

October 15, 2020

ADDENDUM 2

TO PROSPECTIVE BIDDERS UNDER REQUEST FOR PROPOSAL 790-20-01, Water Treatment Plant Effluent Meters, Large Customer Meters, Rate Control Stations, and Regulators Improvements Design Project

Notice is hereby given that RFP 790-20-01 of the East Bay Municipal Utility District has been revised as follows:

1. TITLE PAGE – RESPONSE DUE

- A. On page 1, replace the response due date information in its entirety with the following information:

RESPONSE DUE
by
4:00 p.m.
on
Friday, October 23, 2020
at
EBMUD, Purchasing Division
375 Eleventh St., First Floor Oakland, CA 94607

2. SECTION I – TASK 2.1 METERING IMPROVEMENTS PLAN

- A. On page 10, replace the information in sub paragraphs “c.” and “f.” in its entirety with the following information:
- c. Design new flow meter structure at the Walnut Creek WTP. The new structure shall include a new permanent flow meter, facilities to test the permanent flow meter using a temporary test meter, and all necessary design components.
 - f. Design new flow meter structure at the Chevron No. 3 and No. 4 LCM site. The new structure shall include a new permanent flow meter, facilities to test the permanent flow meter using a temporary test meter, and all necessary design components.

B. On page 10, insert the following information under new sub paragraphs “h”, “i”, “j”, and “k” :

- h. Prepare District as built drawings of the temporary test facilities constructed on the 12” pipeline at the Chevron 2 location.
- i. Prepare District as built drawings of the temporary test facilities constructed on the 16” pipeline at the Chevron 5 location.
- j. Design new flow meter structure at the Chevron No. 3 and No. 4 LCM site. The new structure shall include a new permanent flow meter, facilities to test the permanent flow meter using a temporary test meter, and all necessary design components.
- k. Chevron No. 1 shall not be included in this scope of work.

C. On page 11, replace the information in sub paragraphs “3.” and “4.” in its entirety with the following information:

- 3. Property acquisition and survey documents
- 4. Geotechnical investigations

3. SECTION I – TASK 2.2 METER FACILITIES BASIS OF DESIGN

A. On page 11, paragraph 3, after the first sentence insert the following information:

The District shall prepare permit applications and obtain permits.

4. SECTION I – TASK 3.1 REVIEW EXISTING INFORMATION AND COMPLETE FACILITY ASSESSMENTS

A. On page 15, replace the information in sub paragraph “4.” in its entirety with the following information:

- 4. Geotechnical investigations

5. SECTION I – TASK 3.2 METER FACILITIES BASIS OF DESIGN

A. On page 16, paragraph 2, after the last sentence insert the following information:

The District shall prepare permit applications and obtain permits.

6. SECTION I – TABLE 2 PROJECT SCHEDULE

- A. On Page 21, replace the information in row 2 in its entirety with the following information:

<i>Anticipated Contract Start (District Board Authorization)</i>	<i>January 12, 2021</i>
---	--------------------------------

7. SECTION I – CALENDAR OF EVENTS

- A. On page 22, replace the information in row 6 in its entirety with the following information :

Response Due	October 23, 2020 by 4:00 p.m.
---------------------	-------------------------------

8. EXHIBIT B – INSURANCE REQUIREMENTS

- A. Replace Exhibit B in its entirety with the attached Exhibit B – Insurance Requirements dated 10/13/2020.

9. EXHIBIT F – RCS AND REGULATORS DESIGN EXAMPLES

- A. After page 75, insert attached Exhibit F – Design Examples.

10. CONSULTING AND PROFESSIONAL SERVICES AGREEMENT, ARTICLE 7 – INDEMNIFICATION AND INSURANCE

- A. On page 6 of the Consulting and Professional Services agreement, replace the information in Article 7 in its entirety with the following information:

“ARTICLE 7 - INDEMNIFICATION AND INSURANCE

7.1 Indemnification

CONSULTANT expressly agrees to defend, indemnify and hold harmless DISTRICT and its Directors, officers, agents and employees from and against any and all loss, liability, expenses, claims, suits, and damages, including attorneys’ fees, arising out of or pertaining to, or relating to CONSULTANT’s, its

associates', employees', subconsultants', or other agents' negligence, recklessness or willful misconduct in the operation and/or performance under this Agreement.

Where applicable by law, the duty to indemnify, including the cost to defend is limited in accordance with California Civil Code § 2782.8.

7.2 Insurance Requirements

Insurance Requirements are as stated in Consulting and Professional Services Agreement Exhibit I - Insurance Requirements.”

- B. At the end of the Consulting and Professional Services Agreement, insert the attached Exhibit I - Insurance Requirements for Consulting and Professional Agreements dated 10/13/2020.

ADDRESS ANY QUESTIONS REGARDING THIS ADDENDUM TO THE PROJECT WEBSITE AT <https://www.ebmud.com/business-center/requests-proposal-rfps/wtp-effluent-lcm-rcs-reg/>.

ANDREW E. RICHARDSON JUNIOR ENGINEER
OPERATIONS AND MAINTENANCE SUPPORT DEPARTMENT



EXHIBIT B

INSURANCE REQUIREMENTS

PROPOSER shall take out and maintain during the life of the Agreement all insurance required and PROPOSER shall not commence work until such insurance has been approved by DISTRICT. The proof of insurance shall be on forms provided by DISTRICT directly following these Insurance Requirements.

PROPOSERS are not required to submit completed insurance verification documents with their bid, but will be required to submit them upon notification of award. By signing Exhibit A – RFP Response Packet, the Proposer agrees to meet the minimum insurance requirements stated in the RFP.

I. The following provisions applicable to all required insurance:

A. Prior to the beginning of and throughout the duration of Services, and for any additional period of time as specified below, CONSULTANT shall, at its sole cost and expense, maintain insurance in conformance with the requirements set forth below.

B. CONSULTANT shall provide Verification of Insurance as required by this Agreement by providing the completed Verification of Insurance as requested below signing and submitting this Exhibit B to the DISTRICT. The Exhibit B may be signed by an officer of the CONSULTANT (Agent) or by the Insurance Broker for the CONSULTANT. CONSULTANT shall update Exhibit B throughout the specified term of the insurance required by this Agreement by resubmitting the completed Exhibit B prior to the expiration date of any of the required insurance. The updated Exhibit B shall become a part of the Agreement but shall not require a change order to the Agreement. The Notice to Proceed shall not be issued, and CONSULTANT shall not commence Services until such insurance has been accepted by the DISTRICT.

C. CONSULTANT shall carry and maintain the minimum insurance requirements as defined in this Agreement. CONSULTANT shall require any subconsultant to carry and maintain the minimum insurance required in this Agreement to the extent they apply to the scope of the services to be performed by subconsultant.

D. Acceptance of verification of Insurance by the DISTRICT shall not relieve CONSULTANT of any of the insurance requirements, nor decrease liability of CONSULTANT.

E. The insurance required hereunder may be obtained by a combination of primary, excess and/or umbrella insurance, and all coverage shall be at least as broad as the requirements listed in this Agreement.

F. Any deductibles, self-insurance, or self-insured retentions (SIRs) applicable to the required insurance coverage must be declared to and accepted by the DISTRICT.

G. At the option and request of the DISTRICT, CONSULTANT shall provide documentation of its financial ability to pay the deductible, self-insurance, or SIR.

H. Any policies with a SIR shall provide that any SIR may be satisfied, in whole or in part, by the DISTRICT or the additional insured at its sole and absolute discretion.

I. Unless otherwise accepted by the DISTRICT, all required insurance must be placed with insurers with a current A.M. Best's rating of no less than A- V.

J. CONSULTANT shall defend the DISTRICT and pay any damages as a result of failure to provide the waiver of subrogation from the insurance carrier.

K. For any coverage that is provided on a claims-made coverage form (which type of form is permitted only where specified) the retroactive date must be shown and must be before the date of this Agreement, and before the beginning of any Services related to this Agreement.

L. Insurance must be maintained and updated Verification of Insurance be provided to the DISTRICT before the expiration of insurance by having CONSULTANT'S insurance broker or agent update, sign and return Exhibit B to the DISTRICT's contract manager. For all claims-made policies the updated Verification of Insurance must be provided to the DISTRICT for at least three (3) years after expiration of this Agreement.

M. If claims-made coverage is canceled or non-renewed, and not replaced with another claims-made policy form with a retroactive date prior to the effective date of this Agreement or the start of any Services related to this Agreement, CONSULTANT must purchase an extended reporting period for a minimum of three (3) years after expiration of the Agreement.

N. If requested by the DISTRICT, a copy of the policies' claims reporting requirement must be submitted to the DISTRICT for review.

O. Where additional insured coverage is required, the additional insured coverage shall be "primary and non-contributory," and will not seek contribution from the DISTRICT's insurance or self-insurance.

P. CONSULTANT agrees to provide immediate Notice to the DISTRICT of any loss or claim against CONSULTANT arising out of, pertaining to, or in any way relating to this Agreement, or Services performed under this Agreement. The DISTRICT assumes no obligation or liability by

such Notice, but has the right (but not the duty) to monitor the handling of any such claim or claims if they are likely to involve the DISTRICT.

Q. CONSULTANT agrees, upon request by the DISTRICT, to provide complete, certified copies of any policies and endorsements within 10 days of such request (copies of policies may be redacted to eliminate premium details.)

R. It is CONSULTANT'S responsibility to ensure its compliance with the insurance requirements. Any actual or alleged failure on the part of the DISTRICT to obtain proof of insurance required under this Agreement shall not in any way be construed to be a waiver of any right or remedy of the DISTRICT, in this or any regard.

S. Notice of Cancellation/Non-Renewal/Material Reduction The insurance requirements hereunder are mandatory and the DISTRICT may, at its sole and absolute discretion, terminate the services provided by CONSULTANT, should CONSULTANT breach its obligations to maintain the required coverage and limits set forth in this Agreement. No coverage required hereunder shall be cancelled, non-renewed or materially reduced in coverage or limits without the DISTRICT being provided at least thirty (30) days prior written notice, other than cancellation for the non-payment of premiums, in which event the DISTRICT shall be provided ten (10) days prior written notice. Replacement of coverage with another policy or insurer, without any lapse in coverage or any reduction of the stated requirements does not require notice beyond submission to the DISTRICT of an updated Verification of Insurance which shall be met by having the CONSULTANT'S insurance broker or agent update, sign and return this EXHIBIT B.

INSURANCE VERIFICATION DOCUMENTS

II. Workers' Compensation and Employer's Liability Insurance Coverage

A. Workers' Compensation insurance including Employer's Liability insurance with minimum limits as follows:

Coverage A. Statutory Benefits Limits

Coverage B. Employer's Liability of not less than:

Bodily Injury by accident: \$1,000,000 each accident

Bodily Injury by disease: \$1,000,000 each employee

Bodily Injury by disease: \$1,000,000 policy limit

B. CONSULTANT'S insurance shall be primary and any insurance or self-insurance procured or maintained by the DISTRICT shall not be required to contribute to it.

C. If there is an onsite exposure of injury to CONSULTANT, subconsultant, and/or subconsultant's employees under the U.S. Longshore and Harbor Workers' Compensation Act, the Jones Act, or under laws, regulations or statutes applicable to maritime employees, coverage is required for such injuries or claims.

D. If CONSULTANT is self-employed, a sole proprietorship or a partnership, with no employees, and is exempt from carrying Workers' Compensation Insurance, CONSULTANT must return the completed Verification of Insurance confirming that CONSULTANT has no employees and is exempt from the State of California Workers' Compensation requirements.

E. If CONSULTANT is self-insured with respect to Workers' Compensation coverage, CONSULTANT shall provide to the DISTRICT a Certificate of Consent to Self-Insure from the California Department of Industrial Relations. Such self-insurance shall meet the minimum limit requirements and shall waive subrogation rights in favor of the DISTRICT as stated below in section "F."

F. Waiver of Subrogation. Workers' Compensation policies, including any applicable excess and umbrella insurance, must contain a waiver of subrogation endorsement providing that CONSULTANT and each insurer waive any and all rights of recovery by subrogation, or otherwise, against the DISTRICT, its directors, board, and committee members, officers, officials, employees, agents, and volunteers. CONSULTANT shall defend and pay any and all damages, fees, and costs, of any kind arising out of, pertaining to, or in any way relating to CONSULTANT'S failure to provide waiver of subrogation from the insurance carrier.

Verification of Workers' Compensation and Employer's Liability Insurance Coverage

☐ By checking the box and signing below, I hereby verify that the CONSULTANT is exempt from the State of California's requirement to carry workers' compensation insurance.

