REQUEST FOR PROPOSALS

Forms

Well #8 INSTALLATION

MISSION HILLS

COMMUNITY SERVICES DISTRICT

Mission Hills Community Services District
1550 East Burton Mesa Blvd.
Lompoc, CA 93436
(805) 733-4366
mg@mhcsd.org

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BID

BID TO: **MISSION HILLS COMMUNITY SERVICES DISTRICT**

The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into Agreement with the District in the form included in the Contract Documents (as defined in Article 4 of the Agreement) to perform the Work as specified or indicated in said Contract Documents entitled:

WELL #8 INSTALLATION

Bidder accepts all of the terms and conditions of the Contract Documents, including without limitation those in the Notice Inviting Bids and Instructions to Bidders, dealing with the disposition of the Bid Security.

This Bid will remain open for the period stated in the Notice Inviting Bids unless otherwise required by law. Bidder will enter into an Agreement within the time and in the manner required in the Instructions to Bidders, and will furnish the insurance certificates, Payment Bond, Performance Bond, and Permits required by the Contract Documents.

Bidder has examined copies of all the Contract Documents including the following Addenda (receipt of which is hereby acknowledged):

Number _____ Date _____

Number _____ Date _____

Bidder has familiarized itself with the nature and extent of the Contract Documents, the Work, the site, the locality where the Work is to be performed, the legal requirements (federal, state, and local laws, ordinances, rules, and regulations), and the conditions affecting cost, progress or performance of the Work and has made such independent investigations as Bidder deems necessary.

In conformance with current statutory requirements of California Labor Code Section 1860, et seq., the undersigned confirm the following as its certification:

> I am aware of the provisions of Section 3700 of the 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 before commencing the performance of the work of this contract.

To all the foregoing, and including all Bid Schedule(s), List of Subcontractors, Contractor's Licensing Statement, Non-collusion Affidavit, Equipment or Material Proposed, Bidder's General Information, and Bid Bond contained in these Bid Forms, said Bidder further agrees to complete the Work required under the Contract Documents within the Contract Time stipulated in said Contract Documents, and to accept in full payment therefor the Contract Price based on the Lump Sum or Unit Bid Price(s) named in the aforementioned Bidding Schedule(s).

Dated: _____

Bidder: _____

By: _____
(Signature)

Title: _____

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Mission Hills Community Services District Bid Form – Municipal Production Well #8 Installation

Bid Form Item No.	Description	Quantity	Units	Unit Price (USD)	Extended Price (USD)
1	Mobilization and Demobilization	1	Lump Sum	$	$
2	Sound Attenuation Measures	1	Lump Sum	$	$
3	Standby Time	8	Hour	$ /hour	$
4	Authorized Hourly Work	8	Hour	$ /hour	$
ONE PRODUCTION WELL (12-inch internal diameter)					
5	Furnish and Install 24" OD x 5/16" Wall ASTM A53 or A139 Grade B Steel Conductor Casing & Sand/Cement Sanitary Seal	50	Linear Feet	$ /foot	$
6	Pilot Borehole - 16" diameter	590	Linear Feet	$ /foot	$
7	Borehole Reaming- 22" diameter	590	Linear Feet	$ /foot	$
8	Geophysical Surveys (E-Log of Pilot Hole; Caliper of Final Reamed Borehole)	1	Each	$	$
9	Furnish and Install 12" ID x 1/4" Wall ASTM 778 Type 304L Stainless Steel Blank Roscoe Moss Well Casing (Includes 20-foot sump and stick-up); (Typical)	363	Linear Feet	$ /foot	$
10	Furnish and Install 12" ID ASTM 778 Type 304L Stainless Steel Wire-wrapped Roscoe Moss Well Screen w/ 0.040" slots, 0.165" wire, 0.217" rod thickness (Typical)	260	Linear Feet	$ /foot	$

Bid Form Item No.	Description	Quantity	Units	Unit Price (USD)	Extended Price (USD)
11	Furnish and Install 3" dia. schedule 40 stainless steel gravel fill pipe (including stick-up)	7	Linear Feet	$ /foot	$
12	Furnish and Install P.W. Gillibrand RFS 3 (12/20) Gravel Pack	640	Linear Feet	$ /foot	$
13	Plumbness and Alignment Testing	1	Each	$	$
14	Initial Well Development	48	Hour	$ /hour	$
15	Test Pump Installation and Removal (Assume Up to 1,000 gpm from 460 ft bgs)	1	Each	$	$
16	Final Well Development	64	Hour	$ /hour	$
17	Aquifer Testing	36	Hour	$ /hour	$
18	Video Survey	1	Each	$	$
19	Final Well Disinfection & Wellhead Completion	1	Each	$	$
TOTAL BID AMOUNT FOR ONE PRODUCTION WELL:					

Total Bid Amount for 1 Production Well

$_____ (Figures)

_____Dollars

and _____cents (Written)

The Total Bid Amount for One Well shall be presented both in words and figures in the spaces provided above. In the event of discrepancy, the amount shown in words shall dictate.

