropolitan. MNWD's invoices submitted 90 days after completion of work, may be delayed or not paid.

d. The final invoice shall be clearly marked "FINAL INVOICE." It shall be submitted after the final report is accepted by Metropolitan and should include a request for the release of the 25 percent retention.

8. Reporting Requirements

a. MNWD shall submit to MWDOC for relay to Metropolitan semi-annual progress reports within 20 days of the end of the preceding six month period, in accordance with the reporting schedule in Exhibit A. MNWD shall include, at a minimum, the items listed in Exhibit C, Semi-Annual Progress Report Format. MNWD shall document all activities and expenditures to date in the semi-annual reports. The submittal of these reports is a requirement for ongoing disbursement of funds.

c. MNWD shall prepare and submit to MWDOC for relay to Metropolitan, upon completion of the Study, a Final Report, which shall include, at a minimum, the items listed in Exhibit D, Final Report Format. The Final Report shall be provided via hard copy (10 copies) and digital format prior to final payment of funds retained by Metropolitan.

d. MNWD shall prepare and deliver a presentation on the findings of the Study during a concluding symposium scheduled and organized by Metropolitan.

e. Failure of MNWD to submit progress reports, key deliverables, or the Final Report within the timeframe established in Exhibit A or any extension of time authorized in accordance with Section 2 above will be a breach of this Agreement.

9. Business Outreach Program

It is the policy of Metropolitan Water District to solicit participation in the performance of all construction, professional services, procurement contracts, supplies, and equipment procured by Metropolitan by all individuals and businesses, including but not limited to small businesses, locally owned businesses, women, minorities, disabled veterans, and economically disadvantaged enterprises. In performing services under this Agreement, MNWD shall endeavor to further this policy whenever practicable.

10. Successors and Assignment

This Agreement covers professional services of a specific and unique nature. Except as otherwise provided herein, MNWD, including its participating entities, consultants, and sub-consultants, shall not assign or transfer its interest in this Agreement.

11. Use of Materials

Metropolitan and/or MWDOC will make available to MNWD such materials from its files as may be required by MNWD to perform services under this Agreement. Such materials shall remain the property of Metropolitan and/or MWDOC while in MNWD's possession. Upon termination of this Agreement and payment of outstanding invoices of MNWD, or completion of work under this Agreement, MNWD shall turn over to MWDOC any property of Metropolitan and/or MWDOC in its possession and any calculations, notes, reports, electronic files, or other materials prepared by MNWD in the course of performing the services under this Agreement.

12. Intellectual Property

a. All intellectual property pursuant to this Agreement shall be owned by MNWD, and MNWD hereby grants MWDOC and Metropolitan and its member public agencies a perpetual, nonexclusive license, at no cost, to use the intellectual property developed in the course of the work performed under this Agreement by MNWD or any contractor and consultant working on the Study as described in Exhibit A. As used herein, the term "intellectual property" includes, but is not limited to, all inventions, patents, copyrightable subject matter, copyrights, test data, trade secrets, other confidential information and software.

b. MNWD agrees that all results produced in the performance of this Agreement may be released to the public.

c. Metropolitan and/or MWDOC may utilize any material prepared or utilize work performed by MNWD pursuant to this Agreement, including computer software, in any manner which Metropolitan and/or MWDOC deems proper without additional

compensation to MNWD. MNWD shall have no responsibility or liability for any revisions, changes, or corrections made by Metropolitan and/or MWDOC, or any use or reuse pursuant to the paragraph unless MNWD accepts such responsibility in writing.

d. MNWD shall include the following language in its agreement with any consultant or contractor retained by MNWD to work on the Study: "All intellectual property developed pursuant to this Agreement is owned by MNWD." As used herein, the term "intellectual property" includes, but is not limited to, all inventions, patents, copyrightable subject matter, copyrights, test data, trade secrets, other confidential information and software.

e. MNWD shall promptly notify MWDOC, in writing, of all intellectual property conceived or developed in the course of MNWD's work for MWDOC under this Agreement.

13. Nonuse of Intellectual Property of Third Parties

MNWD shall not use, disclose, or copy any intellectual property of any third parties in connection with work carried out under this Agreement, except for intellectual property for which MNWD has a license. MNWD shall indemnify and hold MWDOC and Metropolitan harmless against all claims raised against MWDOC and/or Metropolitan based upon allegations that MNWD has wrongfully used intellectual property of others in performing work for MWDOC and Metropolitan.

14. Representations

Each Party represents that it is represented by legal counsel, that it has reviewed this Agreement and agrees that:

a. This Agreement is legally enforceable;

b. Payments made by MWDOC to MNWD pursuant to this Agreement are a legal use of MWDOC's funds; and,

c. MWDOC may legally recover the costs incurred by MWDOC pursuant to this Agreement in the water rates charged by Metropolitan, which costs may be passed through to MNWD.

15. Legal Requirements

MNWD shall secure and maintain all licenses or permits required by law and shall comply with all ordinances, laws, orders, rules, and regulations pertaining to the work.

16. Guarantee and Warranty

a. MNWD guarantees and warrants that the work shall be performed and completed in accordance with generally accepted industry standards, practices, and principles applicable to the work.

b. MWDOC and Metropolitan's representatives shall at all times have access to the work for purposes of inspecting same and determining that the work is being performed in accordance with the terms of this Agreement.

17. Access to Metropolitan Premises

a. In the event of any work to be performed on Metropolitan premises, MNWD shall provide to the Agreement Administrators, at least two business days in advance, the names of its personnel or sub-consultant personnel requiring access to Metropolitan premises, intended work locations, and durations of work. The Agreement Administrator shall provide to the Security team manager or his designee written notification listing the names of the individuals requiring access, explaining the business need for these individuals to receive the requested access, and reflecting his/her approval. Except in extraordinary circumstances, all work on Metropolitan's premises shall be scheduled during Metropolitan's normal working days and hours. Metropolitan shall make a good faith effort to accommodate MNWD's request, however, Metropolitan's operations and other conflicts may require rescheduling all or part of Consultant's work.

18. Indemnity

a. MNWD assumes all risk of injury to its employees, agents, consultants, sub-consultants, and contractors, including loss or damage to property, in the performance of this Agreement, except for those losses due to MWDOC and Metropolitan's negligence, recklessness or willful misconduct.

b. MNWD shall defend, indemnify, and hold harmless MWDOC and Metropolitan, their Boards of Directors, officers, employees, and agents from and against all claims, suits, or causes of action for injury to any person or damage to any property to the proportionate extent arising out of, pertaining to, or related to MNWD's and its participating entities', consultants', and sub-consultants' negligence, recklessness, or willful misconduct in the performance of this Agreement, including any claims, suits, or causes of action by any employee of MNWD and its participating entities, consultants, and sub-consultants relating to his or her employment status with MWDOC and Metropolitan and/or rights to employment benefits from MWDOC and Metropolitan.

19. Insurance

a. MNWD shall procure and maintain for the duration of this Agreement insurance, or a program of self insurance, against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by MNWD and its participating entities, consultants, and sub-consultants, and their agents, representatives, or employees.

b. MNWD shall sustain proof of insurance coverage in an updated ACORD form (attached hereto as Exhibit F), or equivalent, and incorporated by reference, during the term of this Agreement. Failure to provide the updated insurance ACORD form, or equivalent, annually may result in the withholding of MNWD's invoice payment. MNWD shall list the agreement name on the ACORD form, or equivalent, and email to MWDOC's Agreement Administrators at **mbaum-haley@mwdoc.com**, with a copy to clingad@mwdoc.com and mgoldsby@mwdoc.com.

c. Minimum Scope of Insurance

Coverage shall be at least as broad as:

i. Insurance Services Office Commercial Liability coverage (occurrence Form CG0001).

ii. Insurance Services Office Form Number CA 0001 covering Automobile Liability, Code 1, (any auto).

iii. Workers' Compensation insurance as required by the State of California and Employer's Liability Insurance.

iv. Professional Liability or Errors and Omissions Liability insurance appropriate to MNWD's profession. Architects' and engineers' coverage is to be endorsed to include contractual liability.

d. Minimum Limits of Insurance

MNWD shall maintain limits no less than:

i. General Liability: Including operations, products and completed operations as applicable, $1,000,000 per occurrence for bodily injury, personal injury and property damage. If Commercial General Liability Insurance or other form with a general aggregate limit is used, either the general aggregate limit shall apply separately to the study or location, or the general aggregate limit shall be twice the required occurrence limit.

ii. Automobile Liability: $1,000,000 per accident for bodily injury and property damage.

iii. Workers' Compensation: Shall be furnished in accordance with statutory requirements of the State of California and shall include Employer's Liability coverage of $1,000,000 per accident for bodily injury or disease.

iv. Professional Liability or Errors and Omissions Liability: $1,000,000 per claim, with a $2 million aggregate.

e. Deductibles and Self-Insurance Retentions: Any deductibles or self-insured retentions must be declared to and approved by MWDOC. At the option of MWDOC, either: the insurer shall reduce or eliminate such deductibles or self-insured retentions as respect to MWDOC, its officers, officials, employees, agents and volunteers; or MNWD shall provide a financial guarantee satisfactory to MWDOC guaranteeing payment of losses and related investigations, claim administration and defense expenses.

f. Verification of Coverage: MNWD shall furnish MWDOC with original certificates and amendatory endorsements affecting coverage required by this clause. The endorsements and certificates are to be received and approved by MWDOC prior to the commencement of work. MWDOC reserves the right to require complete, certified copies of all required insurance policies, including endorsements affecting coverage, and coverage binders required by these specifications at any time.

g. Acceptability of Insurers: Insurance is to be placed with California admitted insurers with a current A.M. Best's rating of no less than A:VIII. A non-admitted carrier may be used with prior approval from MWDOC, with an A.M. Best rating of no less than A: X. an exception to these standards will be made for the State Compensation Insurance Fund when not specifically rated.