As the CONSULTANT'S insurance broker/agent, I hereby verify that I have reviewed and confirmed that the CONSULTANT carries workers' compensation insurance as required by this Agreement, including the relevant provisions applicable to all required insurance.

Self-Insured Retention: Amount: \$ _____

Policy Limit: \$ _____

Policy Number: _____

Policy Period: from: _____ to: _____

Insurance Carrier

Name: _____

Insurance Broker or Agent: Print

Name: _____

Insurance Broker or Agent's Signature:

III. Commercial General Liability Insurance ("CGL") Coverage

A. CONSULTANT'S insurance shall be primary and any insurance or self-insurance procured or maintained by the DISTRICT shall not be required to contribute to it.

B. The insurance requirements under this Agreement shall be the greater of (1) the minimum coverage and limits specified in this Agreement; or (2) the broader coverage and maximum limits of coverage of any insurance policies or proceeds available to the Named Insured. It is agreed that these insurance requirements shall not in any way act to reduce coverage that is broader or that includes higher limits than the minimums required herein. No representation is made that the minimum insurance requirements of this Agreement are sufficient to cover the obligations of the CONSULTANT.

C. Minimum Requirements. CGL insurance with minimum per occurrence and aggregate limits as follows:

Bodily Injury and Property Damage & aggregate	\$2,000,000 per occurrence
Personal Injury/Advertising Injury & aggregate	\$2,000,000 per occurrence
Products/Completed Operations & aggregate	\$2,000,000 per occurrence

D. Coverage must be on an occurrence basis.

E. Coverage for Products, and Completed Operations, and Ongoing Operations must be included in the insurance policies and shall not contain any "prior work" coverage limitation or exclusion applicable to any Services performed by CONSULTANT and/or subconsultant under this Agreement.

F. Insurance policies and Additional Insured Endorsement(s) Coverage shall be included for all premises and operations in any way related to this Agreement.

G. There will be no exclusion for explosions, collapse, or underground liability (XCU).

H. Insurance policies and Additional Insured Endorsement(s) shall not exclude liability and damages to work arising out of, pertaining to, or in any way relating to services performed by Subconsultant on CONSULTANT'S behalf.

I. Contractual liability coverage shall be included and shall not limit, by any modification or endorsement, coverage for liabilities assumed by CONSULTANT under this Agreement as an "insured contract."

J. Waiver of Subrogation. The policy shall be endorsed to include a Waiver of Subrogation ensuring that the CONSULTANT and its insurer(s) waive any rights of recovery by subrogation, or otherwise, against the DISTRICT, its directors, board, and committee members, officers, officials, agents, volunteers, and employees. CONSULTANT shall defend and pay any and all damages, fees, and costs, of any kind, arising out of, pertaining to, or in any way resulting from CONSULTANT'S failure to provide the waiver of subrogation from its insurance carrier(s).

K. "Independent CONSULTANT'S Liability" shall not limit coverage for liability and/or damages arising out of, pertaining to, or in any way resulting from Services provided under this Agreement.

To the fullest extent permitted by law, the DISTRICT, its directors, board, and committee members, officers, officials, employees, agents, and volunteers must be covered as Additional Insureds on a primary and noncontributory basis on all underlying, excess and umbrella policies that shall be evidenced in each case by an endorsement. The Additional Insureds must be covered for liability arising in whole, or in part, from any premises, Products, Ongoing Operations, and Completed Operations by or on behalf of CONSULTANT, in any way related to Services performed under this Agreement.

L. A severability of interest provision must apply for all the Additional Insureds, ensuring that CONSULTANT'S insurance shall apply separately to each insured against whom a claim is made or suit is brought, except with respect to the policies' limit(s).

Verification of Commercial General Liability (CGL) Insurance Coverage

As the CONSULTANT'S insurance broker/agent, I hereby verify that I have reviewed and confirmed that the CONSULTANT carries Commercial General Liability insurance, as required by this Agreement, including the relevant provisions applicable to all required insurance:

Self-Insured: Amount: \$ _____

Policy Limit: Per Occurrence: \$ _____ Aggregate: \$ _____

Policy Number: _____

Policy Period: from: _____ to: _____

Insurance Carrier
Name: _____

Insurance Broker or Agent: Print
Name: _____

Insurance Broker or Agent's Signature:

IV. Business Auto Liability Insurance Coverage

CONSULTANT'S insurance shall be primary and any insurance or self-insurance procured or maintained by the DISTRICT shall not be required to contribute to it.

A. The insurance requirements under this Agreement shall be the greater of (1) the minimum coverage and limits specified in this Agreement; or (2) the broader coverage and maximum limits of coverage of any insurance policies or proceeds available to the Named Insured. It is agreed that these insurance requirements shall not in any way act to reduce coverage that is broader or that includes higher limits than the minimums required herein. No representation is made that the minimum insurance requirements of this Agreement are sufficient to cover the obligations of the CONSULTANT.

B. Minimum Requirements. Auto insurance with minimum coverage and limits as follows:

Each Occurrence Limit (per accident) and in the Aggregate:

\$2,000,000

Bodily Injury and Property Damage:

\$2,000,000

C. Coverage must include either "owned, non-owned, and hired" autos or "any" automobile

This provision ensures the policy covers losses arising out of use of company-owned vehicles ("owned autos"), employee's personal autos ("non-owned autos" meaning not owned by company/insured) or autos that are rented or leased ("hired autos").

D. If CONSULTANT is transporting hazardous materials or contaminants, evidence of the Motor Carrier Act Endorsement-hazardous materials clean-up (MCS-90, or its equivalent) must be provided.

E. If CONSULTANT'S Scope of Services under this Agreement exposes a potential pollution liability risk related to transport of potential pollutants, seepage, release, escape or discharge of any nature (threatened or actual) of pollutants into the environment arising out of, pertaining to, or in any way related to CONSULTANT'S and/or Subconsultant's performance under this Agreement, then Auto Liability Insurance policies must be endorsed to include Transportation Pollution Liability insurance. Alternatively, coverage may be provided under the CONSULTANT'S Pollution Liability Policies if such policy has no exclusions that would restrict coverage under this Agreement. Coverage shall also include leakage of fuel or other "pollutants" needed for the normal functioning of covered autos.

F. To the fullest extent permitted by law, the DISTRICT, its directors, board, and committee members, officers, officials, employees, agents, and volunteers must be covered as Additional Insureds on a primary and noncontributory basis on all underlying and excess and umbrella policies. The Additional Insureds must be covered for liability arising in whole, or in part, from any premises, Products, Ongoing Operations, and Completed Operations by or on behalf of CONSULTANT, in any way related to Services performed under this Agreement.

G. A severability of interest provision must apply for all the Additional Insureds, ensuring that CONSULTANT'S insurance shall apply separately to each insured against whom a claim is made or suit is brought, except with respect to the insurer's limits of liability.

Verification of Business Auto Liability Insurance Coverage

As the CONSULTANT'S insurance broker/agent, I hereby verify that I have reviewed and confirmed that the CONSULTANT carries Business Automobile Liability insurance, as required by this Agreement, including the relevant provisions applicable to all required insurance:

Self-Insured: Amount: \$ _____

Policy Limit: Per Accident/Occurrence \$ _____ **Aggregate: \$** _____

Policy Number: _____

Policy Period: from: _____ **to:** _____

Insurance Carrier

Name: _____

Insurance Broker or Agent: Print

Name: _____

Insurance Broker or Agent's Signature:

V. Professional Liability (also known as Errors and Omissions) Insurance Coverage

A. CONSULTANT'S insurance shall be primary and any insurance or self-insurance procured or maintained by the DISTRICT shall not be required to contribute to it.

B. The insurance requirements under this Agreement shall be the greater of (1) the minimum coverage and limits specified in this Agreement; or (2) the broader coverage and maximum limits of coverage of any insurance policies or proceeds available to the Named Insured. It is agreed that these insurance requirements shall not in any way act to reduce coverage that is broader or that includes higher limits than the minimums required herein. No representation is made that the minimum insurance requirements of this Agreement are sufficient to cover the obligations of the CONSULTANT.

C. Minimum Requirements: Professional Liability Insurance with minimum limits as follows:

Each Claim or Occurrence Limit:	\$2,000,000
Aggregate Limit:	\$2,000,000

D. If Coverage is written on a claims-made form, the following shall apply:

1. The retroactive date must be shown, and must be before the date of the Agreement or the beginning of the Services.
2. Insurance must be maintained and evidence of insurance must be provided for a minimum of three (3) years after completion of the Services.
3. If claims-made coverage is canceled or non-renewed, and not replaced with another claims-made policies form with a retroactive date prior to the effective date of the Agreement, CONSULTANT must purchase an extended period of coverage for a minimum of three (3) years after completion of the Services.

E. Insurance shall include prior acts coverage sufficient to cover the services under this Agreement.

F. Coverage shall be included for all premises and operations in any way related to this Agreement.

Verification of Professional Liability (Errors and Omissions) Insurance Coverage

As the CONSULTANT'S insurance broker/agent, I hereby verify that I have reviewed and confirmed that the CONSULTANT carries Professional Liability insurance as required by this Agreement, including the relevant provisions applicable to all required insurance.

Self-Insured: Amount: \$ _____

Policy Limit: Per Claim \$ _____ Aggregate: \$ _____

Policy Number: _____

Policy Period: from: _____ to: _____

Insurance Carrier

Name: _____

Insurance Broker or Agent: Print

Name: _____

Insurance Broker or Agent's Signature:

VI. Excess and/or Umbrella Liability Insurance Coverage

A. CONSULTANT'S insurance shall be primary and any insurance or self-insurance procured or maintained by the DISTRICT shall not be required to contribute to it.

B. The insurance requirements under this Agreement shall be the greater of (1) the minimum coverage and limits specified in this Agreement; or (2) the broader coverage and maximum limits of coverage of any insurance policies or proceeds available to the Named Insured. It is agreed that these insurance requirements shall not in any way act to reduce coverage that is broader or that includes higher limits than the minimums required herein. No representation is made that the minimum insurance requirements of this Agreement are sufficient to cover the obligations of the CONSULTANT.

C. Minimum Requirements: It is expressly understood by the parties that CONSULTANT'S Excess and/or Umbrella Liability policies shall, at minimum, comply with all insurance requirements set forth within this Agreement.

1. Coverage for Products, Completed Operations, and Ongoing Operations must be included in the insurance policies and shall not contain any "prior work" coverage limitation or exclusion applicable to any Services performed under this Agreement and, if it is a claims-made policy, it must be maintained for a minimum of three (3) years following final completion of the Services.

2. Coverage shall be included for all premises and operations in any way related to this Agreement.

3. There will be no exclusion for explosions, collapse, or underground damage (XCU).

4. Insurance policies and Additional Insured Endorsements shall not exclude coverage for liability and damages from services performed by Subconsultant on CONSULTANT's behalf.

5. Contractual liability coverage shall be included and shall not limit, by any modification or endorsement, coverage for liabilities assumed by CONSULTANT under this Agreement as an "insured contract."

6. "Independent CONSULTANT'S Liability" shall not limit coverage for liability and/or damage arising out of, pertaining to, or in any way related to Services provided under this Agreement.

7. To the fullest extent permitted by law, the DISTRICT, its directors, officers, officials, agents, volunteers, and employees must be covered as Additional Insureds on a primary and noncontributory basis on all excess and umbrella policies. The Additional Insureds must be covered for liability arising in whole or in part from any premises, Products, Ongoing Operations, and Completed Operations by or on behalf of CONSULTANT, in any way related to Services performed under this Agreement.

8. A severability of interest provision must apply for all the Additional Insureds, ensuring that the CONSULTANT'S insurance shall apply separately to each insured against whom a claim is made or suit is brought, except with respect to the policy's limits.

9. CONSULTANT and its excess and/or umbrella Liability insurance coverage must waive any rights of subrogation against the DISTRICT, its directors, officers, officials, employees, agents, and volunteers, and CONSULTANT shall defend and pay any damages as a result of failure to provide the waiver of subrogation from the insurance carrier(s).

D. CONSULTANT shall defend and pay any damages as a result of failure to provide the waiver of subrogation from the insurance carrier(s).

Verification of Excess and/or Umbrella Liability Insurance Coverage

As the CONSULTANT'S insurance broker/agent, I hereby verify that I have reviewed and confirmed that the CONSULTANT carries Excess and/or Umbrella Liability insurance, as required by this Agreement, including the relevant provisions applicable to all required insurance.