The Contractor acknowledges that quantities shown on the Bid Form are estimates only and actual quantities will be determined upon final well design and field observations. Final payment will be based on actual quantities determined as per the Contract Documents. The Contractor acknowledges that the Owner is not obligated to implement the scope of work shown in the Bid Form.

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INFORMATION REQUIRED OF BIDDER

LIST OF SUBCONTRACTORS

In accordance with the requirements of Section 4104 of the Public Contracts Code, the Bidder shall list below the names and location of place of business of each subcontractor who will perform work or labor or who will render service to the prime contractor in or about the construction of the Work or improvement, or a subcontractor licensed by the State of California who, under subcontract to the prime Contractor, specially fabricates and installs a portion of the Work or improvement according to detailed drawings contained in the plans and specifications, in an amount in excess of one-half of one percent of the prime Contractor's total bid or, in the case of bids or offers for the construction of streets or highways, including bridges, in excess of one-half of one percent of the prime Contractor's total bid or $10,000, whichever is greater. After the opening of bids, no changes or substitutions will be allowed except as otherwise provided by law. The listing of more than one subcontractor for each item of Work to be performed with the words "and/or" will not be permitted. The Bidder's attention is directed to the provisions of Article 6.5 of the Supplementary General Conditions, entitle: "Concerning Subcontractors, Suppliers, and Others" which stipulates the percent of the Work to be performed with the Bidder's own forces. Failure to comply with this requirement will render the Bid as non-responsive and may cause its rejection.

Work to be Performed		Subcontractor's Name, Address, Phone Number		Percent of Total
1.				
Contractor's License Number		PWC Registration Number		
2.				
Contractor's License Number		PWC Registration Number		
3.				
Contractor's License Number		PWC Registration Number		
4.				
Contractor's License Number		PWC Registration Number		
5.				
Contractor's License Number		PWC Registration Number		

Add additional pages as required.

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BIDDER'S LICENSING STATEMENT
TO BE SUBMITTED WITH BID

State of California

County of _____

I, _____, certify the accuracy of the following

representations:

Contractor's License Number _____

License Expiration Date _____

PWC Registration Number _____

Bidder _____
print or type licensee's name

By _____
Signature of licensee, RME or RMO

Title_____

Organization _____

Address _____

_____

_____

Phone _____

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NON-COLLUSION AFFIDAVIT TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID

State of California

County of _____

I, _____, being first duly sworn, deposes and says that he or she is

_____ of _____ the party making the foregoing bid that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and, further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

Bidder _____

By _____

Title _____

Organization _____

Address _____

_____

_____

Phone _____

Subscribed and sworn to before me this _____ day of _____, _____

[Notarial Seal]

Notary Public in and for the State of _____

My commission expires _____

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BIDDER'S GENERAL INFORMATION

The Bidder shall furnish the following information. Additional sheets shall be attached as required. Failure to complete Item Nos. 1, 3, and 8 will cause the Bid to be non-responsive and may cause its rejection. In any event, no award will be made until all of the Bidder's General Information (i.e. Items 1 through 8, inclusive) is provided to the District.

1. BIDDER / CONTRACTOR'S name and street address:

   Name of Licensee, RMO, or RME _____

2. CONTRACTOR'S telephone number: _____

3. CONTRACTOR'S license: Primary Classification _____

   State License Number _____ Expiration Date _____

   Supplemental license classifications: _____

   Name of licensee and RMO or RME, if different from line (1), above

4. Name of person who inspected the site of the proposed Work for the Bidder:

   Name: _____ Date of inspection: _____

5. Surety Company and Agent who will provide the required Bonds on this Contract:

   Name of Surety _____

   Address _____

   Surety Company Agent _____

   Telephone Numbers: Agent _____ Surety _____

6. ATTACH TO THIS BID the experience resume of the person who will be designated as General Construction Superintendent or on-site Construction Manager for the Contractor.

7. ATTACH TO THIS BID a financial statement, references, and other information, sufficiently comprehensive to permit an appraisal of Contractor's current financial condition.