h. General Liability and Automobile Liability Endorsements: The commercial general liability policy and automobile policies are to contain, or be endorsed to contain, the following provisions:

i. MWDOC, its officers, officials, employees and agents are to be covered as additional insureds as respect to liability arising out of work or operations performed by or on behalf of MNWD; or automobiles owned, leased, hired or borrowed by MNWD.

ii. For any claims related to this study, MNWD's insurance coverage shall be primary insurance as respect to MWDOC, its officers, officials, employees, and volunteers. Any insurance or self-insurance maintained by MWDOC, its officers, officials, employees or agents shall be excess of the MNWD's insurance and shall not contribute with it.

iii. Each insurance policy required by this clause shall not be canceled by either party, except after thirty (30) days' prior written notice by certified mail, return receipt requested, has been given to MWDOC.

iv. Coverage shall not extend to any indemnity coverage for the active negligence of the additional insured in any case where an agreement to indemnify the additional insured would be invalid under Subdivision (b) of Section 2782 of the Civil Code.

i. Other Endorsements and Insurance Provisions

i. All rights of subrogation under the property insurance policy (if the policy is required) have been waived against MWDOC.

ii. The workers' compensation insurer, agrees to waive all rights of subrogation against MWDOC for injuries to employees of the insured (MNWD) resulting from work for MWDOC or use of MWDOC's premises or facilities.

iii. If General Liability, Pollution and/or any Asbestos Pollution Liability and/or professional liability or Errors & Omissions coverage are written on a claims-made form:

1) The "Retro Date" must be shown, and must be before the date of the contract or the beginning of contract work.

2) Insurance must be maintained for at least five (5) years after completion of the contract work. On MWDOC's request, MNWD shall provide evidence of insurance verifying that coverage is/was in effect during said five-year period.

3) If coverage is canceled or non-renewed, and not replaced with another claims-made policy form with a "Retro Date" prior to the contract effective date, MNWD must purchase "extended reporting" coverage for a minimum of five (5) years after completion of contract work.

4) A copy of the claims reporting requirements must be submitted to MWDOC for review if requested.

20. Audit

a. MNWD shall be responsible for ensuring the accuracy and propriety of all billings and shall maintain all supporting documentation for the period specified below.

b. MWDOC will have the right to audit MNWD's invoices and all supporting documentation for purposes of compliance with this Agreement during the term of this Agreement and for a period of three years following completion of services under this Agreement.

i. MNWD shall be responsible for maintaining the supporting documentation for a period of three years following completion of services under this agreement.

c. Upon reasonable notice from MWDOC, MNWD shall cooperate fully with any audit of its billings conducted by MWDOC and shall permit access to its books, records and accounts as may be necessary to conduct such audits.

d. MNWD shall promptly refund to MWDOC any amounts paid under this Agreement in the event MWDOC establishes via an audit that the invoices/billings were not in compliance with the requirements established by MWDOC pursuant to this Agreement. If such a refund is not provided to MWDOC within thirty (30) days of request, the requested amount may be debited by MWDOC on MNWD's next water service invoice.

21. Equal Employment Opportunity, Affirmative Action, and Notification of Employee Rights Under the NLRA

MNWD agrees to submit to MWDOC evidence of compliance with this section, as applicable, within 30 days of a request.

MWDOC is committed to a policy of equal opportunity for all and to providing a work environment that is free of unlawful discrimination and harassment. In keeping with this commitment, MWDOC maintains a policy prohibiting unlawful discrimination and harassment in any form based on race, religious creed, color, national origin, ancestry, physical or mental disability, medical condition, pregnancy or childbirth, marital status, gender, sex, sexual

orientation, veteran status or age by officials, employees and non-employees (vendors, contractors, etc.).

This policy applies to all employees, subsidiaries, participating entities, consultants, and sub-consultants of the MWDOC. Appropriate corrective action will be taken against all offenders, up to and including immediate discharge or termination of this Agreement. During, and in conjunction with, the performance of this Agreement, MNWD and any of its subsidiaries, participating entities, consultants, and sub-consultants shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, age, marital status or national origin.

22. Prohibited Relationships with Sanctioned Countries and Persons

MNWD represents and warrants that both 1) MNWD, and 2) to MNWD's knowledge, its directors, officers, employees, subsidiaries, participating entities, consultants, and sub-consultants, are not engaged in any business transactions or other activities prohibited by any laws, regulations or executive orders relating to terrorism, trade embargoes, or money laundering ("Anti-Terrorism Laws"), including Executive Order No. 13224 on Terrorist Financing, effective September 24, 2001 (the "Executive Order"), the Patriot Act, and the regulations administered by the Office of Foreign Assets Control ("OFAC") of the U.S. Department of Treasury, including those parties named on OFAC's Specially Designated Nationals and Blocked Persons List. MNWD is in compliance with the regulations administered by OFAC and any other Anti-Terrorism Laws, including the Executive Order and the Patriot Act. In the event of any violation of this section, MWDOC shall be entitled to immediately terminate this Agreement and take such other actions as are permitted or required to be taken under law or in equity.

23. Conflict of Interest and Gift Restrictions

a. MNWD represents that it has advised MWDOC in writing prior to the date of signing of this Agreement of any known relationships with a third party, MWDOC and/or Metropolitan's Boards of Directors, or employees which would (1) present a conflict of interest with the work performed under this Agreement, (2) prevent MNWD from performing

the terms of this Agreement, or (3) present a significant opportunity for the disclosure of confidential information.

b. MNWD agrees not to accept any employment during the term of this Agreement from any other person, firm or corporation where such employment is a conflict of interest or where such employment is likely to lead to a conflict of interest between MWDOC and Metropolitan's interest and the interests of such person, firm or corporation or any other third party. MNWD shall immediately inform MWDOC, throughout the term of this Agreement, if any employment contemplated may develop into a conflict of interest or potential conflict of interest.

c. MNWD is hereby notified that Sections 7103 and 7104 of MWDOC's Administrative Code, the California Political Reform Act ("PRA") and regulations of the Fair Political Practices Commission ("FPPC") prohibit MWDOC Board members, officers and employees from receiving or agreeing to receive, directly or indirectly, any compensation, reward or gift from any source except from his or her appointing authority or employer, for any action related to the conduct of MWDOC's business, except as specifically provided in the Administrative Code Sections 7103 and 7104, the PRA and FPPC regulations. MNWD agrees not to provide any prohibited compensation, reward or gift to any MWDOC Board member, officer or employee.

24. Use of Metropolitan's and/or MWDOC's Names

MNWD and its participating entities, consultants, and sub-consultants shall not publish or use any advertising, sales promotion, or publicity in matters relating to services, equipment, products, reports, and material furnished by MNWD and its participating entities, consultants, and sub-consultants in which Metropolitan's and/or MWDOC's names are used, or their identities implied without the Agreement Administrators' prior written approvals. **This provision survives the termination of this Agreement.**

25. Termination

a. MWDOC may terminate this Agreement with or without cause by providing written notice to MNWD not less than twenty-five days prior to an effective

termination date. MWDOC's only obligation in the event of termination will be payment of fees and expenses incurred in conformity with this Agreement up to and including the effective date of termination.

b. MNWD may terminate this Agreement with or without cause by providing written notice to MWDOC not less than thirty-five days prior to an effective termination date. MNWD's only obligation in the event of termination will be payment of fees and expenses incurred in conformity with this Agreement up to and including the effective date of termination.

c. This Agreement may be terminated by MWDOC upon written notice to MNWD if work on the Study has not started by August 31, 2019.

26. Force Majeure Events

a. Excuse to Performance: In addition to specific provisions of the Agreement, lack of performance by any Party shall not be deemed to be a breach of this Agreement, where delays or defaults are due to acts of God, or the elements, casualty, strikes, lockouts, or other labor disturbances, acts of the public enemy, orders or inaction of any kind from the government of the United States, the State of California, or any other governmental, military or civil authority (other than Metropolitan, MWDOC, or another party to this Agreement), war, insurrections, riots, epidemics, landslides, lightning, droughts, floods, fires, earthquakes, civil disturbances, freight embargoes, or any other inability of any Party, whether similar or dissimilar to those enumerated or otherwise, which are not within the control of the Party claiming such inability or disability, which such Party could not have avoided by exercising due diligence and care and with respect to which such Party shall use all reasonable efforts that are practically available to it in order to correct such condition (such conditions being herein referred to as "Force Majeure Events").

b. Responding to Force Majeure Events: The Parties agree that in the event of a Force Majeure Event which substantially interferes with the implementation of this Agreement, the Parties will use their good faith efforts to negotiate an interim or permanent

modification to this Agreement which responds to the Force Majeure Event and maintains the principles pursuant to which this Agreement was executed.

27. Notices

Any notice or communication given under this Agreement shall be effective when deposited, postage prepaid, with the United States Postal Service and addressed to the contracting parties as follows:

Moulton Niguel Water District
26880 Aliso Viejo Parkway
Aliso Viejo, CA 92656
Attention: **Drew Atwater,** Director of Finance & Water Resources

Municipal Water District of Orange County
Post Office Box 20895
Fountain Valley, CA 92728
Attention: **Dr. Melissa Baum-Haley**

Any party may change the address to which notice or communication is to be sent by providing advance written notice to the other parties.

28. Severability

If any provision of this Agreement shall be held illegal, invalid, or unenforceable, in whole or in part, such provision shall be modified to the minimum extent necessary to make it legal, valid, and enforceable, and the legality, validity, and enforceability of the remaining provisions shall not be affected thereby.

29. Jurisdiction and Venue

This Agreement shall be deemed a contract under the laws of the State of California and for all purposes shall be interpreted in accordance with such laws. Both parties hereby agree and consent to the exclusive jurisdiction of the courts of the State of California and that the proper venue of any action brought thereunder is and shall be Los Angeles County, California.