Self-Insured: Amount: \$ _____

Policy Number: _____

Policy Period: from: _____ **to:** _____

Insurance Carrier

Name: _____

Insurance Broker or Agent: Print

Name: _____

Insurance Broker or Agent's Signature:

EXHIBIT F

DESIGN EXAMPLES

REFERENCE DOCUMENTS	82nd Ave RCS	Campus Reg	Circle Reg & Orion Reg	Cull Creek Reg/RCS	Gramercy Reg	Keller Reg	Villareal Reg
PROJECT MGMT							
Project Authorization	✓		✓				
Mtg minutes, presentations			✓	✓			
Permits	✓						
Bid & Award	✓						
PLANNING							
Facilities Plan				✓			
CEQA	✓						
Property Purchase			✓				
Memoranda			✓				
Miscellaneous			✓	✓			
Design Parameters	✓	✓	✓	✓	✓	✓	✓
Transfer to Design				✓			
Infrastructure		✓	✓		✓	✓	✓
Rehab Plan		✓	✓			✓	✓
DESIGN							
Survey	✓		✓	✓			
Photos	✓		✓		✓		✓
10% (Drawings/Specs/Comments)	✓						
50% (Drawings/Specs/Comments)	✓						
Miscellaneous: technical docs	✓						
90% (Drawings/Specs/Comments)	✓						
Engineering calculations	✓		✓				
PG&E	✓						
Workplace Health and Safety	✓						
Real Estate							
Test and Programming				✓			
100% (Drawings/Specs/Comments)	✓						
Drawings	bid set	✓	✓		✓	✓	✓
Specifications	bid set		✓				
Transfer to Construction	✓						
CONSTRUCTION							
Pre-construction	✓						
Request for Information	✓						
Submittals	✓						
Photos	✓						
Change Orders/Requests	✓						
Manuals	✓						
Start-up & Commissioning	✓						
Punch List	✓						
Debriefing	✓						

(Sample A) Memo,
Design Parameters
and Shutdown Plan

(Sample B)
Memo, field
assessment

(Sample C) List

(Sample D) List of
Specifications

Sample A

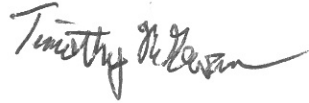
Memo – Design Parameters and Shutdown Plan

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: July 22, 2016

MEMO TO: Mark D. Knox, Senior Civil Engineer, Infrastructure Management

FROM: Timothy R. McGowan, Senior Civil Engineer, Major Facilities Planning



SUBJECT: Design Parameters and Shutdown Plan for Villareal Regulator
Rehabilitation

INTRODUCTION

Design Division requested Water Distribution Planning Division (WDPD) to provide design parameters for the rehabilitation of Villareal Regulator. Villareal Regulator was identified as in need of rehabilitation in the Regulator Infrastructure Rehabilitation Master Plan (IRP) dated December 2012. The suggested improvements identified in the Regulator IRP include replacement and/or repair of corroded piping, valves, mechanical equipment and other components; installation of a high-pressure emergency shutoff (HESO) valve; replacement of the existing hatch and installation of hatch drainage piping; improvement of vault drainage; and installation of remote telemetry unit/telemetry. This memorandum summarizes the design parameters for the rehabilitation of the Villareal Regulator. A temporary regulator will be required during the Villareal Regulator rehabilitation outage.

SUMMARY

The proposed flow and gradient parameters for the rehabilitation of Villareal Regulator are provided in the attached design parameters datasheet (see Attachment 1). To prevent flooding in the Villareal Regulator vault and corrosion of the rehabilitated Villareal Regulator, drainage improvements are recommended as feasible. Telemetry is not recommended, as Villareal Pressure Zone is a small regulated pressure zone serving 51 customers. A skid-mounted temporary Villareal Regulator enclosed in a wooden structure must be provided to supply flows and maintain level of service in the regulated Villareal Pressure Zone during the Villareal Regulator outage (see Figure 1). Water Operations staff was consulted and concurred with WDPD's recommendations.

DISCUSSION

Facility Description

The Villareal Regulator was constructed in 1980 to supply water from the Norris Pressure Zone (service elevations between 550 and 750 feet) to the Villareal Pressure Zone (see Table 2 for

service elevations of the regulated Villareal Pressure Zone). The Villareal Regulator consists of three pressure-regulating valves: a service valve, a standby valve, and an emergency valve located within an underground concrete vault. Inspections conducted as part of the Regulator IRP indicate that the vault has wall condensation and presence of water at the bottom of the vault, poor ventilation, and the coating of the valves and associated piping are aged and significantly corroded.

Hydraulic Analyses

WDPD staff conducted a two-step analysis on the Norris and Villareal Pressure Zone cascade utilizing the projected 2030 demands from the District's 2040 Demand Study and the recommended fire flows for the regulated zones as shown in Table 1.

TABLE 1
Norris and Villareal Pressure Zone Cascade

Pressure Zone	Projected 2040 Demands (mgd) ^a			Fire Flow (gpm) ^e
	2030 MDD ^b	2030 AAD ^c	2030 AWD ^d	
Villareal	0.07	0.04	0.02	(1,500)
Norris	0.8	0.4	0.28	(1,500)

a. mgd = million gallons per day.

b. MDD = maximum day demand.

c. AAD = average annual demand.

d. AWD = average winter demand.

e. gpm = gallons per minute.

An initial analysis was performed to evaluate if the existing sizes of the pressure-regulating valves for the Villareal Regulator are adequate to meet the projected demands and fire flow conditions. Findings of this analysis indicate, for the Villareal Regulator rehabilitation, no change in regulating valve sizes is recommended. An increase in regulator valve pressure settings is recommended to improve the level of service and fire flows as follows: service valve at 50 psi, standby valve at 45 psi, and emergency valve at 40 psi.

Details of the existing and replacement valves are shown in Table 2.

TABLE 2
Villareal Regulator

Zone Served/ Service Elevations (feet)	Location	C _L ^a (feet)	Sizes of Existing Valves (inches)			Sizes of Replacement Valves (inches)		
			#1 ^b	#2 ^c	#3 ^d	#1 ^b	#2 ^c	#3 ^d
Villareal 350 – 500	Villareal Drive, approximately 2,800 feet south of La Mirada Drive, Castro Valley	531	2	2	6	2	2	6

- a. The centerline elevation is at the six-inch pipeline, and the replacement Villareal Regulator is expected to be similar to the existing Villareal Regulator.
- b. Valve #1 acts as a service valve to supply water from Norris Pressure Zone to meet the regulated Villareal Pressure Zone's normal demands (i.e., the Villareal Pressure Zone's minimum, typical and maximum day demands, peak hourly demand, as well as maximum day demand plus fire flow demand).
- c. Valve #2 acts as a standby valve and activates in case of an unexpected failure at the service valve or a fire.
- d. Valve #3 acts as an emergency valve to meet fire flow.

An all-pipe computer model of Norris and Villareal Pressure Zone cascade, using InfoWater, was prepared, and a detailed steady-state hydraulic analysis was performed using the model to determine the upstream and downstream gradients and flow rates for the rehabilitated Villareal Regulator. The analysis utilized the projected 2040 demands and fire flows shown in Table 1. The recommended design parameters for the replacement Villareal Regulator to meet various flow conditions, based on the results of the hydraulic analysis, are summarized on the datasheet in Attachment 1. The Mechanical Engineering Section of the Design Division will finalize sizes of the replacement pressure-regulating valves of the replacement Villareal Regulator based on the flow and gradient information.

Shutdown Plan

The shutdown period required for Villareal Regulator should be coordinated with Facilities Maintenance and Construction Division to determine the rehabilitation timeframe of the replacement work.

The Villareal Pressure Zone does not have in-zone storage, and Villareal Regulator is the only source of water. Prior to the Villareal Regulator shutdown, installation of a skid-mounted temporary Villareal Regulator (see Figure 1) connecting to hydrants or pumping tees upstream and downstream of the Villareal Regulator will be necessary to serve customers in the regulated Villareal Pressure Zone. If Location 1 is used, then two new hydrants or pumping tees on the upstream and downstream sides at locations near the existing Villareal Regulator will be required. If Location 2 is used, then Hydrant H-13788 can be used on the upstream side, and one

new hydrant or pumping tee will be required on the downstream side. The suggested valve sizes and proposed pressure settings of the temporary Villareal Regulator are summarized in Table 3. Potential locations of the temporary Villareal Regulator and the hydrants are shown in Figure 1. The Facilities Maintenance and Construction Division Mechanical Supervisor and Design Division Project Manager will conduct a joint field visit to the Villareal Regulator site to determine the actual site of the temporary regulator and the hydrants based on field conditions and ease of construction of the temporary skid-mounted Villareal Regulator. A temporary construction easement will need to be acquired for the temporary Villareal Regulator, as both proposed locations are on private property owned by the Community Association of Palomares Hills. A temporary outage is not required to install the temporary Villareal Regulator, as the new hydrant(s) or pumping tee(s) will be installed by hot-tapping the existing eight-inch asbestos main in Villareal Drive.

TABLE 3
Temporary Villareal Regulator Summary

Serving Regulated Zone	C _L ^a , (feet)	Proposed Size	Proposed Pressure Setting ^b (psi)	Upstream Hydrant	Downstream Hydrant	Potential Locations
Location 1	542	2-inch (service valve)	50	New	New	See Figure 1
		6-inch (emergency valve)	45			
Location 2	545	2-inch (service valve)	50	H-13788	New	See Figure 1
		6-inch (emergency valve)	45			

a. The centerline elevations of the temporary Villareal Regulator are estimated elevations based on EBMUD_DEM_GRD_2FT and temporary regulator drawings 42-M-001/-002.

b. The service valve for the temporary Villareal Regulator will be operated at the proposed pressure setting for the replacement regulator, and the emergency valve for the temporary regulator will kick on when there is an additional five psi pressure drop at the regulated Villareal Pressure Zone.

Please contact Alina Moiceanu at Extension 2071 if you have any questions regarding this analysis.

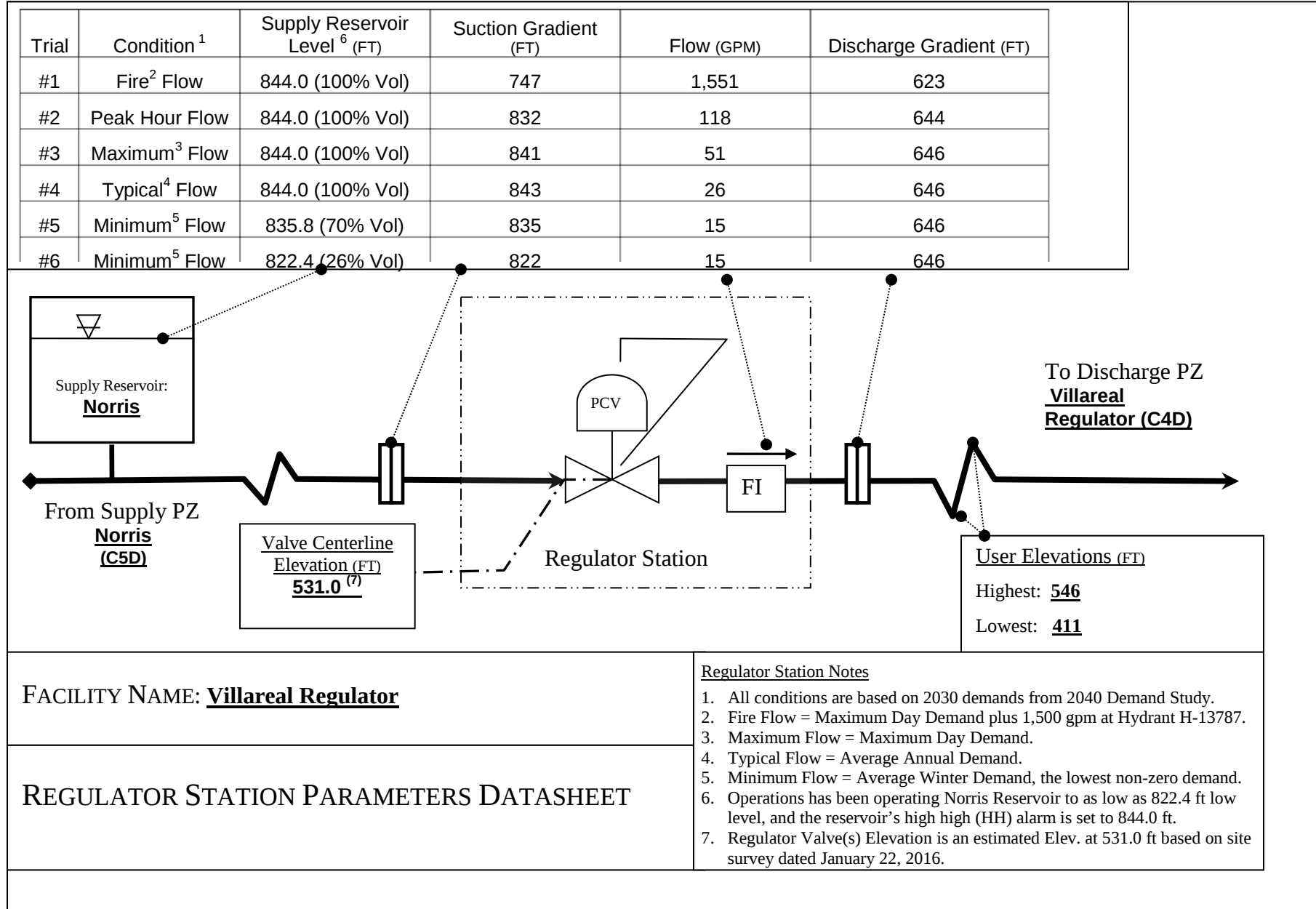
TRM:AMM:dks

sb16_116

Attachments: Attachment 1 – Villareal Regulator Station Parameters Datasheet
Figure 1 – Villareal Temporary Regulator