8. ATTACH TO THIS BID a list of 4 municipal projects completed as of recent date involving work of similar type and complexity, listing the following data for each project:

(1) Project Name _____

Contract Price _____

Name, Address, and Telephone Number of Owner's Project Representative

(2) Project Name _____

Contract Price _____

Name, Address, and Telephone Number of Owner's Project Representative

(3) Project Name _____

Contract Price _____

Name, Address, and Telephone Number of Owner's Project Representative

(4) Project Name _____

Contract Price _____

Name, Address, and Telephone Number of Owner's Project Representative

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we,

_____

as Principal, hereinafter called the Principal, a ☐ corporation ☐ partnership ☐ individual duly authorized by law to do business as a construction contractor in the state of California, and

_____

(Surety Company name)

a corporation duly authorized to do a surety business under the Laws of the state of California as Surety, hereinafter called the Surety, are held and firmly bounds unto the Vandenberg Village Community Services District, hereinafter called the "District", in the sum of

_____ Dollars $ _____

OR

10 % of the bid

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.

WHEREAS, the principal has submitted a bid for the project named:

WELL #8 INSTALLATION

NOW THEREFORE, if said Principal is awarded a contract by said District, and, within the time and in the manner required in the "Notice Inviting Bids" and the "Instructions to Bidders" enters into a written Agreement on the form of agreement bound with said Contract Documents, furnishes the required Performance Bond and Payment Bond, then this obligation shall be null and void, otherwise it shall remain in full force and effect. In the event suit is brought upon this bond by said District and District prevails, said surety shall pay all costs incurred by said District in such suit, including a reasonable attorney's fee to be fixed by the court.

Signed and sealed this _____ day of _____ 20 _____

_____
Principal

_____
Signature

_____
Print or type name signed above

_____
Title

_____
Surety Seal

_____
Signature

_____
Print or type name signed above

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CERTIFICATE OF BIDDER REGARDING
AFFIRMATIVE ACTION PROGRAM

The Bidder hereby certifies that he or she is in compliance with the Civil Rights Act of 1964, Executive Order No. 11246, The California Fair Employment Practices Act, and all other applicable Federal and State laws and regulations relating to equal opportunity employment.

Bidder's Name _____

Address:_____

Name and Title of Signer _____

Signature_____Date_____

(The above certification of the Bidder regarding its affirmative action program shall be filled out completely, signed, and submitted by each bidder and shall be a part of the Contract Documents.)

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Mission Hills Community Services District
1550 East Burton Mesa Blvd.
Lompoc, CA 93436
Telephone: (805) 733-4366
FAX: (805) 733-4188
Email: mg@mhcsdorg

AGREEMENT

THIS AGREEMENT made this ___ day of _____in the year ___ , by and between the Mission Hills Community Services District, a legal entity organized and existing in the County of Santa Barbara, under and by virtue of the laws of the State of California, hereinafter designated as the District, and_____hereinafter designated as the CONTRACTOR.

Contract price $ _____

Completion date _____

Instructions: Sign and return original. Upon acceptance by Mission Hills Community Services District, a copy will be signed by its authorized representative and promptly returned to you. Insert below, the names of your authorized representative(s).

Accepted:

Mission Hills Community Services District

By _____

Title _____

Purchase Order # _____

Other authorized representative(s):

_____

Contractor:

_____
(Business Name)

By _____

Title _____

Other authorized representative(s):

_____

Workers' Compensation Insurance - By his/her signature hereunder, Contractor certifies that he/she 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 he/she will comply with such provisions before commencing the performance of the work of this agreement. Contractor and sub-contractors will keep workers' compensation insurance for their employees in effect during all work covered by this agreement.

Indemnification - To the fullest extent permitted by law, Contractor will immediately defend, indemnify and hold harmless Mission Hills Community Services District, its directors, officers, employees, or authorized volunteers (collectively the District) from all claims and demands of all persons arising out of or in connection with this Contract or the performance of the work or the furnishing of materials; including but not limited to, claims by the Contractor or Contractor's employees for damages to persons or property except for the sole negligence or willful misconduct or active negligence of The District, its directors, officers, employees, or authorized volunteers. Contractor shall immediately defend upon the District's tender, 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 the District, its officials, officers, agents, employees and representatives, notwithstanding whether Contractor's liability is or can be established; Contractor's obligation to indemnify shall survive the termination or completion of this agreement for the full period of time allowed by law and shall not be restricted by the insurance requirements of this Contract or to insurance proceeds, if any received by The District, or its directors, officers, employees, or authorized volunteers.

GENERAL CONDITIONS

Laws, Regulations and Permits - The Contractor shall give all notices required by law and comply with all laws, ordinances, rules and regulations pertaining to the conduct of the work. The Contractor shall be liable for all violations of the law in connection with work furnished by the Contractor. If the Contractor observes that the drawings or specifications are at variance with any law or ordinance, rule or regulation, he/she shall promptly notify the District engineer in writing and any necessary changes shall be made by written instruction or change order. If the Contractor performs any work knowing it to be contrary to such laws, ordinances, rules or regulations and without giving notice to the District engineer, the Contractor shall bear all costs arising therefrom.