30. Waiver

No delay or failure by either party to exercise or enforce at any time any right or provision of this Agreement shall be considered a waiver thereof or of such party's right

thereafter to exercise or enforce each and every right and provision of this Agreement. A waiver to be valid shall be in writing but need not be supported by consideration. No single waiver shall constitute a continuing or subsequent waiver.

31. Entire Agreement

a. This writing contains the entire agreement of the parties relating to the subject matter hereof; and the parties have made no agreements, representations, or warranties either written or oral relating to the subject matter hereof which are not set forth herein. Except as provided herein, this Agreement may not be modified or altered without formal amendment thereto.

b. Notwithstanding the foregoing, and to realize the purpose of this Agreement, the Agreement Administrator may issue a written modification to the Scope of Work, if this modification will not require a change to any other term of this Agreement.

32. Joint Drafting

Both parties have participated in the drafting of this Agreement.

//////

Signature Page

IN WITNESS WHEREOF, the parties have executed and entered into this Agreement as of the date last written below.

MUNICIPAL WATER DISTRICT OF ORANGE COUNTY	MOULTON NIGUEL WATER DISTRICT
By: _____	By: _____
Robert J. Hunter	Joone Lopez
General Manager	General Manager
Date: _____	Date: _____
APPROVED AS TO FORM	APPROVED AS TO FORM:
By: _____	By: _____
Date: _____	Date: _____

Attachements

Exhibit A- Scope of Work

Smart Watershed Network

1.0 Study Objectives

Develop a permanently deployed, continuous flow monitoring network at strategic locations within the stormwater network, connected to MNWD's existing AMI network.

Develop a cloud-based data management, integration, and analytics space to support data feeds, algorithms, and scenario evaluation.

2.0 Background Information

Stormwater recovery can reduce peak flows in the stormwater system, improve water quality and assist with flood protection. While urban runoff recovery can provide significant benefits, typically, these benefits are only achieved if reuse efforts are made where the captured water can be used immediately – either through infiltration to augment groundwater or used directly on-site. An alternative to immediate or onsite use is utilizing existing wastewater collection and treatment facility infrastructure to divert and treat stormwater flows. Existing drainage assets, such as flood control basins and stormwater treatment facilities can also be used to temporarily detain runoff from small storms before being safety diverted to the wastewater collection system. Due to factors such as water conservation and climate change, many wastewater systems today have unused capacity, especially during dry weather flow conditions. This unused capacity presents an opportunity to develop new water supplies through diversion and treatment of stormwater and urban runoff.

Before stormwater or urban runoff can be fully developed as a new resource, agencies must understand the interactions of various environmental, social, and regulatory factors which influence the viability and success of a potential project. Evaluation of these factors requires data from multiple spatial and temporal scales – then data processing and analysis in an integrated in a way to provide a complete understanding of the urban water balance. Currently, there are no comprehensive databases or platforms on which to evaluate these factors to support informed decision-making.

The Aliso Creek Watershed is a long narrow coastal canyon which contains portions of the cities of Aliso Viejo, Dana Point, Laguna Beach, Laguna Hills, LagunaNiguel, Laguna Woods, Lake Forest, and Mission Viejo, ultimately discharging to the Pacific Ocean at Aliso Beach. The watershed also contains over half of the MNWD service area. As part of the South Orange County's 2017 Water Quality Improvement Plan (WQIP), the watershed was identified as having viable urban runoff recovery potential. Dry weather flows at major storm drain outfalls are estimated to be 1,100 acre-feet per year (AFY) (or 1.5 cfs). Additionally, storm runoff from

events 0.5-inches and smaller is estimated to result in approximately 1,300 AFY on average. MNWD currently owns approximately double the wastewater treatment capacity of the current dry weather wastewater flows it sends to wastewater treatment plants. In 2017, the District recorded average dry wastewater flows of 10.8 Million gallons per day (MGD), with current capacity of approximately 22.7 MGD (resulting in an available capacity of approximately 13,300 AFY) . If MNWD were to divert and recover the combined dry weather and small-storm runoff volume and treat it as part of their current capacity allowance, this volume would represent approximately 9% of MNWD's total water demands. The table below shows the potential recovery volume, available treatment capacity, and the potential contribution to MNWD total water demand.

Potential Recovery Volume	Available WWTP Capacity	% of MNWD Total Demand (based on Potential Recovery Volume)*
1,100 AFY (dry-weather urban runoff)	13,300 AFY (dry weather)	4.1%
1,300 AFY (storms < 0.5")		4.8%
Total = 2,400 AFY		Total = 8.9%

The description above indicates that recovery of urban and storm water runoff represents an opportunity for MNWD and other agencies in Southern California to increase local water supplies. The key gap in acting on this opportunity has been the availability of real-time, high resolution watershed data which would allow for a complete understanding of the urban water balance. As discussed, there are many environmental, social, and regulatory factors which influence the potential success of an urban runoff recovery project. In the past, there has been no comprehensive database or platform on which to evaluate these factors to support informed decision-making.

3.0 Study Description

In order to realize urban runoff recovery as a reliable water supply source, the factors identified above need to be evaluated simultaneously, on one platform. This proposal provides a vision and work plan to reach that goal – a Smart Watershed Network. The proposed Smart Watershed Network Project (Project) is a watershed-scale urban runoff recovery potential study based in the Aliso Creek Watershed. The Project consists of two primary elements:

- Development of a permanently-deployed, continuous flow monitoring network at outfalls and major confluences within the storm drain network connected via the MNWD's existing Advanced Metering Infrastructure (AMI) network. This will also

include probes to continuously monitor salinity to provide data for salt balance accounting. Transferrable guidance on equipment selection and AMI integration to support flow monitoring is an intended outcome of the study.

- Development of a cloud-based data management, integration, and analytics space to support planning and decision making based on watershed data feeds and applied algorithms. The analytical scripts, algorithms and visualizations determined to be effective for managing and interpreting data can be directly adopted or serve as a template for other agencies. Software developed as part of this Project will be developed under an open-source license. The Project will serve as a model for other agencies.

The resulting network and analysis space will provide a framework for obtaining, managing, and analyzing watershed-scale flow and salt concentration datasets in a manner that can be spatially and temporally related to water meter data. With this capability, the system can be used to support decision making at multiple scales. For example, the datasets will support analysis of discrete low flow diversion projects at an individual subwatershed scale to evaluate incremental increases in water recovery and progress toward water quality goals. It could also be used to evaluate system-scale strategies for low flow and small storm diversions, including impacts to system capacity and benefits related to water supply, salt balance, and pollutant load reduction.

Participating Entities and Supporting Entities

The Municipal Water District of Orange County (MWDOC) is a Member Agency of the Metropolitan Water District of Southern California and is the designated lead Member Agency submitting this proposal. Moulton Niguel Water District (MNWD) and the County of Orange (County) will serve as Co-Program Managers and will lead the execution of the project. MWDOC, MNWD, and the County will form the project leadership team.

In addition to the project leadership team, supporting entities will provide technical expertise and guidance, along with cooperating partner agencies who support the project but will not be directly involved in execution of the project. The project leadership team has reached out and received confirmation of support from the following supporting entities:

- Research Advisors
- Technical Expert Consultants
- Cooperating Partners

Research Advisors: Technical advisors will support technical review of the data analysis and modeling work; provide guidance on improving transferability of approaches, findings, and work product to other agencies; engage with interested stakeholders; and help to spread the output across the research community as well as other watersheds. Advisors include:

- Dave Feldman, PhD, Professor of Urban Planning and Public Policy and Political Science at the University of California, Irvine (UCI); and

- Eric Stein, PhD, Principal Scientist at the Southern California Coastal Water Resource Project (SCCWRP)

Technical Expert Consultants: Expert technical consultants will lead development of the software framework and analytics platform, and perform data processing tasks.

- **Geosyntec Consultant (Geosyntec):** Geosyntec delivers technical leadership in stormwater and watershed management, GIS analysis and programming, and development of data management and decision support tools. Geosyntec modeling and information management staff will lead system design, algorithm development, data analysis, and reporting efforts in collaboration with MNWD and County analysts.
- **Sitka Technology Group (Sitka):** Sitka develops custom software solutions and delivers data management services to provide powerful tools for managing environmental and infrastructure assets. Sitka will configure digital infrastructure, publish web maps, support integration of data feeds, and contribute to open-source software algorithms.
- **Alta Environmental (Alta):** Alta has key expertise in watershed and storm drain monitoring. Alta will support development of equipment specifications, install, calibrate, and maintain monitoring equipment, and support reporting on monitoring equipment installation.

[Include other member agencies, sub-agencies, and public agencies at participating entities, along with applicable consultants, sub-consultants, and other non-public agencies as supporting entities.]

4.0 Description of Tasks

The detailed Project Work Plan has been divided into tasks with specific deliverables and is presented below. Work plan tasks are linked to the Project Schedule which includes key project milestone dates and deliverable due dates. The Project Schedule immediately follows the Project Work Plan. .

TASK 1 – SELECT MONITORING SITES This task includes selection of flow monitoring sites and verification of the ability to feasibly access and install equipment. Monitoring will be performed at 38 major outfalls (36-inch diameter and larger) in the Aliso Creek Watershed. In addition, monitoring will be performed at 10 locations in stream channels where there is a defined cross section (i.e., road crossings), and 12 locations within the pipe network of larger subwatersheds. The purpose of in-stream measurements is to help inform overall water balance accounting, including water that does not originate within the subwatersheds of one of the monitored outfalls. The purpose of locations within pipe networks is to provide better spatial resolution in cases where the tributary area to an outfall is relatively large. In this case, monitoring stations will be located on major branches of the storm drain network. This task will be performed by County monitoring staff who are very familiar with the storm drain assets. Upon verification of the selected sites, a Monitoring Site Technical Memorandum will be prepared which lists the sites and provides brief rationales for their selection. Product research and selection will be provided along with proposed equipment specifications and cost estimates.