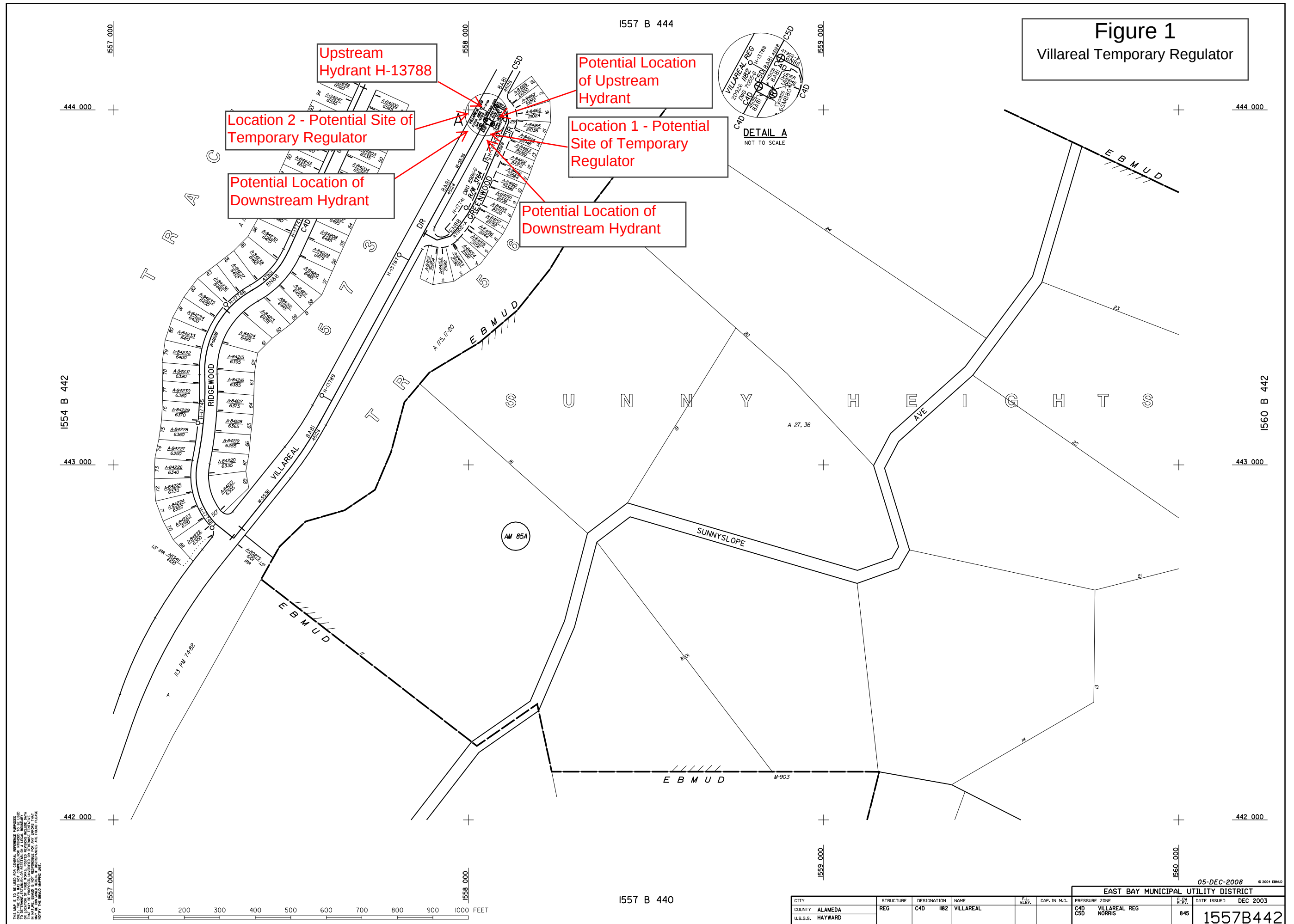
cc: David Rehnstrom Damon Hom
Shirley Lu Matt Elawady
Brett Kawakami Chron
Files: Norris Pressure Zone and Villareal Pressure Zone

Figure 1



Note: Norris Pumping Plant and Eden Pumping Plant are OFF for Trials #1 through #6.

Figure 1
Villareal Temporary Regulator



Sample B

Memo – Field Assessment

Campus Regulator

Location: Campus Drive at Crystal Ridge Court, Oakland

Date: May 2007



EXISTING CONDITIONS

This regulator is located in a concrete vault set back from the sidewalk along Campus Drive at Crystal Ridge Court in Oakland. (The vault is not beneath the sidewalk as depicted on Drawing 7605-G.)

Civil and Mechanical

The facility was constructed in 1984 and consists of one 6-inch and two 2-inch valve assemblies. This facility regulates flow from the Madrone PZ into the Campus Regulator PZ. Access is via a hatch and ladder and the vault was found to contain approximately one foot of standing water at the time of the inspection. At this water level, only a portion of the pipe support was submerged.

The hatch and vault appeared to be in good condition. The piping was generally in good condition. The six inch piping is below the two inch piping and it was constructed of painted mild steel with some stainless steel components. The coating system was generally satisfactory on the 6-inch regulator itself, and less so on the strainer and valves.

The bolt heads and nuts on the regulator were corroded and in need of cleaning and touch-up paint. The inlet and outlet piping could be considered essentially bare, with only remnants of a coating system. The steel inlet and outlet piping were only moderately corroded. The stainless steel components were in excellent condition. A Victaulic coupling was observed to have rust staining emanating from its stud cavity, indicating corrosion of these two fasteners. This coupling should be considered for eventual replacement although this action is not believed to be urgent.

The 2-inch and 3-inch piping was constructed of a variety of materials, including galvanized steel, brass, copper and a PVC drain. This piping was in generally good condition. The internal surfaces of the galvanized steel components are in unknown condition, although galvanized steel is susceptible to a reduction in internal diameter when continuously exposed to potable water. (Once the zinc galvanizing has corroded away sacrificially, the exposed steel will tuberculate, which leads to a loss of I.D. and the introduction of iron particles into the water.) The galvanizing on the pipe exterior was intact except for mild corrosion staining at the exposed pipe threads.

In addition to routine maintenance painting (touch-up only), this facility is recommended for installation of a magnesium anode only if the water level reaches a height sufficient to submerge the piping. Anode installation should generally follow Drawing 1200-D-040, except that the connection to the piping can be simplified by using a 2-inch all-brass grounding clamp.



Electrical

- This facility has no power.

Recommendations

- Replace small 3ft. x 3ft. access hatch with large double leaf access hatch to address ventilation and lighting issues
- Repair and recoat (as needed) piping, valves and other components that have minor corrosion.
- Connect a pipe to drain the pressure relief valve outside of the vault, connect to nearest storm drain or drain inlet.
- Remove and replace ceiling eyebolts
- Seal cracks along the concrete wall and ceilings.
- Install a magnesium anode to provide corrosion protection during periods of prolonged flooding (Drawing 1200-D-040).
- Install a hydraulic shut off valve. This may require a new precast vault due to limited space in the existing facility.
- Provide electrical power for a sump pump if gravity drainage to existing storm drain system is not possible; install RTU and telemetry as needed

Sample C

RCS Drawing List

LIST OF DRAWINGS

PROJECT DRAWINGS

GENERAL

1103-Z-001.1 LIST OF DRAWINGS AND GENERAL INFORMATION	
DEMOLITION	
1103-M-001D	30" CONTROL VALVE MECHANICAL DETAILS
1690-G	CONDUIT LAYOUT & WIRING DIAGRAM, REW 6
1825-G	HATCH COVER - PLAN & SECTIONS, REV 3
CIVIL	
1103-C-001	SITE PLAN
STRUCTURAL	
1103-S-001	30" CONTROL VALVE STRUCTURE ON 82ND AVE GENERAL ARRANGEMENT, SHEET 1 OF 5, REV 12
S-007	ACCESS HATCH AND DETAILS
S-900	TYPICAL DETAILS, SHEET 1 OF 3
S-901	TYPICAL DETAILS, SHEET 2 OF 3
S-902	TYPICAL DETAILS, SHEET 3 OF 3
MECHANICAL	
1103-M-001	30" CONTROL VALVE MECHANICAL DETAILS, REV 6
M-900	TYPICAL MECHANICAL DETAILS
PROCESS	
1103-J001	P&ID, REV 1
ELECTRICAL	
1103-E-001	SITE PLAN
E-002	PLAN AND SECTIONS
E-003	CONDUIT AND CABLE SCHEDULE
E-004	GROUNDING PLAN
E-100	SINGLE LINE, PANELBOARD LAYOUT AND SCHEDULE
E-101	VALVE ACTUATOR CONTROL DIAGRAM
E-202	ELEVATIONS
E-203	EXHAUST FAN AND LIGHTING CONTROL SCHEMATICS
E-400	OP/NET SYSTEM, RTU UA36 CABINET LAYOUT
E-401	OP/NET SYSTEM, RTU UA36 ELEMENTARY DIAGRAM, S
E-402	OP/NET SYSTEM, RTU UA36 ELEMENTARY DIAGRAM, S
E-403	OP/NET SYSTEM, RTU UA36 ELEMENTARY DIAGRAM, S
E-404	OP/NET SYSTEM, RTU UA36 ELEMENTARY DIAGRAM, S
E-405	OP/NET SYSTEM, RTU UA36 ELEMENTARY DIAGRAM, S
E-406	OP/NET SYSTEM, RTU OA36 INTERCONNECTION DIAGR
E-900	TYPICAL DETAILS, SHEET 1 OF 4
E-901	TYPICAL DETAILS, SHEET 2 OF 4
E-902	TYPICAL DETAILS, SHEET 3 OF 4
E-903	TYPICAL DETAILS, SHEET 4 OF 4