Safety - Contractor must obtain all applicable Division of Occupational Safety and Health (CAL-OSHA) permit(s) and others required by California Labor Code and California Government Code, prior to the initiation of any practices, work, method, operation, or process related to the work covered in the contract. Permits required by governmental authorities will be obtained at Contractor's expense.

In the performance of this contract the contractor shall comply with all applicable, including but not limited to, Federal, State and local laws governing safety, health and sanitation related to their scope of work and operations. In case of conflict in regulations, the most stringent shall apply. The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract. It is a condition of this contract, and shall be made a condition of each subcontract which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under Cal/OSHA safety and health standards.

Any change in the scope of the work to be done, method of performance, nature of materials or price thereof, or to any other matter materially affecting the performance or nature of the work will not be paid for or accepted unless such change, addition or deletion is approved in advance, in writing by a supplemental agreement executed by the District. Contractor's "authorized representative(s)" has (have) the authority to execute such written change for Contractor.

Commercial General Liability and Automotive Liability Insurance - The Contractor shall provide and maintain the following commercial general liability and automotive liability insurance:

Coverage - Coverage for commercial general liability and automotive insurance shall be at least as broad as the following:

1. Insurance Services Office Commercial General Liability coverage (Occurrence Form CG 0001)
2. Insurance Services Office Form Number CA 0001 covering Automobile Liability, Symbol 1 (any auto)

Limits - The Contractor shall maintain limits no less than the following:

1. General Liability – Two million dollars ($2,000,000) per occurrence or the full per occurrence limits of the policies available, whichever is greater for bodily injury, personal injury and property damage and products & completed operations liability. If Commercial General Liability Insurance or other form with a general aggregate limit or products-completed operations aggregate limit is used, either the general aggregate limit shall apply separately to the project/location (via ISO endorsement at least as broad as the ISO CG 2503, or ISO CG 2504, provided to Mission Hills Community Services District) or the general aggregate limit and products-completed operations aggregate limit shall be twice the required occurrence limit.

2. Automobile Liability - One million dollars ($1,000,000) for bodily injury and property damage each accident limit.

3. Excess Liability - 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 Insurance 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 the District (if agreed to in a written contract or agreement) before the District's own primary or self-Insurance shall be called upon to protect it as a named insured.

Required Provisions - The general liability and automobile liability policies are to contain, or be endorsed to contain the following provisions:

1. The District, its directors, officers, employees, and authorized volunteers are to be given insured status at least as broad as ISO endorsement CG 2010 11 85; or both CG 20 10 and CG 20 37 04 13 (or the 20 10 04 13 (or earlier edition date) specifically naming all of the District parties required in this agreement, or using language that states "as required by contract"). All Subcontractors hired by Contractor must also have the same forms or coverage at least as broad; as respects liability arising out of activities performed by or on behalf of the Contractor; products and completed operations of the Contractor; premises owned, occupied or used by the Contractor; and automobiles owned, leased, hired or borrowed by the Contractor. The coverage shall contain no special limitations on the scope of protection afforded to the District, its directors, officers, employees, or authorized volunteers.

2. For any claims related to this project, the Contractor's insurance shall be primary insurance as respects the District, its directors, officers, employees, or authorized volunteers using the ISO CG 20 01 04 13 or coverage at least as broad. Any insurance, self-insurance, or other coverage maintained by the District, its directors, officers, employees, or authorized volunteers shall not contribute to it.

3. Any failure to comply with reporting or other provisions of the policies including breaches of warranties shall not affect coverage provided to the District, its directors, officers, employees, or authorized volunteers.

4. The Contractor's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.

5. Each insurance policy required above shall provide that coverage shall not be canceled, except with notice to the District.

Such liability insurance shall indemnify the Contractor and his/her sub-contractors against loss from liability imposed by law upon, or assumed under contract by, the Contractor or his/her sub-contractors for damages

on account of such bodily injury (including death), property damage, personal injury, completed operations, and products liability.

The automobile liability policy shall cover all owned, non-owned, and hired automobiles.

All of the insurance shall be provided on policy forms and through companies satisfactory to the District.

Deductibles and Self-Insured Retentions - Any deductible or self-insured retention must be declared to and approved by the District. At the option of the District, the insurer shall either reduce or eliminate such deductibles or self-insured retentions. Policies containing any self-insured retention (SIR) provision shall provide or be endorsed to provide that the SIR may be satisfied by either the named or additional insureds, co-insurers, and/or insureds other than the First Named Insured.