TASK 2 – CONFIGURE DIGITAL INFRASTRUCTURE This task will initiate development of a cloud-based data management, integration, and analytics space to support planning and decision making based on data feeds and applied algorithms. As part of this task, the digital infrastructure will be configured to process and store supporting datasets and receive new flow monitoring datasets that will come online as part of Task 3. Defined subtasks and outcomes of ask 2 include:

- Configure a workspace with the Microsoft Azure environment (note, Azure costs are not included in this proposal)
- Configure a SQL database for expected datasets, including subwatershed properties, water usage statistics by subwatershed, flow measurements, salinity measurements, and other datasets.
- Set up automated file transfers from the District's AMI data repositories to the Microsoft Azure space
- Develop and publish map services/geoprocessing services to summarize water usage, water budget, and efficiency measures from the District's existing datasets at the scale of monitored subwatersheds

- Set up automated data processing routines to translate water level and conductivity measurements to flow and dissolved solids estimates and calculated key metrics related to flow rates and salt concentrations. For example, automated baseflow separation can be applied to estimate the portion of flow that is baseflow vs. diurnal variation.
- Develop an interactive Web Map with layers for each of the primary datasets, including simple query functions to view relevant attributes of each dataset.
- Establish dynamic linkages to the AMI network to incorporate flow and salt monitoring station data as it comes online as part of Task 3.

Further development of the digital infrastructure as part of Task 4 will expand analytical and scenario management capabilities. A Draft Digital Configuration Technical Memorandum will be prepared which details the specific configuration options, database schema, maps service specifications, and any custom code that is used to create data linkages and perform data management and processing. The Web Map will identify the monitoring sites, as well as geometries and key statistics associated with each dataset. Click-based queries will return popup windows that display attribute data and key statistics. The Web Map will be published to a project website where it will be publicly accessible in a view-only mode. Finally, a publicly accessible GitHub repository will be established to house opensource code developed as part of this task.

TASK 3 – MONITORING EQUIPMENT PROCUREMENT, INSTALLATION & CALIBRATION

This task includes procurement, installation, and calibration of 60 continuously-deployed flow monitoring stations connected to the District's AMI network. Flow meters will be installed at the sites identified in Task 1 and data feeds will be integrated into the digital infrastructure described in Task 2. Equipment installed at each site will include the following :

- Sensus Smart Gateways to connect to the AMI network. These systems offer 2 digital Sensor inputs and 2 analog 4/20 mA inputs. The equipment will log 15-minute measurements and transmit measurements every 4 hours and have battery life of more than 5 years at the intended transmit frequency.
- Global Water WL400 Water Level Sensor, ultrasonic water level sensor, 4/20 mA output, 0 to 12 ft range.
- Lithium Ion Battery sized for at least 2 years of continuous deployment between replacement.

At 20 locations, conductivity will also be measured via a Global Water Conductivity Sensor. These locations will be selected where a probe can be continuously submerged. It is anticipated that results at these locations can be extrapolated across the watershed. The per station cost is estimated to be approximately $1,300 plus installation for flow monitoring and $2,200 per station for flow and conductivity monitoring. Stations will be installed, commissioned, calibrated, and maintained by County contractors (Alta Environmental). This tasks includes initial installation, calibration, and approximately 3 return visits to each station over the study period to check calibration. Calibration includes validating sensor observations (i.e., water level and conductivity) and establishing the flow-vs-discharge rating table at each location. An Equipment Installation and Calibration Technical Memorandum will document the technical specifications of the equipment procured, the actual cost of equipment procured,

provide a summary of installation and calibration activities, photographic records organized by site, and electronic datasheets describing the sensor calibration parameters (i.e., rating tables).

TASK 4 – DATA ANALYSIS AND SCENARIO EVALUATION This task includes expanding the functions of the cloud-based Azure analytic space and using the space to: (1) evaluate spatial and temporal relationships in data; (2) develop algorithms for quantifying longterm potential capture; and (3) evaluate case study scenarios. The cloud-based data management, integration, and analytics environment will be expanded from Task 2 to include the modules, as needed:

- Machine Learning Studio – data analytics and machine learning space for algorithm development, supporting Python and R.
- Power BI – for visualization and scenario management.

When fully developed, the cloud-based environment will provide the following services/capabilities:

- Continuously process water level and conductivity measurements to estimate flow and dissolved solid concentrations.
- Link to GIS resources to establish and maintain spatial and temporal relationships between water usage, water conservation measures, urban runoff, salt concentrations, and weather parameters.
- Apply algorithms to aggregate water usage, water budgets, water conservation measures and weather data at a subwatershed scales corresponding to flow meter locations.
- Apply algorithms to calculate water recovery potential.

Using this framework, the project team will be able to:

- Evaluate regressions between the integrated data streams.
- Publish regression services and/or machine learning services that are found to have predictive power related to urban runoff flow rates and water quality. For example, a regression or machine learning function could support estimates of urban runoff at intermediate or unmonitored storm drain locations based on hourly AMI water usage data, budgets, irrigated area, and/or other attributes.
- Develop and test algorithms (written in Python or R) to quantify the results of key management scenarios:
  - Low flow diversion into the sanitary collection system at one or many outfalls.
  - Storage and delayed release of small storm flows into the sanitary collection system using in- system storage, such as stormwater facilities.
- Develop and publish a scenario management interface that allows these management scenarios to be defined and analyzed. For example, allow a MNWD or County user to select a location, define the diversion rate, define the storage volume, and define the delay period following storm events, as applicable, and return results relative to resource recovery (AFY) and salt concentration of recovered water.

By working with readily available tools in the Azure environment, the configurations, scripts, routines, algorithms, etc. used as part of the Project can serve as a template for other agencies. Any custom software

developed as part of the Project will be part of the GitHub repository maintained under an open source license.

Upon development of the framework and associated algorithms, the project team will prepare three case studies of how the framework can be used to evaluate resource recovery scenarios. This will demonstrate the system functionality to support individual outfall projects as well as more programmatic (widespread) strategies. A Case Study Report will be prepared which concisely document inputs, methodology, and results of three case studies. The Case Study Report will be delivered in PDF format with standalone case-study briefs.

TASK 5 – RESEARCH FINDINGS AND PROJECT REPORT

This task will yield a research report and associated PowerPoint presentation. The research report will document the project activities, methodology, and findings. The body of the research report is anticipated to include:

1. Executive Summary
2. Introduction
3. Watershed Monitoring System
   a. Monitoring Locations
   b. Equipment Configuration
   c. Lessons Learned and Transferrable Findings
4. Data Management and Analytic Infrastructure
   a. System Elements
   b. System Configuration
   c. Regression/Machine Learning Analysis
   d. Urban Runoff Capture Quantification Algorithms
   e. Lessons Learned and Transferrable Elements
5. Urban Runoff Capture Analysis
   a. Case Studies
   b. MNWD System-scale Implications
   c. Aliso Creek Watershed Management Implications
6. Summary
   a. Findings of Research Project for MNWD/Aliso Creek System
   b. Broader Applicability to Southern California Watersheds
   c. Effectiveness of System to Reduce Barriers to Future Supply

The research report will be supported by the memorandums and Web Map prepared as part of prior tasks (as appendices).

5.0 Deliverables

Task/Subtask	Deliverables	Submittal Due Date
1- Select Flow Monitoring Sites	Siting Technical Memo	**August 1, 2019**
2- Configure Digital Infrastructure	Draft Digital Configuration Technical Memo & Web Map	**October 1, 2019**
3- Monitoring Equipment Procurement, Installation, Maintenance	Equipment Installation and Calibration Report	**October 1, 2019**
4- Data Analysis & Scenario Evaluation	Open Source Code, Final Digital Configuration Technical Memo and Case Study Support	**October 31, 2020**
5- Research Findings & Project Results	Final Report and Presentations	**February 1, 2020**

6.0 Cost Estimate

Task No.	Task Description	Total Study Cost	Requested Metropolitan Funding Match
1	Select Flow Monitoring Sites	**In Kind**	**$0**
2	Configure Digital Infrastructure	**$62,500**	**$31,250**
3	Monitoring Equipment Procurement, Installation, Maintenance	**$220,308**	**$110,154**
4	Data Analysis & Scenario Evaluation	**$89,820**	**$44,910**
5	Research Findings & Project Results	**$38,880**	**$19,440**
	Totals	**$411,508**	**$205,754**

7.0 Process Schedule

		Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Jun
		2019				2020				2021
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
Task	**Task Name**									
1	Select Flow Monitoring Sites									
2	Configure Digital Infrastructure									
3	Monitoring Equipment Procurement, Installation, Maintenance									
4	Data Analysis & Scenario Evaluation									
5	Research Findings & Project Results									

Post-study reporting to Metropolitan is not shown on the graphical schedule, but should be submitted upon request by Metropolitan one year following Metropolitan's acceptance of the Final Report.

8.0 Reporting Schedule

- Semi-Annual Progress Report 2019 No. 1 (Jan 2019 – Jun 2019).....July 20, 2019

[The following table is to be completed by MNWD based on content of submitted proposal and subject to review and approval by Metropolitan/MWDOC. Fill in cell(s) reflective of expected quarterly progress using example color. Expand to as many rows as required.]

The following illustrates the expected quarterly progress schedule per task.