GENERAL NOTES

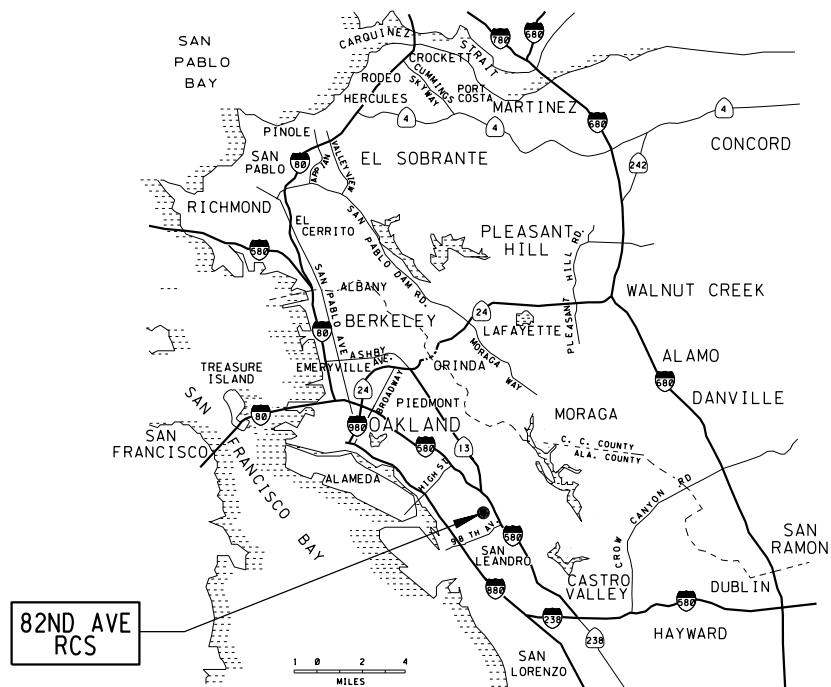
1. ELEVATIONS ARE BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929, SPECIFICALLY BENCHMARK "BM SCHAPIRO RESERVOIR", ELEVATION 514.505', PER RECORD FORM 535, 3XX-1, 476, XXX. SAID BENCHMARK IS A BRASS DISK SET ON THE SE CORNER OF THE CONCRETE ROOF OF THE RESERVOIR.
2. HORIZONTAL CONTROL IS BASED ON THE NORTH AMERICAN DATUM OF 1983, EPOCH 2002.0.
3. PROJECT DRAWINGS IN THE SERIES 1103- ARE USUALLY REFERRED TO AS C-001, S-001 ETC.
4. SECTIONS AND DETAILS ARE DESIGNATED BY FRACTIONAL SYMBOLS SUCH AS: $\frac{A}{C-001}$; $\frac{3}{M-001}$
THE NUMERATOR IDENTIFIES THE SECTION OR DETAIL:
LETTERS IDENTIFY SECTIONS.
NUMERALS IDENTIFY DETAILS.
- THE DENOMINATOR IS THE SHEET REFERENCE NUMBER:
IN A PARENT VIEW, IT IDENTIFIES THE SHEET ON WHICH THE SECTION OR DETAIL VIEW IS SHOWN.
IN THE CAPTION OF A SECTION OR DETAIL VIEW, IT IDENTIFIES EACH SHEET ON WHICH THE PARENT VIEW IS SHOWN.
5. THE AVAILABLE WATER SOURCE IS A HYDRANT AS DESCRIBED IN THE SPECIFICATIONS. THE MAXIMUM WATER PRESSURE IS APPROXIMATELY 80 PSI. SEE SPEC SECTION 01 14 00.
6. SCREENED OR DOTTED LINES ARE USED TO SHOW THE FOLLOWING:
 - A. SITE PLAN DRAWINGS - EXISTING
 - B. DISCIPLINE DRAWINGS - OTHER DISCIPLINE WORK

E.B.M.U.D. STANDARD DRAWINGS

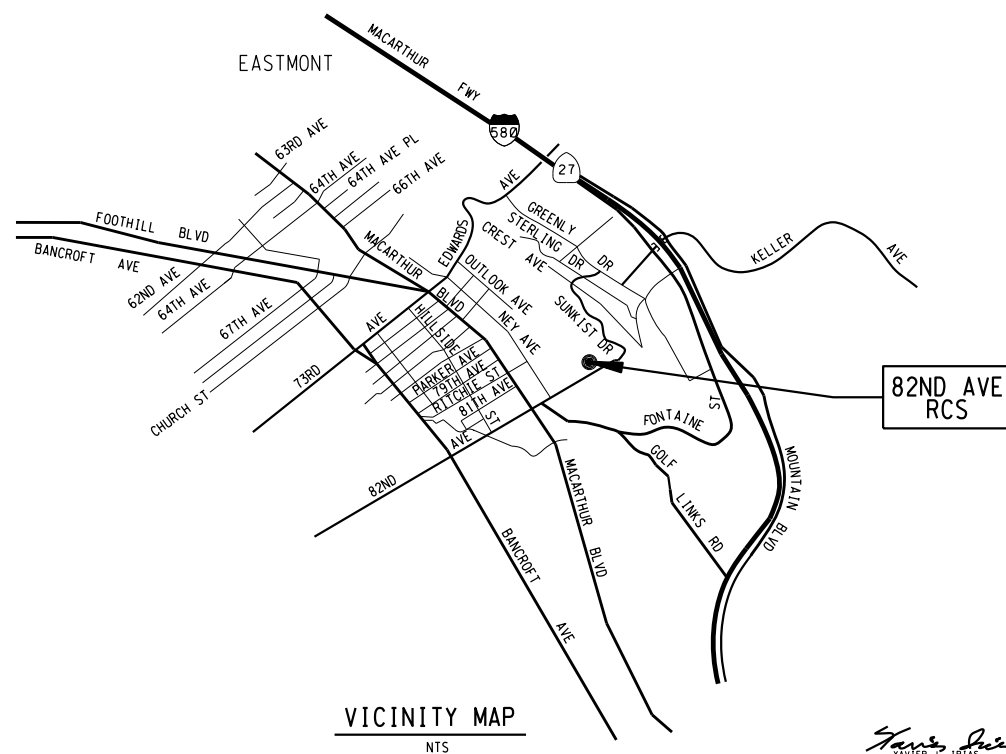
9492-G-001	ELECTRICAL LEGEND AND SYMBOLS
9492-G-001.1	ELECTRICAL, LEGEND AND SYMBOLS
9492-G-001.2	ELECTRICAL, SECURITY LEGEND, SYMBOLS, AND ABBREVIATIONS NEW STANDARD DRAWING
9492-G-002	GENERAL LEGEND, SYMBOLS, AND ABBREVIATIONS FOR P&ID DRAWINGS
9492-G-003	SYMBOLS FOR P&ID DRAWINGS, VALVES FITTINGS, AND MISCELLANEOUS SYMBOLS, SHEET 1 OF 3
9492-G-004	SYMBOLS FOR P&ID DRAWINGS, SENSING ELEMENTS, SHEET 2 OF 3
9492-G-005	SYMBOLS FOR P&ID DRAWINGS, EQUIPMENT, SHEET 3 OF 3
9492-G-006	EQUIPMENT TAG NUMBER CODES AND COLORS, SHEET 1 OF 2
9492-G-007	EQUIPMENT TAG NUMBER CODES AND COLORS, SHEET 2 OF 2
9494-G-1	ABBREVIATIONS FOR WATER FACILITIES, DESIGN DRAWINGS, A THRU M, SHEET 1 OF 2
9494-G-2	ABBREVIATIONS FOR WATER FACILITIES, DESIGN DRAWINGS, N THRU Z, SHEET 2 OF 2

REFERENCE DRAWINGS

S-1 CITY OF OAKLAND, CONCRETE CURB AND GUTTER.



LOCATION MAP



VICINITY MAP

Xavier J. Irias
XAVIER J. IRIAS
DIRECTOR OF ENGINEERING & CONSTRUCTION R.P.E. NO. C44782

SPECIFICATION NO. 2021

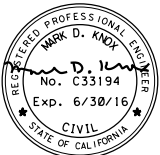
NO.	DATE	REVISION	BY	REC.	APP

DESIGN	DESIGNED BY	<i>Butt Morgan</i> DIRECTOR: MARGOSIAN	EAST BAY MUNICIPAL UTILITY DISTRICT OAKLAND, CALIFORNIA						
	DESIGN CHECKED BY	<i>C. Wang</i> CHIEF: WANG	82ND AVENUE RATE CONTROL STATION REHABILITATION GENERAL						
REVIEW	DRAWN BY	K. ENG					LIST OF DRAWINGS AND GENERAL INFORMATION		
	PROJECT ENGINEER	<i>D. Satali</i> R.P.E. NO. C74803 DENISE A. CYCALA							
	RECOMMENDED: SENIOR CIVIL ENGR. R.P.E. NO. C33194	<i>M. D. Knox</i> MARK D. KNOX	PROJ. NO. Z-001	1103-Z-001.1	0				
	APPROVED: MGR. OF DESIGN R.P.E. NO. C4598	<i>S. Testa</i>	SCALE NONE						
			DATE 30/JAN/2015	STRUCT.	DISC.	NUMBER	REV.		

3" ON ORIGINAL DOCUMENT

0 1 2 3

USER: pcariaso
DATE: 04-FEB-2015 16:59
FILE: H:srtcntrls\1103s



Sample D

List of Specifications

SET NO. _____

**82ND AVENUE AND HOLLIS RATE CONTROL
STATIONS REHABILITATION**

CONTRACT DOCUMENTS

VOLUME I OF III

BIDDING DOCUMENTS
AND SPECIFICATIONS
(DIVISIONS 00-04)

SPECIFICATION 2021



EAST BAY MUNICIPAL UTILITY DISTRICT

Bids will be opened at 1:30 pm, Wednesday, March 18, 2015 in the Board Room,
Second Floor of the District's Administration Building, 375 11th Street, Oakland, California

SPECIFICATION 2021

82ND AVENUE AND HOLLIS RATE CONTROL STATIONS REHABILITATION

TABLE OF CONTENTS

VOLUME I - BIDDING DOCUMENTS AND SPECIFICATIONS (DIVISIONS 00 THROUGH 04)

DIVISION 00 - PROCUREMENT AND CONTRACTING DOCUMENTS

00 01 10	Table of Contents
00 11 13	Notice to Contractors
00 21 13	Instructions to Bidders
00 30 05	Offices to Contact
00 31 24	Materials Assessment Information
00 41 02	Bid Form
00 42 00	Proposal
00 43 13	Bidder's Bond
00 43 39	Contract Equity Program and Equal Employment Opportunity Guidelines
00 45 13	Bidder's Qualifications and References
00 45 19	Declaration of Noncollusion
00 45 46	Declaration of Eligibility to Work on Public Works Projects
00 51 00	Execution of Contract
00 52 00	Contract
00 61 13.13	Faithful Performance Bond
00 61 13.16	Payment Bond
00 62 00	Insurance Requirements
00 62 16.11	Certificate of Workers' Compensation Insurance
00 62 16.13	Certificate of Commercial General and Auto Liability Insurance
00 62 16.14	Certificate of Pollution Liability Insurance
00 62 16.15	Certificate of Builder's Risk Insurance
00 72 00	General Conditions
00 73 00	Supplementary General Conditions

DIVISION 01 - GENERAL REQUIREMENTS

01 11 00	Summary of Work
01 14 00	Work Restrictions
01 24 13	Value Engineering
01 29 00	Payment Procedures
01 31 19	Project Meetings
01 31 23.10	Web-based Construction Document Management
01 32 00	Construction Progress Documentation
01 33 00	Submittal Procedures
01 35 13	Special Project Procedures
01 35 24	Project Safety Requirements
01 35 44	Environmental Requirements
01 35 53	Security Procedures
01 42 19	Reference Standards
01 43 11	Seismic Requirements
01 45 27	Shop Inspection
01 50 00	Temporary Facilities and Controls
01 55 26	Traffic Regulation
01 61 00	Common Product Requirements
01 64 05	District-Furnished Materials
01 74 05	Cleaning
01 74 19	Construction Waste Management and Disposal
01 75 17	Field Testing and Startup
01 77 00	Closeout Procedures
01 91 13.10	Asset Identification Tags

DIVISION 02 – EXISTING CONDITIONS

02 21 13	Construction Surveying
02 41 13	Selective Site Demolition
02 82 13	Asbestos Control Activities
02 83 13	Lead Hazard Control Activities

DIVISION 03 - CONCRETE

03 11 00	Concrete Forming
03 20 00	Concrete Reinforcing
03 30 53	Miscellaneous Cast-in-Place Concrete
03 35 00	Concrete Finishing
03 39 00	Concrete Curing
03 62 00	Non-Shrink Grouting

DIVISION 04 – NOT USED

VOLUME II - SPECIFICATIONS (DIVISIONS 05 THROUGH 44 and APPENDICES)

DIVISION 05 - METALS

05 05 14	Hot-Dip Galvanizing
05 05 26	Flange Bolting
05 50 00	Metal Fabrications

DIVISIONS 06 THROUGH 07 – NOT USED

DIVISION 08 - OPENINGS

08 31 05	Access Hatches and Vault Hatches
----------	----------------------------------

DIVISION 09 - FINISHES

09 96 56.05	High-Build Epoxy Coatings
09 96 56.10	Fusion-Bonded Epoxy Coatings
09 96 57	Mechanical and Electrical Coating Systems

DIVISIONS 10 THROUGH 21 – NOT USED

DIVISION 22 - PLUMBING

22 05 53.05	Pipe Identification
-------------	---------------------

DIVISION 23 - HEATING, VENTILATING, AND AIR CONDITIONING

23 31 13	Metal Ducts
23 34 00	HVAC Fans

DIVISIONS 24 THROUGH 25 – NOT USED

DIVISION 26 - ELECTRICAL

26 05 00	Common Work Results for Electrical
26 05 19	Low-Voltage Electrical Power Conductors and Cables
26 05 26	Grounding and Bonding for Electrical Systems
26 05 33	Raceway and Boxes for Electrical Systems
26 05 43	Underground Ducts and Raceways for Electrical Systems
26 05 53	Identification for Electrical Systems
26 05 83	Low Voltage Motors
26 08 00	Commissioning of Electrical Systems
26 24 16	Panelboards
26 27 26	Wiring Devices
26 28 16	Enclosed Switches and Circuit Breakers
26 51 13	Interior Lighting Fixtures, Lamps, and Ballasts