Acceptability of Insurers - Insurance is to be placed with insurers having a current A.M. Best rating of no less than A-:VII or equivalent or as otherwise approved by the District.

Workers' Compensation and Employer's Liability Insurance - By his/her signature hereunder, Contractor certifies that he/she 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 he/she will comply with such provisions before commencing the performance of the work of this agreement. Contractor and sub-contractors will keep workers' compensation insurance for their employees in effect during all work covered by this agreement.

Responsibility for Work - Until the completion and final acceptance by the District of all the work under and implied by this Agreement, the work shall be under the Contractor's responsible care and charge. The Contractor shall rebuild, repair, restore and make good all injuries, damages, re-erections, and repairs occasioned or rendered necessary by cause of any nature whatsoever.

The Contractor shall provide and maintain builder's risk insurance (or installation floater) covering all risks of direct physical loss, damage or destruction to the work in the amount specified in the General Conditions, to insure against such losses until final acceptance of the work by the District. Such insurance shall include[1] explosion, collapse, underground excavation and removal of lateral support. The District shall be a named insured on any such policy. The making of progress reports to the Contractor shall not be construed as creating an insurable interest by or for the District or be construed as relieving the Contractor or his/her subcontractors of responsibility for loss from any direct physical loss, damage or destruction occurring to final acceptance of the work by the District.

The insurer shall waive all rights of subrogation against the District, its directors, officers, employees or authorized volunteers.

Evidences of Insurance - Prior to execution of the agreement, the Contractor shall file with the District a certificate of insurance (Acord Form 25 or equivalent) signed by the insurer's representative evidencing the coverage required by this agreement. Such evidence shall include (1) attached additional insured endorsements with primary & non-contributory wording, (2) Workers' Compensation waiver of subrogation, and (3) a copy of the CGL declarations or endorsement page listing all policy endorsements, and confirmation that coverage includes or has been modified to include Required Provisions 1-5 above. The District reserves the right to obtain complete, certified copies of all required insurance policies, at any time. Contractor shall maintain the Insurance required by this agreement for a period of not less than 10 years following the termination or completion of this agreement. Contractor further waives all rights of subrogation under this agreement. Failure to continually satisfy the Insurance requirements is a material breach of contract.

If any of the required coverages expire during the term of this agreement, the Contractor shall deliver the renewal certificate(s) including the general liability additional insured endorsement to the District at least ten (10) days prior to the expiration date. Failure to comply with any of the Insurance requirements shall constitute a material breach of contract. The Insurance requirements in this agreement do not in any way

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[1] *Addition of earthquake and flood should be considered if loss potential from these perils is significant*

represent or imply that such coverage is sufficient to adequately cover the Contractor's obligations under this agreement. All Insurance or self-insurance coverage and limits applicable to a given loss or available to the named insured shall be available and applicable to the additional insured. The insurance obligations under this agreement are independent of and in addition to the defense and indemnity obligations contained elsewhere in this agreement and shall not in any way act to limit or restrict the defense or Indemnity or additional insured obligations of the Contractor or the Contractor's insurance carrier, and shall be for (1) the full extent of the Insurance or self-insurance coverages and limits carried by or available to the Contractor, or (2) the minimum Insurance coverage and amounts shown in this agreement; whichever is greater. District reserves the right to add such other parties as may be required in the future to the indemnity and additional insured requirements of this agreement.

Contractor shall not accept direction or orders from any person other than the General Manager or the person(s) whose name(s) is (are) inserted on Page 1 as "other authorized representatives."

Payment, unless otherwise specified on Page 1, is to be 30 days after acceptance by the District.

Sub-Contractors - In the event that the Contractor employs other Contractors (sub-Contractors) as part of the work covered by this agreement, it shall be the Contractor's responsibility to require and confirm that each sub-Contractor meets the minimum insurance requirements specified above.

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MISSION HILLS COMMUNITY SERVICES DISTRICT

WELL #8 INSTALLATION

February 4, 2025

TECHNICAL PROVISIONS AND DRILLING SPECIFICATIONS

GENERAL

- It is the intent of these Contract Documents to provide specifications for drilling and completing one municipal production well located in Mission Hills, Santa Barbara County, California, for the Mission Hills Community Services District (Owner). For bidding purposes, a pilot hole will be drilled to a projected depth of 640 feet below ground surface (bgs), with an anticipated final completion depth of 620 feet bgs.

- For a bid to be deemed qualified, the bidder must hold a valid Class C-57 California Contractor's License.