- Semi-Annual Progress Report 2019 No. 2 (Jul 2019 – Dec 2019)..... January 20, 2020
- Semi-Annual Progress Report 2020 No. 1 (Jan 2020 – June 2020).....July 20, 2020
- Draft Final Report…….November 20, 2020
- Semi-Annual Progress Report 2020 No. 2 (Jul 2020 – Dec 2020)..... January 20, 2021
- **Final Report**.....**February 20, 2021**
- Post-Study Update Report ..... February 20, 2022

Exhibit B- Sample Invoice

BILL TO	INVOICE
Metropolitan Water District of Southern California **Accounts Payable Section** **P.O. Box 54153** **Los Angeles, CA 90054-0153** AccountsPayableBusiness@mwdh2o.com	

AGENCY NAME	INVOICE DATE	INVOICE NUMBER	INVOICE PERIOD

ADDRESS	STUDY NAME

CONTACT	CONTACT PHONE	MWD AGREEMENT NUMBER

MAXIMUM AWARD AMOUNT	AMOUNT PREVIOUSLY INVOICED	AWARD AMOUNT REMAINING

ITEMIZED EXPENSES		
TASK	DETAILED DESCRIPTION (e.g., consultant costs and hours, materials and supplies, lab costs, etc.)	COST
	TOTAL COSTS	
	TOTAL ELIGIBLE COSTS (UP TO 50% OF TOTAL COSTS)	
	RETENTION (25% of total eligible reimbursable costs)	
	TOTAL ELIGIBLE REQUEST - RETENTION	

BY SIGNING THIS INVOICE, MNWD CERTIFIES THAT WORK DESCRIBED HEREIN IS AN ACCURATE AND CORRECT RECORD OF SERVICES PERFORMED FOR METROPOLITAN UNDER THIS AGREEMENT AND THIS WORK HAS NOT BEEN BILLED ON ANY OTHER CLIENT OR STUDY PARTNER INVOICES.

STUDY MANAGER	

I,_____, General Manager or designee of the Municipal Water District of Orange County, certify that the information provided is verified in accordance with guidelines provided in the Agreement indicated above by our staff who has no conflict of interest in the verification.

Exhibit B – Sample Invoice

BILL TO:

Metropolitan Water District of Southern California
Accounts Payable Section
P.O. Box 54153
Los Angeles, CA 90054-0153

BUDGET Tracking

STUDY NAME	INVOICE PERIOD
	MWD AGREEMENT NUMBER

A	B	C	D	E	F	G
TASK NUMBER AND NAME	TOTAL COSTS PAID BY MEMBER MNWD FOR CURRENT INVOICE	ELIGIBLE REIMBURSABLE COSTS FOR CURRENT INVOICE (UP TO 50% OF B)	CUMULATIVE ELIGIBLE REIMBURSABLE COSTS (INCLUDING CURRENT INVOICE)	TOTAL AWARD AMOUNT PER EXHIBIT A SCOPE OF WORK	REMAINING AWARD BALANCE (E – D)	PERCENT COMPLETE (D/E x100%)
TOTAL						

CUMULATIVE WITHHOLDING (INCLUDING CURRENT INVOICE)	
CUMULATIVE REIMBURSABLE REQUEST (INCLUDING CURRENT INVOICE)	

Exhibit C – Semi-annual Progress Reports

MNWD shall include, at minimum, the following items in the Semi-Annual Progress Reports.

1. Cover Letter

Provide a brief description of the submittal, including the amount invoiced in the respective invoice period, a list of items being submitted, and contact information. The letter must be signed and include the following language:

"I am informed and believe that the information contained in this report is true and that the supporting data is accurate and complete."

2. Semi-Annual Progress Report

2.1 Study Status

a) Describe work performed during the semi-annual period, by task.
b) Describe major accomplishments, such as:
   i. Tasks achieved
   ii. Milestones met and deliverables completed
   iii. Meetings held or attended
   iv. Press release, etc.
c) Where applicable, describe how the activities carried out differed from the plans outlined in the Study Scope of Work. Identify any problems encountered in the performance of the work under this Agreement, and how these matters were addressed.
d) If the semi-annual period's objectives were not met, explain why and how these goals will be approached for the next reporting period.

2.2 Cost Information

a) Identify costs incurred during the quarter by MNWD and each partnering/supporting entity working on the Study.
b) Discuss how the actual budget is progressing in comparison to the latest Study budget. Describe any differences that occurred, identifying budget impacts and/or problems encountered, and describe how these matters will be addressed for the next reporting period.
c) Provide a revised budget, by task, if changed from the latest Study budget.

2.3 Schedule Information

a) Provide a Study schedule showing actual progress versus planned progress from the latest schedule.
b) Discuss how the actual schedule is progressing in comparison to the latest Study schedule. Justify any differences that occurred, identifying schedule impacts and/or problems encountered, and describe how these matters will be addressed for the next reporting period.
c) Provide a revised schedule, by task, if changed from the latest Study schedule.

Exhibit D – Final Report Format

MNWD shall include, at minimum, the following items in the Final Report.

1. Cover Letter

Provide a brief description of the submittal, including the total amount of funds disbursed, a list of items being submitted, and contact information. The letter must be signed and include the following language:

"I am informed and believe that the information contained in this report is true and that the supporting data is accurate and complete."

2. Final Report

2.1 Executive Summary

a) Briefly summarize the content of the main report.

2.2 Introduction

a) Provide an overview of the work performed and accomplishments achieved throughout the duration of the Study.
b) Briefly describe the findings of the study.
c) Describe the role/involvement of each partnering/supporting entity and their relationship to the Study.

2.3 Cost Summary

a) Include a summary of the costs incurred and of funds disbursed throughout the duration of the Study.
b) Provide a comparison between the planned budget in the Agreement and the actual budget. Justify any differences that occurred, identifying budget impacts and/or problems encountered, and how these matters were addressed.

2.4 Schedule Summary

a) Include a summary of all tasks accomplished throughout the duration of the Study.
b) Provide a comparison between the planned schedule in the Agreement and the actual schedule. Justify any differences that occurred, identifying schedule impacts and/or problems encountered, and how these matters were addressed.

2.5 Study Results and Analysis

a) Describe and provide an analysis of the Study results and findings in detail.
b) Were the Study goals and objectives as proposed achieved? Explain.
c) Discuss any major problems that occurred in meeting the Study goals and objectives, including how, and if, they were resolved.
d) Explain how the findings of the Study can be applied to other areas of the region. What types of obstacles, if any, would be anticipated before implementation/application can occur, and how could these matters be addressed?

2.6 Conclusion

a) Describe lessons learned.
b) Describe the next steps of the Study (e.g., applicability of the results, topics that may require additional research, new programs that should be developed, policy amendments, etc.).

Exhibit E – Post Study Update Format

MNWD shall include, at minimum, the following items in the Post-Study Update Report.

1. **Accomplishments and Applicability**
   a) What has been accomplished since the submittal of the Final Report? How have the Study findings/results of the Final Report been applied/implemented (e.g., regional application of results, pilot study results used for full-scale implementation, additional research performed, impacts on regulations/legislation, technical advances, etc.)?
   b) Discuss new information obtained during this reporting period, and how this knowledge will further future efforts.
   c) If applicable, provide additional data obtained since the submittal of the Final Report (e.g., pilot project water quality data, etc.).

2. **Next Steps**
   a) Describe specific plans, if any, for continuing work on this Study or related studies (e.g., what questions will be investigated, what programs will be developed, etc.).

Exhibit F – ACORD Form or Equivalent

ACORD™	CERTIFICATE OF INSURANCE	ISSUE DATE (MM/DD/YY)

Producer	THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMA-TION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.
	COMPANIES AFFORDING COVERAGE
CODE SUB-CODE	Company Letter A
INSURED	Company Letter B
	Company Letter C
	Company Letter D

COVERAGES

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED, NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

CO LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS	
	GENERAL LIABILITY ☐ COMMERCIAL GENERAL LIABILITY ☐ CLAIMS MADE ☐ OCCUR. ☐ OWNER'S & CONTRACTOR'S PROT.				GENERAL AGGREGATE PRODUCTS-COMP/OPS AGGREGATE PERSONAL & ADVERTISING INJURY EACH OCCURRENCE FIRE DAMAGE (ANY ONE FIRE) MEDICAL EXPENSE (ANY ONE PERSON)	$ $ $ $ $ $
	AUTOMOBILE LIABILITY ☐ ANY AUTO ☐ ALL OWNED AUTOS ☐ SCHEDULED AUTOS ☐ HIRED AUTOS ☐ NON-OWNED AUTOS ☐ GARAGE LIABILITY				COMBINED SINGLE LIMIT BODILY INJURY (PER PERSON) BODILY INJURY (PER ACCIDENT) PROPERTY DAMAGE	$ $ $ $
	EXCESS LIABILITY ☐ UMBRELLA FORM ☐ OTHER THAN UMBRELLA FORM				EACH OCCURRENCE AGGREGATE	$ $
	WORKERS COMPENSATION/ EMPLOYERS LIABILITY ☐ AND EMPLOYERS' LIABILITY				STATUTORY $ (EACH ACCIDENT) $ (DISEASE--POLICY LIMIT) $ (DISEASE-EACH EMPLOYEE)	$
	OTHER ☐ ERRORS AND OMMISSIONS ☐ CRIME OR DISHONEST BOND					$ $

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/RESTRICTIONS/SPECIAL ITEMS

METROPOLITAN, ITS OFFICERS, OFFICIALS, EMPLOYEES AND AGENTS ARE TO BE COVERED AS INSUREDS.
INSURANCE VERIFIED ON THIS CERTIFICATE IS APPLICABLE TO AGREEMENT NO.

CERTIFICATE HOLDER	CANCELLATION
Metropolitan Water District of Southern California P.O. Box 54153, Terminal Annex Los Angeles California 90054	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL ENDEAVOR TO MAIL ____ DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGA-TION OR LIABILITY OF ANY KIND UPON THE COMPANY, ITS AGENTS OR REPRESENTATIVES.
	AUTHORIZED REPRESENTATIVE
ACORD	ACORD CORPORATION 1998

INTERAGENCY COST SHARING AGREEMENT
SMART WATERSHED NETWORK

This Interagency Cost Sharing Agreement ("Agreement") is by and between the MOULTON NIGUEL WATER DISTRICT, a public agency ("MNWD") and the COUNTY OF ORANGE, a public agency ("County"). MNWD and County are hereinafter sometimes collectively referred to as the "Parties" or individually as a "Party."