DIVISION 27 - COMMUNICATIONS

27 05 00	Common Work Results for Communications
27 08 00	Commissioning of Communications Systems
27 22 05	RTU, RTU Control Panels and Hardware

DIVISION 28 – ELECTRONIC SAFETY AND SECURITY

28 13 33.16	Access Control Interfaces to Access Door Control
-------------	--

DIVISIONS 29 THROUGH 30 – NOT USED

DIVISION 31 - EARTHWORK

31 23 16	Excavation
31 23 23	Fill

DIVISION 32 - EXTERIOR IMPROVEMENTS

32 12 16.81 Asphalt Pavement Replacement

DIVISION 33 – UTILITIES

33 09 11 Instruments and Recorders
33 11 07 Specialty Couplings for Mechanical Piping
33 12 01 Basic Mechanical Materials and Methods
33 12 16.05 Miscellaneous Valves
33 12 16.27 AWWA Ball Valves
33 12 16.32 Powered Valve Actuators

DIVISIONS 34 THROUGH 39 – NOT USED

DIVISION 40 - PROCESS INTEGRATION

40 20 20 Mechanical Piping

DIVISIONS 41 THROUGH 42 – NOT USED

DIVISION 43 - PROCESS GAS AND LIQUID HANDLING, PURIFICATION AND STORAGE EQUIPMENT

43 21 43 Sump Liquid Pumps

DIVISION 44 – NOT USED

APPENDIX A – Forms and Schedules

APPENDIX B – Environmental Test Results

APPENDIX C - Local Noise Ordinances

APPENDIX D – Excerpt from Consumer Confidence Report Small Water Systems (CCRSWS)

APPENDIX E – District Approved Disposal / Recycling Facilities

VOLUME III – DRAWINGS

Volume III is bound separately

Sample Design Guides

Table of Contents



East Bay Municipal Utility District

Pumping Plant Design Guide

Version: 2017.18

December 18, 2017

TABLE OF CONTENTS

1.0	INTRODUCTION	1-1
1.1	PURPOSE	1-1
1.2	SCOPE	1-1
2.0	PLANNING AND PRELIMINARY DESIGN	2-1
2.1	PLANNING PROCESS	2-1
2.1.1	Security Considerations	2-1
2.2	PLANT CAPACITY (“FIRM CAPACITY”)	2-2
2.3	PUMP SELECTION	2-2
2.3.1	Type of Pumps	2-2
2.3.2	Number of Pumps	2-3
2.3.3	Variable Frequency Drives	2-4
2.3.4	Operating Head/System Curve	2-5
2.3.5	Pump and Motor Size	2-7
2.4	SITE SELECTION AND LAYOUT	2-9
2.4.1	Design Alternatives Analyses	2-9
2.4.2	Construction Limitations	2-9
2.4.3	Building Construction and Aesthetics	2-10
2.4.4	Building Footprint and Height	2-10
2.4.5	Noise Control	2-11
2.4.6	Connection to Distribution Piping	2-11
2.4.7	Surge Control	2-11
2.4.8	Electrical Power Supply	2-13
2.4.9	Geotechnical Investigations and Surveys	2-15
2.4.10	Existing Utilities	2-17
2.4.11	Environmental and Personnel Health and Safety	2-17
2.5	FACILITY OUTAGES DURING CONSTRUCTION	2-17
2.6	ENVIRONMENTAL DOCUMENTATION	2-17
2.7	PROPERTY ACQUISITION	2-17
2.8	PERMITS	2-18
3.0	GENERAL DESIGN	3-1
3.1	DESIGN STANDARDS	3-1
3.2	SITE LAYOUT	3-1
3.2.1	Vehicle Access and Parking	3-1
3.2.2	Electrical Equipment	3-1
3.3	PLANT AND EQUIPMENT LAYOUT	3-1
3.3.1	Facility Access	3-1
3.3.2	Telecommunications	3-2
3.3.3	Internal Layout	3-2
3.3.4	Restroom Facilities	3-4
3.3.5	Signage	3-5
3.4	EQUIPMENT NUMBERING	3-5
3.5	DESIGN REVIEW PROCESS	3-5
3.5.1	Ten Percent Review/Preliminary Design	3-6
3.5.2	Fifty Percent Review	3-7
3.5.3	Pre-Ninety Percent Review	3-8
3.5.4	Ninety Percent Review	3-9
3.5.5	Design Completion	3-9

4.0	DESIGN DETAILS	4-1
4.1	MECHANICAL	4-1
4.1.1	Final Pump Selection.....	4-1
4.1.2	Design Points.....	4-2
4.1.3	General Pump Details.....	4-4
4.1.4	Vertical Turbine Pump Details	4-6
4.1.5	Horizontal Split Case Pump Details	4-12
4.1.6	Facility Piping	4-15
4.1.7	Instrument Sensing Lines	4-18
4.1.8	Flanges and Flange Gaskets	4-19
4.1.9	Piping Supports	4-20
4.1.10	Vertical Turbine Pump Barrel	4-20
4.1.11	Pump Control Valves	4-21
4.1.12	Pump Test Taps	4-22
4.1.13	Check Valves.....	4-23
4.1.14	Surge Control/Pressure Relief/Bypass Valve	4-24
4.1.15	Isolation Valves	4-27
4.1.16	Sump Pumps and Sump (Wet Well) Sizing.....	4-28
4.1.17	Ventilation and Cooling	4-28
4.1.18	Plumbing	4-33
4.1.19	Freeze Protection	4-33
4.2	ELECTRICAL.....	4-33
4.2.1	Plant Voltage and Grounding	4-33
4.2.2	Power Meters.....	4-36
4.2.3	Main Switchgear.....	4-37
4.2.4	Transformers	4-38
4.2.5	Motor Control.....	4-40
4.2.6	Induction Motor Protection	4-40
4.2.7	Motors	4-41
4.2.8	Switchgear Circuit Breaker Controls.....	4-47
4.2.9	Emergency Generators and Transfer Switches.....	4-48
4.2.10	Panelboards	4-49
4.2.11	Panel Space Heaters	4-49
4.2.12	Lighting and Power Outlets.....	4-49
4.2.13	Conductors and Raceway	4-50
4.2.14	Circuit Analysis and Equipment Selection.....	4-51
4.2.15	Seismic Qualification	4-52
4.3	INSTRUMENTATION AND CONTROL	4-53
4.3.1	Facility Data Communications	4-53
4.3.2	Pump Control Panel.....	4-53
4.3.3	Pump Control Description.....	4-54
4.3.4	Surge Valve Controls	4-57
4.3.5	Surge Valve Control Description	4-57
4.3.6	Pulsation Dampeners.....	4-58
4.3.7	Pressure Gauges	4-58
4.3.8	Pressure Switches	4-58
4.3.9	Discharge Temperature Transmitter.....	4-58
4.3.10	Flow and Pressure Transmitters	4-59
4.3.11	Flow Elements and Transmitters	4-59
4.3.12	Flow and Pressure Recorders	4-62
4.4	CIVIL	4-62

4.4.1	Access Roads.....	4-62
4.4.2	Grading and Berms.....	4-63
4.4.3	Paving and Curbs.....	4-63
4.4.4	Retaining Walls and Buried Structures	4-63
4.4.5	Security.....	4-64
4.4.6	Site Drainage	4-64
4.4.7	Site Piping	4-65
4.4.8	Landscaping and Irrigation.....	4-67
4.5	STRUCTURAL	4-68
4.5.1	Building Construction Type	4-68
4.5.2	Materials and Properties	4-69
4.5.3	Design Loads.....	4-70
4.5.4	Wind Design.....	4-71
4.5.5	Earthquake Design	4-71
4.5.6	Load Combinations and Strength Limitations.....	4-71
4.5.7	Structure Foundations.....	4-73
4.5.8	Horizontal Pump Foundations.....	4-73
4.5.9	Wall Design.....	4-73
4.5.10	Stairs and Grating	4-73
4.5.11	Building Crane	4-73
4.5.12	Internal Drainage.....	4-74
4.6	CORROSION CONTROL	4-74
4.7	ARCHITECTURE.....	4-74
4.7.1	Materials	4-75
4.7.2	Roofing.....	4-75
4.7.3	Roof Hatches	4-75
4.7.4	Doors	4-76
4.7.5	Vent Openings.....	4-76
4.7.6	Interior/Exterior Finishes.....	4-76
4.7.7	Color Schemes.....	4-76
4.7.8	Fire Extinguishers.....	4-77
5.0	CONTRACT DOCUMENTS	5-1
5.1	SPECIFICATIONS	5-1
5.2	DRAWINGS	5-2
6.0	CONSTRUCTION AND OPERATIONS SUPPORT.....	5-1
6.1	OFFICE AND FIELD ENGINEERING	5-1
6.2	CONSTRUCTION SURVEYS	5-2
6.3	RESIDENT INSPECTION	5-2
6.4	TESTING AND STARTUP	5-2
6.5	RECORD DRAWINGS	5-2
7.0	REFERENCES	5-1
7.1	GENERAL REFERENCE.....	5-1
7.2	INDUSTRY STANDARDS, RECOMMENDED PRACTICES, AND CODES.....	5-1
7.3	DISTRICT ENGINEERING STANDARD PRACTICES (ESP'S).....	5-3
7.4	DISTRICT ENGINEERING STANDARD DRAWINGS.....	5-4

APPENDIX A – SUPPLEMENTARY DATA



East Bay Municipal Utility District

Reservoir Design Guide

December 18, 2017

1.0	INTRODUCTION	1-1
1.1	PURPOSE	1-1
2.0	PLANNING AND PRELIMINARY DESIGN	2-1
2.1	PROJECT DEVELOPMENT	2-1
2.2	RESERVOIR CAPACITY AND ELEVATION	2-1
2.3	SITE SELECTION	2-1
2.4	PROPERTY ACQUISITION	2-2
2.5	RESERVOIR TYPE SELECTION.....	2-3
2.5.1	Welded Steel	2-3
2.5.2	Bolted Steel.....	2-4
2.5.3	Conventionally Reinforced Concrete.....	2-4
2.5.4	Prestressed Concrete	2-4
2.6	ENVIRONMENTAL DOCUMENTATION	2-5
2.7	PERMITS.....	2-5
2.8	REVIEW PROCEDURES	2-6
2.8.1	Design Reviews	2-6
2.8.1.1	Ten Percent Review - Preliminary Design Report.....	2-6
2.8.1.2	Ninety Percent Review	2-7
3.0	GENERAL DESIGN	3-1
3.1	SITework	3-1
3.1.1	Geotechnical Investigations and Surveying.....	3-1
3.1.1.1	Geotechnical Investigations.....	3-1
3.1.1.2	Surveying.....	3-1
3.1.2	Grading and Berms	3-2
3.1.3	Security	3-2
3.1.4	Retaining Walls.....	3-3
3.1.5	Surface Runoff Drainage	3-3
3.1.6	Piping	3-4
3.1.6.1	Inlet/Outlet Pipe.....	3-4
3.1.6.2	Piping Flexibility	3-5
3.1.6.3	Overflow.....	3-6
3.1.6.4	Reservoir Drain	3-7
3.1.6.5	Underdrain.....	3-7
3.1.6.6	Drainage	3-7
3.1.6.7	Discharge of Drainage and Overflows.....	3-7
3.1.6.8	Corrosion Control.....	3-8
3.1.6.9	Disinfection	3-8
3.1.6.10	Fire Hydrant Connections.....	3-8
3.1.7	Landscaping	3-8
3.1.8	Paving and Parking Area	3-9
3.2	ACCESS ROAD	3-9
3.3	IRRIGATION	3-9
3.3.1	Irrigation Piping.....	3-10
3.3.2	Bubblers	3-10
3.3.3	Strainer.....	3-10
3.3.4	Backflow Prevention.....	3-10
3.3.5	Irrigation Pump	3-10
3.3.5.1	Mechanical	3-10
3.3.5.2	Electrical.....	3-10
3.3.5.3	Automatic Valves	3-11
3.3.5.4	Pump Controls	3-11