- The project is located in the census-designated place (CDP) of Mission Hills in Santa Barbara County (County), California, approximately 2 miles north of the City of Lompoc, California (Figure 1). The well site is located on the Owner's property near the intersection of Burton Mesa Boulevard and Via Lato. The site address is 1550 E. Burton Mesa Boulevard, Lompoc, California. The site will be staked before drilling for Contractor inspection.

- It will be the responsibility of the Contractor to have inspected the drilling site and to make provisions for physically moving onto and off the site with personnel, equipment, and supplies. The Contractor shall attend the mandatory pre-bid site meeting before submitting a bid. The Contractor may conduct additional visits to the site with an appointment at their own convenience.

- A minimum of 7 days advance notice is required before project mobilization.

- The Contractor shall provide as continuous an operation as is feasible from the time pilot hole drilling commences to well completion. When work resumes following pilot hole drilling, drilling and well completion operations shall be conducted on a continuous daily basis until well development is complete. To the extent feasible, construction activities shall be limited to 12-hour shifts between 7:00 a.m. and 7:00 p.m. 24-hour continuous operations will be allowed only during the drilling, construction, filter packing, and sealing of the production well when operating under a

County of Santa Barbara Nighttime Noise Restriction variance, as procured by the Contractor.

- The Contractor shall have a health and safety plan for this project and maintain safe work conditions at all times.
- The Contractor shall produce daily reports and have daily communications with the project Geologist.

PROJECT SUMMARY

- The work includes furnishing all materials, labor, equipment, fuel, tools, transportation, and services for drilling, construction, development, testing, and completion of one municipal production well as described in these specifications.
- The general work required to complete the project includes:

    a) The Contractor shall work with the Geologist to obtain the necessary well construction permits from Santa Barbara County Division of Environmental Health.

    b) Mobilize and demobilize equipment on (and off) the site.

    c) Drill a pilot borehole to an estimated depth of 640 feet bgs, collect drill cuttings, and maintain a detailed drilling time log, drilling fluid log, and drill cuttings log. The Contractor shall collect and package samples at 10-foot intervals for logging and sieve analysis purposes. Results will be used to select the appropriate screen-opening size.

    d) Provide for and assist with conducting geophysical surveys using spontaneous potential (SP), resistivity (16-inch and 64-inch), and gamma ray in the pilot borehole, and caliper survey of the final reamed borehole. A calculated water quality analysis shall be provided based on specific potential and resistivity.

    e) Upon satisfactory analysis of the drill cuttings and electric log, and following the Geologist's approval to complete the well, the borehole shall be reamed to a final diameter of 22 inches, as shown in Figure 2. The Geologist will confirm

the final well design to the Contractor within 4 hours following reciept of the geophysical results.

f) The well design consists of a 12-inch inside diameter with 1/4-inch wall thickness of American Society of Testing Materials (ASTM) 778 Type 304L stainless steel blank casing with ASTM 778 Type 304L stainless steel wire-wrapped screen. Wire-wrapped screen shall consist of 0.165-inch wire and 0.217-inch rod thickness or of equivalent strength and have a slot opening of 0.040". The gravel fill pipe will be constructed with 3-inch Schedule 40 stainless steel. The preliminary well design is shown in Figure 2.

g) The annulus within the screened interval shall be filled with P.W. Gillibrand RFS 3 (12/20) gravel pack material.

h) Install a sand-cement sanitary seal in the uppermost 50 feet of the annulus, surrounding the Conductor Casing, according to state and local standards. Arrange for inspection of the seal by the County.

i) Conduct initial well development with swabbing and airlifting techniques.

j) Install test pump for final development and well performance aquifer testing, conduct development and testing procedures, and remove test pump upon completion of development and testing procedures.

k) Conduct a post-construction video survey of the completed well.

l) Perform final well disinfection.

m) Secure the well casing and gravel fill pipe with locking covers.

n) Clean up the site, and demobilize.

- A copy of these specifications shall be kept on site at all times.
- This is a prevailing wage job. The Contractor shall comply with the prevailing wage provisions of the Labor Code and provide necessary documentation to the Owner.

- As used herein, "Geologist" means a staff member of GSI Water Solutions, Inc. Questions can be directed to Trent Sherman at tsherman@gsiws.com; (661) 345-1988.

PROJECT SCHEDULE

The Contractor shall adhere to the following project schedule:

- February 19 – Attend on-site mandatory pre-bid meeting and site walk.
- February 26 – All questions due by close of business.
- March 7 – Bids due to Owner by close of business.
- March 20 – Notice of award.
- March 27 – Notice to proceed. The Contractor shall begin work no later than April 7.
- June 27 – The Contractor shall complete all work by 5pm June 27. Failure to complete work by this date will result in liquidated damages of $1,500 per day beginning June 28. The Contractor shall submit a written request for rain delays or schedule changes that may be considered beyond their control. The Owner has the final discretion as to the number of days that will be credited to the Contractor (if any).