RECITALS

A. As a member agency of the Metropolitan Water District of Southern California ("Metropolitan"), the Metropolitan Water District of Orange County ("MWDOC") purchases water from Metropolitan and distributes that water to MWDOC's member agencies, including MNWD; and

B. Metropolitan, through its Future Supply Actions Funding Program ("FSA Funding") provides funding to its member agencies, such as MWDOC, for technical studies and pilot projects that reduce barriers to future production of recycled water, stormwater, seawater desalination, and groundwater resources. MNWD, through MWDOC, has obtained FSA Funding for a Smart Watershed Network ("Study"). MNWD and MWDOC have entered into that certain FSA Funding Agreement for the Study, dated _____, a copy of which is attached hereto as Exhibit "A" and incorporated herein by reference ("MWDOC Agreement"). The MWDOC Agreement provides, among other things, for MNWD to perform certain work, submit invoices to MWDOC for reimbursement of costs, and to provide reports on the progress of the Study; and

C. The Study is estimated to cost $411,508.00. FSA Funding under the MWDOC Agreement, for reimbursement of Study costs, will not exceed $205,754.00 or 50% of the total cost expended for the Study, whichever is less ("Metropolitan Match"). Under the MWDOC Agreement, MNWD is responsible for all costs in excess of the Metropolitan Match. The MWDOC Agreement sets forth the process by which MNWD is to submit invoices to MWDOC for relay to Metropolitan. Subject to approval by Metropolitan, payment will be made by Metropolitan to MWDOC and, in turn, MWDOC will provide payment to MNWD; and

D. The Parties desire to enter into this Agreement in order to provide for participation by the County in the Study, through providing in-kind services, as further described in this Agreement. This Agreement also provides for reimbursement to County from the Metropolitan Match funds, as well as direct payment to County from MNWD, to offset Study costs incurred by the County.

NOW, THEREFORE, in light of the foregoing Recitals, and in consideration of the mutual covenants, promises, and conditions set forth in this Agreement, and for other good, valuable, and adequate consideration, the Parties hereto agree as follows:

TERMS AND CONDITIONS

1. Scope of Work

(a) County Scope of Work. County shall be responsible for performance of the following portions of the Study, as further described in the County Scope of Work attached hereto as Exhibit "B" and incorporated herein by reference: Purchase of equipment (except equipment purchased by MNWD as described in subsection (c) below) and installation of flow and salinity sensors, developing data models and necessary consultant support to develop the analysis and cloud data management of the data acquired from the Smart Watershed Network, and other plans as needed. Exhibit "B" may be revised to incorporate changes in the work to be performed. However, no such changes may be made, which would increase the amounts to be paid by either Party, without the prior written consent of both Parties as indicated by an amendment to this Agreement.

(b) MNWD Scope of Work. MNWD shall be responsible for performance of the portions of the Study as further described in the MNWD Scope of Work attached hereto as Exhibit "C" and incorporated herein by reference.

(c) Equipment. Equipment shall be owned by the Party who purchases the equipment, and that Party shall be responsible for operation and maintenance thereof. Following completion of the Study, the Parties may elect, in their discretion, to enter into a contractual arrangement for the long-term maintenance of said equipment and the establishment of a database in connection with the use of sensors and information obtained from any network that is developed.

2. Allocation of Study Costs and Metropolitan Match Funds

(a) Section 7 of the MWDOC Agreement sets forth the procedures that MNWD must follow regarding the submissions of invoices to MWDOC, in order for MWDOC to relay to Metropolitan the requests for FSA Funding for Study expenditures. Upon approval by Metropolitan, payment is made by Metropolitan to MWDOC and, in turn, MWDOC provides payment to MNWD.

(b) County shall comply with the same procedures regarding content and submission of invoices, except that County's invoices shall be directed to Drew Atwater, Director of Finance and Water Resources, Moulton Niguel Water District. County's invoices shall be signed by Amanda Carr, Deputy Director, OC Environmental Resources, or her designee. MNWD shall process and forward all County invoices to MWDOC for payment, in accordance with Exhibit A (MWDOC Agreement), and facilitate full and timely payment to County of each invoice. Any and all contractors and consultants used by County for the Study, for which reimbursement from the Metropolitan Match is sought, shall comply with the same invoicing procedures as County.

(c) Neither County nor any of its contractors/consultants shall be eligible to receive reimbursement which exceeds the amounts set forth in subsection (d), unless otherwise allowed in this Agreement.

(d) The Parties intend that each Party incurs the same amount of net expenditures to complete the Study, and that each Party's proportionate net expenditure be equal to 50% of total Study costs in excess of the Metropolitan Match, not to exceed $102, 877. Therefore, the allocation of Metropolitan Match funds between the Parties, and the amount of direct reimbursement of Study costs from MNWD to County, shall be in an amount so as to achieve this parity. Based on the $411,508 estimated total cost of the Study, each Party's responsibility for Study costs shall be as follows:

Total estimated Study costs - $411,508.00

Metropolitan Match - $205,754.00

County – 50% of the amount in excess of the Metropolitan Match, or $102,877

MNWD – 50% of the amount in excess of the Metropolitan Match, or $102,877

Table 1 is based on the estimated $411, 508 total Study Cost, and illustrates how Metropolitan Match funding shall be allocated between the Parties, and the amount of direct reimbursement MNWD shall provide directly to County from MNWD's own funds, such that each Party has the same net expenditure of $102, 877. If one Party's actual net expenditure is less than the amount equal to 50% of Study costs in excess of the Metropolitan Match, the allocation of Metropolitan Match funds, and any direct reimbursement from one Party to the other Party, shall be adjusted accordingly.

Table 1: Summary of Anticipated Study Costs and Reimbursement Amounts

Party	**Direct Expenditure**	**Metropolitan Match (50% of total Study costs, up to $205,754)**	**Payment from MNWD to County**	**Net Expenditure by Party**
MNWD	$18,000	$9,000	$93,877	$102,877
County	$393,508	$196,754	$0	$102,877
Total	**$411,508**	**$205,754**	**$93,877**	**$205,754**

(e) No Party shall be required to incur net expenditures for Study costs in excess of $102, 877. In the event either Party determines that its net expenditure for Study costs will exceed the estimated costs set forth above, said Party shall notify the other Party as soon as reasonably possible. The Parties shall then engage in good faith negotiations to determine the extent of work to be performed and the allocation of any additional Study costs between the Parties, except that, as to the work to be performed by County, in the event County determines that its net expenditure will exceed $102,877, County, at its sole discretion, may elect to reduce its portion of the Scope of Work in order to remain within the estimated costs.

3. Advance Payments

The Parties acknowledge that Metropolitan's internal procedures may take a number of months to complete before FSA Funding is received from the Metropolitan Match. Therefore, MNWD may elect, in its discretion, and from time to time, to advance funds to County to cover County's share of the Metropolitan Match. In that event, MNWD shall be entitled to receive the applicable payment from the Metropolitan Match, once it is processed and received from Metropolitan, in order to cover the amount which was advanced by MNWD.

4. Impact of MWDOC Agreement

(a) MNWD shall have no obligation to continue or extend the MWDOC Agreement beyond the term, rights and obligations set forth in that version of the MWDOC Agreement.

(b) County shall be responsible for compliance with any and all obligations under the MWDOC Agreement which pertain to the Scope of Services and Study costs which apply to County's activities under this Agreement.

5. Effective Date, Term and Termination

(a) This Agreement shall be effective on the date of full execution of this Agreement by both Parties ("Effective Date"). The term of this Agreement shall be from the Effective Date to the date of expiration or termination of the MWDOC Agreement or February 28, 2021, whichever date is sooner, unless earlier terminated pursuant to this section.

(b) In the event it is determined that Study costs in excess of the Metropolitan Match will exceed $205,754, and/or that any Party's net expenditure for Study costs will exceed $102,877, and the Parties are not able to reach an agreement as to the allocation of excess costs, then either Party shall have the right to terminate this Agreement upon 30 days prior written notice to the other Party. Any reports or work products required under the Scopes of Work completed prior to said termination shall be provided to each Party as contemplated in the Scopes of Work. In addition, Study costs incurred prior to said termination shall be billed and paid as contemplated under this Agreement.

(c) If either Party to this Agreement believes that the other Party has failed to perform any obligation of that Party in accordance with the terms of this Agreement ("Default"), the Party alleging the Default shall provide written notice ("Default Notice") to the other Party, setting forth the nature of the alleged Default. Unless otherwise provided by a specific term of this Agreement, the Party claimed to be in Default shall have: (i) with respect to a Default involving the payment of money, ten (10) days after its receipt of the Default Notice to completely cure such Default, and (ii) with respect to any other type of Default, thirty (30) days from the receipt of the Default Notice to completely cure such Default or, if such Default cannot reasonably be cured within such thirty (30) day period, to commence the cure of such Default within the thirty (30) day period and diligently prosecute the cure to completion thereafter. If the Party claimed to be in Default does not cure such Default within the time periods and procedures as set forth herein, the Party alleging Default may then terminate this Agreement. In the event a dispute arises, the Parties shall first attempt to resolve the disagreement through an informal dispute resolution process. A Party shall initiate the informal dispute resolution process by

transmitting written notice to the other party, setting forth the nature and extent of the dispute, and requesting that the Parties engage in informal dispute resolution. In the event the Parties have not reached a mutually satisfactory resolution within thirty (30) calendar days following the date of the initial informal dispute resolution meeting, either Party may pursue other available remedies including, but not limited to, termination of this Agreement.

6. Incorporation of Recitals

The Recitals set forth above are incorporated herein and made an operative part of this Agreement.

IN WITNESS WHEREOF, each of the Parties have caused this Agreement to be executed by its respective duly authorized officers.