3.4	APPURTENANCES	3-11
3.4.1	Tank Access Openings (Manways)	3-11
3.4.2	Access stairs	3-11
3.4.3	Roof Vent	3-11
3.4.4	Fall Protection	3-12
3.4.5	Overflow	3-12
3.4.6	Water Level Indicator	3-13
3.4.7	Sample Tap	3-13
3.4.8	Level Gauge	3-13
3.4.9	Air Valve	3-13
3.4.10	Chlorination Tap	3-13
3.4.11	Miscellaneous Taps	3-13
3.4.12	Reservoir Underdrain Leakage	3-13
	3.4.12.1 Steel or Concrete Reservoirs	3-13
	3.4.12.2 Open-Cut Reservoirs	3-14
3.5	POWER SOURCE AND COMMUNICATIONS	3-14
3.5.1	General	3-14
3.5.2	Pacific Gas and Electric (PG&E) Service	3-14
3.5.3	Site Plan	3-14
3.6	INSTRUMENTATION	3-16
3.6.1	Reservoir Level	3-16
3.6.2	Alarms and Monitoring Systems	3-17
3.6.3	Remote Terminal Unit (RTU)	3-17
3.6.4	Alarms	3-17
3.6.5	RTU Inputs	3-17
3.6.6	Discharge Valve	3-18
3.6.7	Duplex Reservoir Design	3-18
3.7	ELECTRICAL	3-18
3.7.1	Codes and Standards	3-18
3.7.2	Specifications	3-18
4.0	STEEL AND CONCRETE RESERVOIR DESIGN	4-1
4.1.1	Codes and Design Standards	4-1
4.1.2	Design Loads	4-1
4.1.3	Seismic Design Criteria	4-2
4.1.4	Pipe Connection at Tank Wall	4-2
4.1.5	Foundation and Anchoring	4-2
4.1.6	Tank Walls and Roof	4-3
4.1.7	Cathodic Protection	4-5
4.2	BOLTED STEEL TANKS	4-5
4.2.1	Codes and Design Standards	4-5
4.2.2	Design Loads	4-6
4.2.3	Seismic Design Criteria	4-6
4.2.4	Pipe Connection at Tank Wall	4-7
4.2.5	Foundation and Anchoring	4-7
4.2.6	Tank Walls and Roof	4-7
4.2.7	Cathodic Protection	4-8
4.3	CONVENTIONALLY REINFORCED CONCRETE TANKS	4-9
4.3.1	Codes and Design Standards	4-9
4.3.2	Design Loads	4-9
4.3.3	Seismic Design Criteria	4-10
4.3.4	Material Properties	4-10

4.3.5	Allowable Stresses	4-11
4.3.6	Structural Design	4-11
4.3.7	Joints	4-11
4.3.8	Painting and Waterproofing	4-11
4.3.9	Circular Tanks.....	4-12
4.3.10	Rectangular Tanks	4-13
4.4	PRESTRESSED CONCRETE TANKS	4-14
4.4.1	Codes and Design Standards.....	4-14
4.4.2	Design Loads	4-15
4.4.3	Seismic Design Criteria	4-15
4.4.4	Material Properties.....	4-16
4.4.5	Allowable Stresses	4-16
4.4.6	Structural Design and Prestressing System.....	4-16
4.4.7	Concrete Roof	4-17
4.4.8	Aluminum Dome Roof	4-18
4.4.9	Foundation	4-18
4.4.10	Floor Joints.....	4-18
4.4.11	Cathodic Protection.....	4-19
4.4.12	Buried Structures	4-19
5.0	VALVE PIT	5-1
5.1	STRUCTURAL	5-1
5.2	MECHANICAL	5-1
5.2.1	General.....	5-1
5.2.2	Inlet/Outlet Piping.....	5-2
5.2.2.1	Inlet Line	5-2
5.2.2.2	Outlet Line.....	5-4
5.2.3	Other Valve Pit Piping Systems.....	5-6
5.2.3.1	Isolation Valves	5-6
5.2.3.2	Pumper Hydrants	5-6
5.2.3.3	Reservoir Drain	5-6
5.2.3.4	Subdrain Measurement Line.....	5-6
5.2.4	Valve Pit Sizing	5-6
5.2.4.1	Piping.....	5-7
5.2.4.2	Entrance	5-7
5.2.5	Drainage and Ventilation	5-7
5.2.5.1	Drainage	5-7
5.2.5.2	Ventilation.....	5-7
5.2.6	Water Quality Cabinet (Sample Station)	5-7
5.2.6.1	Sample Tap.....	5-8
5.2.6.2	Vacuum	5-8
5.2.6.3	Chemical Injection.....	5-8
5.2.6.4	Sample Drain Basin (Sink)	5-8
5.2.6.5	Chemical Catch Basin (Sink).....	5-8
5.2.6.6	Lights and Instrumentation	5-8
5.3	Electrical	5-8
5.3.1	General.....	5-8
5.3.2	Plan Drawing	5-9
6.0	CONTRACT DOCUMENTS	6-1
6.1	SPECIFICATIONS.....	6-1
6.2	DRAWINGS	6-1
7.0	CONSTRUCTION AND OPERATIONAL SUPPORT	7-1

7.1	OFFICE AND FIELD ENGINEERING DURING CONSTRUCTION.....	7-1
7.2	CONSTRUCTION SURVEYING.....	7-1
7.3	RESIDENT INSPECTION	7-2
7.4	RECORD DRAWINGS	7-2
Appendix A.....		7-3

EXHIBIT I
INSURANCE REQUIREMENTS

I. Provisions Applicable to All Required Insurance

A. Prior to the beginning of and throughout the duration of Services, and for any additional period of time as specified below, CONSULTANT shall, at its sole cost and expense, maintain insurance in conformance with the requirements set forth below.

B. CONSULTANT shall provide Verification of Insurance as required by this Agreement by providing the completed Verification of Insurance as requested below signing and submitting this Exhibit D to the DISTRICT. The Exhibit D may be signed by an officer of the CONSULTANT (Agent) or by the Insurance Broker for the CONSULTANT. CONSULTANT shall update Exhibit D throughout the specified term of the insurance required by this Agreement by resubmitting the completed Exhibit D prior to the expiration date of any of the required insurance. The updated Exhibit D shall become a part of the Agreement but shall not require a change order to the Agreement. The Notice to Proceed shall not be issued, and CONSULTANT shall not commence Services until such insurance has been accepted by the DISTRICT.

C. CONSULTANT shall carry and maintain the minimum insurance requirements as defined in this Agreement. CONSULTANT shall require any subcontractor to carry and maintain the minimum insurance required in this Agreement to the extent they apply to the scope of the services to be performed by subcontractor.

D. Acceptance of verification of Insurance by the DISTRICT shall not relieve CONSULTANT of any of the insurance requirements, nor decrease liability of CONSULTANT.

E. The insurance required hereunder may be obtained by a combination of primary, excess and/or umbrella insurance, and all coverage shall be at least as broad as the requirements listed in this Agreement.

F. Any deductibles, self-insurance, or self-insured retentions (SIRs) applicable to the required insurance coverage must be declared to and accepted by the DISTRICT.

G. At the option and request of the DISTRICT, CONSULTANT shall provide documentation of its financial ability to pay the deductible, self-insurance, or SIR.

H. Any policies with a SIR shall provide that any SIR may be satisfied, in whole or in part, by the DISTRICT or the additional insured at its sole and absolute discretion.

I. Unless otherwise accepted by the DISTRICT, all required insurance must be placed with insurers with a current A.M. Best's rating of no less than A- V.

J. CONSULTANT shall defend the DISTRICT and pay any damages as a result of failure to provide the waiver of subrogation from the insurance carrier.

K. For any coverage that is provided on a claims-made coverage form (which type of form is permitted only where specified) the retroactive date must be shown and must be before the date of this Agreement, and before the beginning of any Services related to this Agreement.

L. Insurance must be maintained and updated Verification of Insurance be provided to the DISTRICT before the expiration of insurance by having CONSULTANT's insurance broker or agent update, sign and return Exhibit D to the DISTRICT's contract manager. For all claims-made policies the updated Verification of Insurance must be provided to the DISTRICT for at least three (3) years after expiration of this Agreement.

M. If claims-made coverage is canceled or non-renewed, and not replaced with another claims-made policy form with a retroactive date prior to the effective date of this Agreement or the start of any Services related to this Agreement, CONSULTANT must purchase an extended reporting period for a minimum of three (3) years after expiration of the Agreement.

N. If requested by the DISTRICT, a copy of the policies' claims reporting requirement must be submitted to the DISTRICT for review.

O. Where additional insured coverage is required, the additional insured coverage shall be "primary and non-contributory," and will not seek contribution from the DISTRICT's insurance or self-insurance.

P. CONSULTANT agrees to provide immediate Notice to the DISTRICT of any loss or claim against CONSULTANT arising out of, pertaining to, or in any way relating to this Agreement, or Services performed under this Agreement. The DISTRICT assumes no obligation or liability by such Notice, but has the right (but not the duty) to monitor the handling of any such claim or claims if they are likely to involve the DISTRICT.

Q. CONSULTANT agrees, upon request by the DISTRICT, to provide complete, certified copies of any policies and endorsements within 10 days of such request (copies of policies may be redacted to eliminate premium details.)

R. It is CONSULTANT's responsibility to ensure its compliance with the insurance requirements. Any actual or alleged failure on the part of the DISTRICT to obtain proof of insurance required under this Agreement shall not in any way be construed to be a waiver of any right or remedy of the DISTRICT, in this or any regard.

S. Notice of Cancellation/Non-Renewal/Material Reduction The insurance requirements hereunder are mandatory and the DISTRICT may, at its sole and absolute discretion, terminate the services provided by CONSULTANT, should CONSULTANT breach its obligations to maintain the required coverage and limits set forth in this Agreement. No coverage required hereunder shall be cancelled, non-renewed or materially reduced in coverage or limits without the DISTRICT being provided at least thirty (30) days prior written notice, other than cancellation for the non-payment of premiums, in which event the DISTRICT shall be provided ten (10) days prior written notice. Replacement of coverage with another policy or insurer, without any lapse in coverage or any reduction of the stated requirements does not require notice

beyond submission to the DISTRICT of an updated Verification of Insurance which shall be met by having the CONSULTANT's insurance broker or agent update, sign and return this **Exhibit I**

II. Workers' Compensation and Employer's Liability Insurance Coverage

- A. Workers' Compensation insurance including Employer's Liability insurance with minimum limits as follows:
 - Coverage A. Statutory Benefits Limits
 - Coverage B. Employer's Liability of not less than:
 - Bodily Injury by accident: \$1,000,000 each accident
 - Bodily Injury by disease: \$1,000,000 each employee
 - Bodily Injury by disease: \$1,000,000 policy limit
- B. CONSULTANT's insurance shall be primary and any insurance or self-insurance procured or maintained by the DISTRICT shall not be required to contribute to it.
- C. If there is an onsite exposure of injury to CONSULTANT, subcontractor, and/or subcontractor's employees under the U.S. Longshore and Harbor Workers' Compensation Act, the Jones Act, or under laws, regulations or statutes applicable to maritime employees, coverage is required for such injuries or claims.
- D. If CONSULTANT is self-employed, a sole proprietorship or a partnership, with no employees, and is exempt from carrying Workers' Compensation Insurance, CONSULTANT must return the completed Verification of Insurance confirming that CONSULTANT has no employees and is exempt from the State of California Workers' Compensation requirements.
- E. If CONSULTANT is self-insured with respect to Workers' Compensation coverage, CONSULTANT shall provide to the DISTRICT a Certificate of Consent to Self-Insure from the California Department of Industrial Relations. Such self-insurance shall meet the minimum limit requirements and shall waive subrogation rights in favor of the DISTRICT as stated below in section "F."
- F. Waiver of Subrogation. Workers' Compensation policies, including any applicable excess and umbrella insurance, must contain a waiver of subrogation endorsement providing that CONSULTANT and each insurer waive any and all rights of recovery by subrogation, or otherwise, against the DISTRICT, its directors, board, and committee members, officers, officials, employees, agents, and volunteers. CONSULTANT shall defend and pay any and all damages, fees, and costs, of any kind arising out of, pertaining to, or in any way relating to CONSULTANT's failure to provide waiver of subrogation from the insurance carrier.

Verification of Workers' Compensation and Employer's Liability Insurance Coverage

☐ By checking the box and signing below, I hereby verify that the CONSULTANT is exempt from the State of California's requirement to carry workers' compensation insurance.

As the CONSULTANT's insurance broker/agent, I hereby verify that I have reviewed and confirmed that the CONSULTANT carries workers' compensation insurance as required by this Agreement, including the relevant provisions applicable to all required insurance.