SUBMITTALS

The Contractor shall submit the following documentation:

- Well Construction Permit(s)
- Project Schedule
- Material Safety Data Sheets
- Welder Certifications
- Sanitary Sand-Cement Seal Mix Design
- Conductor Casing Mill Certificate

- Drilling Fluids Control Program
- Well Casing and Screen Mill Certificates
- Gravel Fill Tubing Mill Certificate
- Gravel Pack Manufacturer Sieve Results
- Well Disinfection Materials and Procedure

TECHNICAL PROVISIONS

Mobilization and Demobilization

The mobilization and demobilization shall be included in the overall costing and shall include the transportation of personnel, equipment, and operating supplies to and from the site, site preparation, provision for the installation and removal of pumping equipment and discharge lines, and other preparatory work at the site for work required by the Contractor.

Before any construction, the Contractor shall notify the Underground Service Alert agency and the authorized representatives of such utility owners or agencies not less than 3 days or more than 7 days before construction. The Contractor shall verify the location, depth, alignment, and grade of all utilities shown and the Contractor shall make exploratory excavations of all utilities that may interfere with the work.

The Contractor shall be responsible for ensuring that drilling fluids, production and discharge water, and other effluent are disposed of at a location and in a manner approved by the Owner. Drilling fluids shall be contained onsite in tanks. The Contractor shall be responsible for final disposal of the drill cuttings and fluids. Drill cuttings and fluids shall not be spread within the fields or on the roads adjacent to the well site (Figure 1). Drilling fluids and cuttings shall be contained within tanks onsite within the work area (Figure 1) to dry before disposal. The Contractor shall spread dry cuttings and mud as directed by the Owner. Well development fluids that are devoid of mud will be discharged into the onsite County retention basin, as shown in the Site Map (Figure 1). The Contractor shall provide temporary settling tank(s) and supporting appurtenances before discharging into the County retention

basin if the Owner determines that water quality is too turbid. The discharge lines from the well to the County retention basin shall maintain access along the existing driveway. The Contractor shall provide traffic rated Rain For Rent or equivalent roadway crossing pipelines to maintain access.

The Owner will provide the required drilling water to the drill site at no charge to the Contractor. The Contractor is responsible for providing necessary conveyance, fittings, hoses, meter, and valves from the Owner's water supply source. The Contractor is responsible for providing and using a calibrated water meter to ensure accurate measurement during drilling operations. Calibration of the meter must have occurred within the last 6 months before drilling begins. Failure to provide a calibrated meter may result in a delay of drilling activities (at no cost to Owner) until an acceptable meter is provided. The construction water supply source will be an adjacent fire hydrant on Burton Mesa Boulevard (Figure 1). Only potable water from the designated water supply shall be used for drilling purposes.

A locking cap shall be placed over the exposed casing and gravel fill pipe to protect the well and aquifer against entry of foreign material. The well shall be covered during temporary cessation of drilling operations, after drilling, and before test pumping, so that the well is protected against vandalism. Site security shall be the Contractor's responsibility.

The drill site shall be left neat, clean, and sanitary before final demobilization.

Sound Attenuation Measures

To minimize noise impact to surrounding residential areas, the Contractor shall be responsible for providing, installing, maintaining, and removing temporary sound attenuation measures. The sound attenuation measures (i.e., sound walls) shall be implemented prior to the commencement of any drilling activities and maintained throughout the entire drilling and well construction process. It is anticipated that sound walls will be necessary to meet local noise ordinances. Sound walls shall be constructed using secure footings and approved by the Geologist and Owner. The Contractor shall be responsible for complying with the County of Santa Barbara Code of Ordinances. To the extent feasible, construction activities shall be limited to 12-hour shifts between 7:00 a.m. and 7:00 p.m. 24-hour continuous operations will be allowed only during the drilling, construction, filter packing, and sealing of the production well when operating under a County of Santa Barbara Nighttime Noise

Restriction variance, as procured by the Contractor. The Contractor shall arrange with the Owner and Geologist one week in advance for any 24-hour operations intended and/or required for the completion of the project in accordance with these technical specifications. The Contractor shall practice good neighborhood relations at all times.

Standby Time and Authorized Hourly Work

Time lost to the project schedule can be expected during project execution due to unavoidable and unforeseen events. Time lost from stoppage of work at the request of the Owner shall be defined as "standby time." Standby time is defined as the duration of idle time greater than four (4) hour accrued at the written request of Owner or the Geologist. The Contractor's workers and equipment shall remain onsite while standby time is in effect. In the event of standby time, the Owner shall pay the Contractor for equipment and crew per hour, not to exceed eight (8) hours per working day, and only hours between 7:00 AM and 7:00 PM. No standby time will be paid while the Owner's Representative analyzes cuttings samples or for the recovery period following the step-rate or constant-rate aquifer tests.