(signatures are on the following page)

MOULTON NIGUEL WATER DISTRICT

By:_____

Title:_____

Date:_____

COUNTY OF ORANGE

By: _____

Title:_____

Date:_____

EXHIBIT “A”

MWDOC Agreement

EXHIBIT “B”

County Scope of Work

Exhibit B- County of Orange Scope of Work

Smart Watershed Network

1.0 Study Objectives

Develop a permanently deployed, continuous flow monitoring network at strategic locations within the stormwater network, connected to MNWD's existing AMI network.

Develop a cloud-based data management, integration, and analytics space to support data feeds, algorithms, and scenario evaluation.

2.0 Background Information

Stormwater recovery can reduce peak flows in the stormwater system, improve water quality and assist with flood protection. While urban runoff recovery can provide significant benefits, typically, these benefits are only achieved if reuse efforts are made where the captured water can be used immediately – either through infiltration to augment groundwater or used directly on-site. An alternative to immediate or onsite use is utilizing existing wastewater collection and treatment facility infrastructure to divert and treat stormwater flows. Existing drainage assets, such as flood control basins and stormwater treatment facilities can also be used to temporarily detain runoff from small storms before being safety diverted to the wastewater collection system. Due to factors such as water conservation and climate change, many wastewater systems today have unused capacity, especially during dry weather flow conditions. This unused capacity presents an opportunity to develop new water supplies through diversion and treatment of stormwater and urban runoff.

Before stormwater or urban runoff can be fully developed as a new resource, agencies must understand the interactions of various environmental, social, and regulatory factors which influence the viability and success of a potential project. Evaluation of these factors requires data from multiple spatial and temporal scales – then data processing and analysis in an integrated in a way to provide a complete understanding of the urban water balance. Currently, there are no comprehensive databases or platforms on which to evaluate these factors to support informed decision-making.

The Aliso Creek Watershed is a long narrow coastal canyon which contains portions of the cities of Aliso Viejo, Dana Point, Laguna Beach, Laguna Hills, LagunaNiguel, Laguna Woods, Lake Forest, and Mission Viejo, ultimately discharging to the Pacific Ocean at Aliso Beach. The watershed also contains over half of the MNWD service area. As part of the South Orange County's 2017 Water Quality Improvement Plan (WQIP), the watershed was identified as having viable urban runoff recovery potential. Dry weather flows at major storm drain outfalls are estimated to be 1,100 acre-feet per year (AFY) (or 1.5 cfs). Additionally, storm runoff from events 0.5-inches and smaller is estimated to result in approximately 1,300 AFY on average. MNWD currently owns approximately double the wastewater treatment capacity of the current

dry weather wastewater flows it sends to wastewater treatment plants. In 2017, the District recorded average dry wastewater flows of 10.8 Million gallons per day (MGD), with current capacity of approximately 22.7 MGD (resulting in an available capacity of approximately 13,300 AFY) . If MNWD were to divert and recover the combined dry weather and small-storm runoff volume and treat it as part of their current capacity allowance, this volume would represent approximately 9% of MNWD's total water demands. The table to the right shows the potential recovery volume, available treatment capacity, and the potential contribution to MNWD total water demand.

The description above indicates that recovery of urban and storm water runoff represents an opportunity for MNWD and other agencies in Southern California to increase local water supplies. The key gap in acting on this opportunity has been the availability of real-time, high resolution watershed data which would allow for a complete understanding of the urban water balance. As discussed, there are many environmental, social, and regulatory factors which influence the potential success of an urban runoff recovery project. In the past, there has been no comprehensive database or platform on which to evaluate these factors to support informed decision-making.

3.0 Study Description

In order to realize urban runoff recovery as a reliable water supply source, the factors identified above need to be evaluated simultaneously, on one platform. This proposal provides a vision and work plan to reach that goal – a Smart Watershed Network. The proposed Smart Watershed Network Project (Project) is a watershed-scale urban runoff recovery potential study based in the Aliso Creek Watershed. The Project consists of two primary elements:

- Development of a permanently-deployed, continuous flow monitoring network at outfalls and major confluences within the storm drain network connected via the MNWD's existing Advanced Metering Infrastructure (AMI) network. This will also include probes to continuously monitor salinity to provide data for salt balance accounting. Transferrable guidance on equipment selection and AMI integration to support flow monitoring is an intended outcome of the study.
- Development of a cloud-based data management, integration, and analytics space to support planning and decision making based on watershed data feeds and applied algorithms. The analytical scripts, algorithms and visualizations determined to be effective for managing and interpreting data can be directly adopted or serve as a template for other agencies. Software developed as part of this Project will be developed under an open-source license. The Project will serve as a model for other agencies.

The resulting network and analysis space will provide a framework for obtaining, managing, and analyzing watershed-scale flow and salt concentration datasets in a manner that can be spatially and temporally related to water meter data. With this capability, the system can be used to support decision making at multiple scales. For example, the datasets will support analysis of discrete low flow diversion projects at an individual subwatershed scale to evaluate incremental increases in water recovery and progress toward water quality goals. It could also be used to evaluate system-scale strategies for low flow and small storm diversions, including impacts to system capacity and benefits related to water supply, salt balance, and pollutant load reduction.

Participating Entities and Supporting Entities

The following entities will participate in and/or support this project:

- *MNWD – Program Manager*
- *County of Orange – Co-Program Manager*
- *Geosyntec Consultants – Prime Consultant*
- *Alta Environmental – Flow Monitoring Subconsultant*
- *Sitka Technology Group – Technology Subconsultant*
- *Southern California Coastal Water Research Project – Eric Stein - Research Advisor*
- *UC Irvine – Dave Feldman – UC Irvine*

4.0 Description of Tasks

The detailed Project Work Plan has been divided into tasks with specific deliverables and is presented below. Work plan tasks are linked to the Project Schedule which includes key project milestone dates and deliverable due dates. The Project Schedule immediately follows the Project Work Plan.

TASK 1 – SELECT MONITORING SITES This task includes selection of flow monitoring sites and verification of the ability to feasibly access and install equipment. Monitoring will be performed at approximately 38 major outfalls (36-inch diameter and larger) in the Aliso Creek Watershed. In addition, monitoring will be performed at approximately 10 locations in stream channels where there is a defined cross section (i.e., road crossings), and approximately 12 locations within the pipe network of larger subwatersheds. Overall 60 monitoring sites will be selected. The purpose of in-stream measurements is to help inform overall water balance accounting, including water that does not originate within the subwatersheds of one of the monitored outfalls. The purpose of locations within pipe networks is to provide better spatial resolution in cases where the tributary area to an outfall is relatively large. In this case, monitoring stations will be located on major branches of the storm drain network. This task will be performed by County monitoring staff who are very familiar with the storm drain assets. Upon verification of the selected sites, a Monitoring Site Technical Memorandum will be prepared which lists the sites and provides brief rationales for their selection. Product research and selection will be provided along with proposed equipment specifications and cost estimates as part of Task 3.

TASK 2 – CONFIGURE DIGITAL INFRASTRUCTURE This task will initiate development of a cloud-based data management, integration, and analytics space to support planning and decision making based on data feeds and applied algorithms. As part of this task, the digital infrastructure will be configured to process and store supporting datasets and receive new flow monitoring datasets that will come online as part of Task 3. Defined subtasks and outcomes of ask 2 include:

- Configure a workspace with the Microsoft Azure environment (note, Azure costs are not included in this proposal).
- Configure a SQL database for expected datasets, including subwatershed properties, water usage statistics by subwatershed, flow measurements, salinity measurements, and other datasets.

- Set up automated file transfers from the District's AMI data repositories to the Microsoft Azure space.
- Develop and publish map services/geoprocessing services to summarize water usage, water budget, and efficiency measures from the District's existing datasets at the scale of monitored subwatersheds.
- Set up automated data processing routines to translate water level and conductivity measurements to flow and dissolved solids estimates and calculated key metrics related to flow rates and salt concentrations. For example, automated baseflow separation can be applied to estimate the portion of flow that is baseflow vs. diurnal variation.
- Develop an interactive Web Map with layers for each of the primary datasets, including simple query functions to view relevant attributes of each dataset.
- Establish dynamic linkages to the AMI network to incorporate flow and salt monitoring station data as it comes online as part of Task 3.

Further development of the digital infrastructure as part of Task 4 will expand analytical and scenario management capabilities. A Draft Digital Configuration Technical Memorandum will be prepared which details the specific configuration options, database schema, maps service specifications, and any custom code that is used to create data linkages and perform data management and processing. The Web Map will identify the monitoring sites, as well as geometries and key statistics associated with each dataset. Click-based queries will return popup windows that display attribute data and key statistics. The Web Map will be published to a project website where it will be publicly accessible in a view-only mode. Finally, a publicly accessible GitHub repository will be established to house open source code developed as part of this task.

Note: MNWD may elect to utilize Amazon Web Services (AWS) instead of Azure at its discretion. Features and modules available on the AWS platform are somewhat different, however the target functionality described in this scope of work can be supported in either the Azure or AWS platform.

TASK 3 – MONITORING EQUIPMENT PROCUREMENT, INSTALLATION & CALIBRATION

This task includes procurement, installation, and calibration of 60 continuously-deployed flow monitoring stations connected to the District's AMI network. Flow meters will be installed at the sites identified in Task 1 and data feeds will be integrated into the digital infrastructure described in Task 2. Equipment installed at each site will include the following :

- Sensus Smart Gateways to connect to the AMI network. These systems offer 2 digital Sensor inputs and 2 analog 4/20 mA inputs. The equipment will log 15-minute measurements and transmit measurements every 4 hours and have battery life of more than 5 years at the intended transmit frequency.
- Global Water WL400 Water Level Sensor, ultrasonic water level sensor, 4/20 mA output, 0 to 12 ft range, or a comparable sensor with similar functionality and resolution.
- Lithium Ion Battery sized for at least 2 years of continuous deployment between replacement.