Self-Insured Retention: Amount: \$ _____

Policy Limit: \$ _____

Policy Number: _____

Policy Period: from: _____ to: _____

Insurance Carrier Name: _____

Insurance Broker or Agent: Print Name: _____

Insurance Broker or Agent's Signature: _____

III. Commercial General Liability Insurance ("CGL") Coverage

- A. CONSULTANT's insurance shall be primary and any insurance or self-insurance procured or maintained by the DISTRICT shall not be required to contribute to it.
- B. The insurance requirements under this Agreement shall be the greater of (1) the minimum coverage and limits specified in this Agreement; or (2) the broader coverage and maximum limits of coverage of any insurance policies or proceeds available to the Named Insured. It is agreed that these insurance requirements shall not in any way act to reduce coverage that is broader or that includes higher limits than the minimums required herein. No representation is made that the minimum insurance requirements of this Agreement are sufficient to cover the obligations of the CONSULTANT.
- C. Minimum Requirements. CGL insurance with minimum per occurrence and aggregate limits as follows:
 - Bodily Injury and Property Damage \$2,000,000 per occurrence & aggregate
 - Personal Injury/Advertising Injury \$2,000,000 per occurrence & aggregate
 - Products/Completed Operations \$2,000,000 per occurrence & aggregate
- D. Coverage must be on an occurrence basis.

- E. Coverage for Products, and Completed Operations, and Ongoing Operations must be included in the insurance policies and shall not contain any “prior work” coverage limitation or exclusion applicable to any Services performed by CONSULTANT and/or subcontractor under this Agreement.
- F. Insurance policies and Additional Insured Endorsement(s) Coverage shall be included for all premises and operations in any way related to this Agreement.
- G. There will be no exclusion for explosions, collapse, or underground liability (XCU).
- H. Insurance policies and Additional Insured Endorsement(s) shall not exclude liability and damages to work arising out of, pertaining to, or in any way relating to services performed by Subcontractor on CONSULTANT’s behalf.
- I. Contractual liability coverage shall be included and shall not limit, by any modification or endorsement, coverage for liabilities assumed by CONSULTANT under this Agreement as an “insured contract.”
- J. Waiver of Subrogation. The policy shall be endorsed to include a Waiver of Subrogation ensuring that the CONSULTANT and its insurer(s) waive any rights of recovery by subrogation, or otherwise, against the DISTRICT, its directors, board, and committee members, officers, officials, agents, volunteers, and employees. CONSULTANT shall defend and pay any and all damages, fees, and costs, of any kind, arising out of, pertaining to, or in any way resulting from CONSULTANT’s failure to provide the waiver of subrogation from its insurance carrier(s).
- K. “Independent CONSULTANT’s Liability” shall not limit coverage for liability and/or damages arising out of, pertaining to, or in any way resulting from Services provided under this Agreement.

To the fullest extent permitted by law, the DISTRICT, its directors, board, and committee members, officers, officials, employees, agents, and volunteers must be covered as Additional Insureds on a primary and noncontributory basis on all underlying, excess and umbrella policies that shall be evidenced in each case by an endorsement. The Additional Insureds must be covered for liability arising in whole, or in part, from any premises, Products, Ongoing Operations, and Completed Operations by or on behalf of CONSULTANT, in any way related to Services performed under this Agreement.

- L. A severability of interest provision must apply for all the Additional Insureds, ensuring that CONSULTANT’s insurance shall apply separately to each insured against whom a claim is made or suit is brought, except with respect to the policies’ limit(s).

Verification of Commercial General Liability (CGL) Insurance Coverage

As the CONSULTANT’S insurance broker/agent, I hereby verify that I have reviewed and confirmed that the CONSULTANT carries Commercial General Liability insurance, as required by this Agreement, including the relevant provisions applicable to all required insurance:

Self-Insured: Amount: \$ _____

Policy Limit: Per Occurrence: \$ _____ **Aggregate: \$** _____

Policy Number: _____

Policy Period: from: _____ **to:** _____

Insurance Carrier Name: _____

Insurance Broker or Agent: Print Name: _____

Insurance Broker or Agent’s Signature: _____

IV. Business Auto Liability Insurance Coverage

CONSULTANT’s insurance shall be primary and any insurance or self-insurance procured or maintained by the DISTRICT shall not be required to contribute to it.

A. The insurance requirements under this Agreement shall be the greater of (1) the minimum coverage and limits specified in this Agreement; or (2) the broader coverage and maximum limits of coverage of any insurance policies or proceeds available to the Named Insured. It is agreed that these insurance requirements shall not in any way act to reduce coverage that is broader or that includes higher limits than the minimums required herein. No representation is made that the minimum insurance requirements of this Agreement are sufficient to cover the obligations of the CONSULTANT.

B. Minimum Requirements. Auto insurance with minimum coverage and limits as follows:
Each Occurrence Limit (per accident) and in the Aggregate: \$2,000,000
Bodily Injury and Property Damage: \$2,000,000

C. Coverage must include either “owned, non-owned, and hired” autos or “any” automobile

This provision ensures the policy covers losses arising out of use of company-owned vehicles (“owned autos”), employee’s personal autos (“non-owned autos” meaning not owned by company/insured) or autos that are rented or leased (“hired autos”).

D. If CONSULTANT is transporting hazardous materials or contaminants, evidence of the Motor Carrier Act Endorsement-hazardous materials clean-up (MCS-90, or its equivalent)

must be provided.

- E. If CONSULTANT's Scope of Services under this Agreement exposes a potential pollution liability risk related to transport of potential pollutants, seepage, release, escape or discharge of any nature (threatened or actual) of pollutants into the environment arising out of, pertaining to, or in any way related to CONSULTANT's and/or Subcontractor's performance under this Agreement, then Auto Liability Insurance policies must be endorsed to include Transportation Pollution Liability insurance. Alternatively, coverage may be provided under the CONSULTANT's Pollution Liability Policies if such policy has no exclusions that would restrict coverage under this Agreement. Coverage shall also include leakage of fuel or other "pollutants" needed for the normal functioning of covered autos.
- F. To the fullest extent permitted by law, the DISTRICT, its directors, board, and committee members, officers, officials, employees, agents, and volunteers must be covered as Additional Insureds on a primary and noncontributory basis on all underlying and excess and umbrella policies. The Additional Insureds must be covered for liability arising in whole, or in part, from any premises, Products, Ongoing Operations, and Completed Operations by or on behalf of CONSULTANT, in any way related to Services performed under this Agreement.
- G. A severability of interest provision must apply for all the Additional Insureds, ensuring that CONSULTANT's insurance shall apply separately to each insured against whom a claim is made or suit is brought, except with respect to the insurer's limits of liability.

Verification of Business Auto Liability Insurance Coverage

As the CONSULTANT'S insurance broker/agent, I hereby verify that I have reviewed and confirmed that the CONSULTANT carries Business Automobile Liability insurance, as required by this Agreement, including the relevant provisions applicable to all required insurance:

Self-Insured: Amount: \$ _____

Policy Limit: Per Accident/Occurrence \$ _____ **Aggregate: \$** _____

Policy Number: _____

Policy Period: from: _____ **to:** _____

Insurance Carrier Name: _____

Insurance Broker or Agent: Print Name: _____

Insurance Broker or Agent's Signature: _____

V. Professional Liability (also known as Errors and Omissions) Insurance Coverage

- A. CONSULTANT's insurance shall be primary and any insurance or self-insurance procured or maintained by the DISTRICT shall not be required to contribute to it.
- B. The insurance requirements under this Agreement shall be the greater of (1) the minimum coverage and limits specified in this Agreement; or (2) the broader coverage and maximum limits of coverage of any insurance policies or proceeds available to the Named Insured. It is agreed that these insurance requirements shall not in any way act to reduce coverage that is broader or that includes higher limits than the minimums required herein. No representation is made that the minimum insurance requirements of this Agreement are sufficient to cover the obligations of the CONSULTANT.
- C. Minimum Requirements: Professional Liability Insurance with minimum limits as follows:
 - Each Claim or Occurrence Limit: \$2,000,000
 - Aggregate Limit: \$2,000,000
- D. If Coverage is written on a claims-made form, the following shall apply:
 - 1. The retroactive date must be shown, and must be before the date of the Agreement or the beginning of the Services.
 - 2. Insurance must be maintained and evidence of insurance must be provided for a minimum of three (3) years after completion of the Services.
 - 3. If claims-made coverage is canceled or non-renewed, and not replaced with another claims-made policies form with a retroactive date prior to the effective date of the Agreement, CONSULTANT must purchase an extended period of coverage for a minimum of three (3) years after completion of the Services.
- E. Insurance shall include prior acts coverage sufficient to cover the services under this Agreement.
- F. Coverage shall be included for all premises and operations in any way related to this Agreement.

Verification of Professional Liability (Errors and Omissions) Insurance Coverage

As the CONSULTANT'S insurance broker/agent, I hereby verify that I have reviewed and confirmed that the CONSULTANT carries Professional Liability insurance as required by this Agreement, including the relevant provisions applicable to all required insurance.

Self-Insured: Amount: \$ _____

Policy Limit: Per Claim \$ _____ **Aggregate: \$** _____

Policy Number: _____

Policy Period: from: _____ **to:** _____

Insurance Carrier Name: _____

Insurance Broker or Agent: Print Name: _____

Insurance Broker or Agent's Signature: _____

VI. Excess and/or Umbrella Liability Insurance Coverage

A. CONSULTANT's insurance shall be primary and any insurance or self-insurance procured or maintained by the DISTRICT shall not be required to contribute to it.

B. The insurance requirements under this Agreement shall be the greater of (1) the minimum coverage and limits specified in this Agreement; or (2) the broader coverage and maximum limits of coverage of any insurance policies or proceeds available to the Named Insured. It is agreed that these insurance requirements shall not in any way act to reduce coverage that is broader or that includes higher limits than the minimums required herein. No representation is made that the minimum insurance requirements of this Agreement are sufficient to cover the obligations of the CONSULTANT.

C. Minimum Requirements: It is expressly understood by the parties that CONSULTANT's Excess and/or Umbrella Liability policies shall, at minimum, comply with all insurance requirements set forth within this Agreement.

1. Coverage for Products, Completed Operations, and Ongoing Operations must be included in the insurance policies and shall not contain any "prior work" coverage limitation or exclusion applicable to any Services performed under this Agreement and, if it is a claims-made policy, it must be maintained for a minimum of three (3) years following final completion of the Services.

2. Coverage shall be included for all premises and operations in any way related to this Agreement.

3. There will be no exclusion for explosions, collapse, or underground damage (XCU).

4. Insurance policies and Additional Insured Endorsements shall not exclude coverage for liability and damages from services performed by Subcontractor on CONSULTANT's behalf.

5. Contractual liability coverage shall be included and shall not limit, by any modification or endorsement, coverage for liabilities assumed by CONSULTANT under this Agreement as an "insured contract."

6. "Independent CONSULTANT's Liability" shall not limit coverage for liability and/or damage arising out of, pertaining to, or in any way related to Services provided under this Agreement.

7. To the fullest extent permitted by law, the DISTRICT, its directors, officers, officials, agents, volunteers, and employees must be covered as Additional Insureds on a primary and noncontributory basis on all excess and umbrella policies. The Additional Insureds must be covered for liability arising in whole or in part from any premises, Products, Ongoing Operations, and Completed Operations by or on behalf of CONSULTANT, in any way related to Services performed under this Agreement.

8. A severability of interest provision must apply for all the Additional Insureds, ensuring that the CONSULTANT's insurance shall apply separately to each insured against whom a claim is made or suit is brought, except with respect to the policy's limits.

9. CONSULTANT and its excess and/or umbrella Liability insurance coverage must waive any rights of subrogation against the DISTRICT, its directors, officers, officials, employees, agents, and volunteers, and CONSULTANT shall defend and pay any damages as a result of failure to provide the waiver of subrogation from the insurance carrier(s).

D. CONSULTANT shall defend and pay any damages as a result of failure to provide the waiver of subrogation from the insurance carrier(s).

Verification of Excess and/or Umbrella Liability Insurance Coverage

As the CONSULTANT'S insurance broker/agent, I hereby verify that I have reviewed and confirmed that the CONSULTANT carries Excess and/or Umbrella Liability insurance, as required by this Agreement, including the relevant provisions applicable to all required insurance.

Self-Insured: Amount: \$ _____

Policy Number: _____

Policy Period: from: _____ **to:** _____

Insurance Carrier Name: _____

Insurance Broker or Agent: Print Name: _____

Insurance Broker or Agent's Signature: _____