At 20 locations, conductivity will also be measured via a Global Water Conductivity Sensor, or a comparable sensor with similar functionality and resolution. These locations will be selected where a probe can be continuously submerged. It is anticipated that results at these locations can be extrapolated across the watershed. The per station cost is estimated to be approximately $1,300

plus installation for flow monitoring and $2,200 per station for flow and conductivity monitoring. Stations will be installed, commissioned, calibrated, and maintained by County contractors (Alta Environmental). This tasks includes initial installation, calibration, and approximately 3 return visits to each station over the study period to check calibration. Calibration includes validating sensor observations (i.e., water level and conductivity) and establishing the flow-vs-discharge rating table at each location. An Equipment Installation and Calibration Technical Memorandum will document the technical specifications of the equipment procured, the actual cost of equipment procured, provide a summary of installation and calibration activities, photographic records organized by site, and electronic datasheets describing the sensor calibration parameters (i.e., rating tables).

TASK 4 – DATA ANALYSIS AND SCENARIO EVALUATION This task includes expanding the functions of the cloud-based Azure analytic space and using the space to: (1) evaluate spatial and temporal relationships in data; (2) develop algorithms for quantifying long-term potential capture; and (3) evaluate case study scenarios. The cloud-based data management, integration, and analytics environment will be expanded from Task 2 to include the following modules, as needed:

- Machine Learning Studio – data analytics and machine learning space for algorithm development, supporting Python and R.
- Power BI – for visualization and scenario management.
- Other modules, as determined to be needed.

Note: MNWD may elect to utilize Amazon Web Services (AWS) instead of Azure at its discretion. Features and modules available on the AWS platform are somewhat different, however the target functionality described in this scope of work can be supported in either the Azure or AWS platform.

When fully developed, the cloud-based environment will provide the following services/capabilities:

- Continuously process water level and conductivity measurements to estimate flow and dissolved solid concentrations.
- Link to GIS resources to establish and maintain spatial and temporal relationships between water usage, water conservation measures, urban runoff, salt concentrations, and weather parameters.
- Apply algorithms to aggregate water usage, water budgets, water conservation measures and weather data at a subwatershed scales corresponding to flow meter locations.
- Apply algorithms to calculate water recovery potential.

Using this framework, the project team will be able to:

- Evaluate regressions between the integrated data streams.
- Publish regression services and/or machine learning services that are found to have predictive power related to urban runoff flow rates and water quality. For example, a regression or machine learning function could support estimates of urban runoff at intermediate or unmonitored storm drain locations based on hourly AMI water usage data, budgets, irrigated area, and/or other attributes.
- Develop and test algorithms (written in Python or R) to quantify the results of key management scenarios:

  - - Low flow diversion into the sanitary collection system at one or many outfalls.
  - - Storage and delayed release of small storm flows into the sanitary collection system using in- system storage, such as stormwater facilities.
- Develop and publish a scenario management interface that allows these management scenarios to be defined and analyzed. For example, allow a MNWD or County user to select a location, define the diversion rate, define the storage volume, and define the delay period following storm events, as applicable, and return results relative to resource recovery (AFY) and salt concentration of recovered water.

By working with readily available tools in the Azure or AWS environment, the configurations, scripts, routines, algorithms, etc. used as part of the Project can serve as a template for other agencies. Any custom software developed as part of the Project will be part of the GitHub repository maintained under an open source license.

Upon development of the framework and associated algorithms, the project team will prepare three case studies of how the framework can be used to evaluate resource recovery scenarios. This will demonstrate the system functionality to support individual outfall projects as well as more programmatic (widespread) strategies. A Case Study Report will be prepared which concisely document inputs, methodology, and results of three case studies. The Case Study Report will be delivered in PDF format with standalone case-study briefs.

TASK 5 – RESEARCH FINDINGS AND PROJECT REPORT

This task will yield a research report and associated PowerPoint presentation. The research report will document the project activities, methodology, and findings. The body of the research report is anticipated to include:

1. Executive Summary
2. Introduction
3. Watershed Monitoring System
   a. Monitoring Locations
   b. Equipment Configuration
   c. Lessons Learned and Transferrable Findings
4. Data Management and Analytic Infrastructure
   a. System Elements
   b. System Configuration
   c. Regression/Machine Learning Analysis
   d. Urban Runoff Capture Quantification Algorithms
   e. Lessons Learned and Transferrable Elements
5. Urban Runoff Capture Analysis
   a. Case Studies
   b. MNWD System-scale Implications
   c. Aliso Creek Watershed Management Implications

6. Summary
   a. Findings of Research Project for MNWD/Aliso Creek System
   b. Broader Applicability to Southern California Watersheds
   c. Effectiveness of System to Reduce Barriers to Future Supply

The research report will be supported by the memorandums and Web Map prepared as part of prior tasks (as appendices).

5.0 Deliverables

Task/Subtask	Deliverables	Submittal Due Date
1- Select Flow Monitoring Sites	Siting Technical Memo	**October 1, 2019**
2- Configure Digital Infrastructure	Draft Digital Configuration Technical Memo & Web Map	**December 1, 2019**
3- Monitoring Equipment Procurement, Installation, Maintenance	Equipment Installation and Calibration Report	**February 1, 2020**
4- Data Analysis & Scenario Evaluation	Open Source Code, Final Digital Configuration Technical Memo and Case Study Support	**December 1, 2020**
5- Research Findings & Project Results	Final Report and Presentations	**February 20, 2021**

6.0 Cost Estimate

Task No.	Task Description	Total Study Cost	Requested Metropolitan Funding Match
1	Select Flow Monitoring Sites	**In Kind**	**$0**
2	Configure Digital Infrastructure	**$62,500**	**$31,250**
3	Monitoring Equipment Procurement, Installation, Maintenance	**$220,308**	**$110,154**
4	Data Analysis & Scenario Evaluation	**$89,820**	**$44,910**
5	Research Findings & Project Results	**$38,880**	**$19,440**
	Totals	**$411,508**	**$205,754**

7.0 Process Schedule

The following illustrates the expected quarterly progress schedule per task.

		Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar
		2019			**2020**				**2021**
		Q2	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**
Task	**Task Name**								
1	Select Flow Monitoring Sites								
2	Configure Digital Infrastructure								
3	Monitoring Equipment Procurement, Installation, Maintenance								
4	Data Analysis & Scenario Evaluation								
5	Research Findings & Project Results								

8.0 Reporting Schedule

- Semi-Annual Progress Report 2019 No. 1 (Jan 2019 – Jun 2019).....July 20, 2019
- Semi-Annual Progress Report 2019 No. 2 (Jul 2019 – Dec 2019) January 20, 2020
- Semi-Annual Progress Report 2020 No. 1 (Jan 2020 – June 2020) ....July 20, 2020
- Semi-Annual Progress Report 2020 No. 2 (Jul 2020 – Dec 2020) January 20, 2021
- Draft Final Report……..……..…… .....January 1, 2021
- **Final Report**..... **February 20, 2021**

Post-Study Update Report February
change

EXHIBIT “C”

MNWD Scope of Work

EXHIBIT “C”

MNWD Scope of Work

MNWD will procure Sensus Smart Gateways to connect to the AMI network. These systems offer 2 digital Sensor inputs and 2 analog 4/20 mA inputs. The equipment will log 15-minute measurements and transmit measurements every 4 hours and have battery life of more than 5 years at the intended transmit frequency.

moulton niguel water district

STAFF REPORT

TO: **Board of Directors** **MEETING DATE: September 12, 2019**

FROM: **Drew Atwater, Director of Finance and Water Resources**
Lindsey Stuvick, Water Efficiency Manager

SUBJECT: **Rebate Application for NatureScape Program**

SUMMARY:

Issue: The District received an exemption request for a NatureScape Program rebate application that exceeded the allowable square footage for turf removal as defined in the approved Board policy.

Recommendation: It is recommended that the Board of Directors consider the NatureScape Program rebate application for Account No. 94023 without a limitation on the maximum allowable square footage and direct staff accordingly.

Fiscal Impact: Sufficient funds are available within the Water Use Efficiency Fund to fund the identified rebate application. Additional information is provided within the staff report.

Reviewed by Committee: The request was received after the committee meeting.

Reviewed by Legal: Not Applicable.

BACKGROUND:

More than half of the water used at the District is for outdoor landscapes. Water efficient landscapes can decrease water use up to 70 percent through a combination of proper plant selection and irrigation technology. However, the cost of installing climate appropriate plants is sometimes an obstacle to turning traditional grass landscapes into more water-efficient environments. The District's NatureScape Program is designed to help residents replace their turf with a watershed-friendly, native plant landscape.

The proposed project is eligible to receive up to $3 per square foot from the District for areas of turf replaced by landscape and plant materials approved through the NatureScape Program. The Program provides limitations on the amount of turf removal that qualifies for the rebate. The relevant cap for the applicant is 3,000 square feet for NatureScape Program projects.

All rebates from the District are funded through the Water Efficiency Fund using the incremental revenue generated from the higher consumption tiers (Tiers 3, 4 and 5) in the water budget-based rate structure.

DISCUSSION:

The District has received a customer request to remove a total of 3,524 square feet of turf. Table 1 identifies the customers and their rebate requests.

Table 1 – NatureScape Rebate Request

Customer	Proposed Turf Removal (Sq. Feet)	Proposed Rebate Value ($)
Account Number: 94023 24236 Las Naranjas Dr., Laguna Niguel	3,524	$10,572
TOTAL	**3,524**	**$10,572**

The value provided above is based on project estimates and may vary as the projects become more defined. The proposed rebate incentives for the identified projects would be funded from the Water Efficiency Fund.

Staff is recommending the Board remove the maximum allowable square footage and allow the General Manager or Assistant General Manager to consider the applications based on the overall project objectives, various funding sources, and current available budget for rebate funding. Removal of the maximum square footage by the Board of Directors for the specifically identified application does not constitute an approval of the rebate applications but allows the specifically identified applications to be considered for the full amount of turf removal and replacement with low water use plants.