Authorized Hourly Work: authorized hourly work shall include furnishing all equipment, labor, tools, and miscellaneous materials necessary to conduct activities not covered under other bid items, as approved by the Owner in writing. The Owner's Representative and the Contractor will maintain records for this work. The Owner's Representative record will be binding. No hourly payment will be made to the Contractor for work being performed to condition or ream the borehole, or to repair, clean, or replace equipment that is not in working condition.

Pilot Hole Drilling

Pilot hole drilling includes the drilling of a 16 inch diameter pilot bore hole at the site to a depth of approximately 640 feet bgs.

Only fresh water shall be used in the drilling fluid, whether employed alone or in combination with drilling additives. The drilling fluid shall possess such characteristics as are required to adequately maintain the walls of the hole to prevent caving of the wall as drilling progresses and to permit recovery of representative samples of cuttings. The drilling fluid shall possess such characteristics that it can

be readily removed from the hole during the placement of the filter pack and during development of the well.

The drilling mud used during drilling shall have the following properties in accordance with API Code RP "Recommended Standard Field Procedure for Testing Drilling Fluid." Water and QuikGel or Supergel bentonite drilling mud shall be employed as drilling fluid. Cement and lime are prohibited as additives. Biodegradable, polymer systems such as Drispac Super-Lo (or equivalent) may be used as an additive. Any additional mud additives shall be pre-approved by the Geologist before use by the Contractor.

The drill rig must be provided at all times with the following Standard API drilling fluid devices to measure the following properties: drilling fluid weight, drilling fluid viscosity, and drilling fluid sand content.

The Contractor must have equipment onsite and be able to demonstrate that the drilling fluids have a viscosity in the range of 36 to 42 seconds through a Marsh funnel. Mud density should be maintained at approximately 68 to 72 pounds per cubic foot (9 to 9.6 pounds per gallon). The sand content of the downhole mud shall be less than 2 percent at all times during drilling.

During the pilot hole drilling, the Contractor must keep the following records and be able to provide copies to the Owner and Geologist upon completion of the project:

a) A log of drilling bit types and depths at which drill bit changes are made.

b) A log of the drilling mud properties measured at no less frequent than 2-hour or 50-foot intervals during the course of the drilling. The record shall show mud weights, Marsh funnel viscosity, sand content, and any mud additives used.

c) A log recording penetration rates for each joint of drill rod.

d) A log of the cuttings, providing the depths and descriptions of the earth materials, encountered during the drilling of pilot hole. The Contractor shall collect cutting samples at 10-foot intervals during the drilling of the pilot boring. Samples shall be placed in zipper storage bags or containers suitable for long-term storage, provided by the Contractor, with the depth of the sample clearly

marked. The Contractor shall collect samples for sieve analysis at depths selected by the Geologist and provide results to the Owner and Geologist.

e) Records shall be maintained no less frequently that every two (2) hours, available for the Geologists review at any time, and a complete record provided to the Geologist daily.

Geophysical Logging and Caliper Survey

At the completion of the pilot hole, an electric geophysical log shall be run at the discretion of the Geologist, consisting of an SP, 16-inch and 64-inch normal logs, 6-foot lateral log, and gamma logs. A calculated water quality analysis shall be conducted based on specific potential and resistivity. The Contractor shall be responsible for contracting and scheduling the electric geophysical log contractor. The geophysical log contractor shall be Pacific Surveys or equivalent. The Contractor shall furnish and provide assistance for geophysical logging of each pilot hole. If the logging probe fails to descend to the desired depth, the Contractor, at thier own expense, shall condition the hole to permit the logging probe to descend to the bottom of the hole. Standby time will not be paid for additional cleaning and conditioning of the hole to enable logging operations to proceed.

Upon completion of logging, a digital copy of the geophysical log (complete video and summary portable delivery format [pdf]) shall be delivered to the Geologist or their representative.

At completion of the final reamed borehole a caliper log shall be run. The Contractor shall be responsible for contracting and scheduling the survey contractor. The survey contractor shall be Pacific Surveys, Boredata, or equivalent. The Contractor shall furnish and provide assistance for caliper logging of the reamed borehole. The borehole diameter as measured by the caliper survey shall not exceed 25 percent of the specified borehole diameter within the screen zones of the well. The borehole diameter exceedance must be isolated to discrete intervals (washouts no greater than 2 feet). The Geologist reserves the right to reject the borehole at the Contractors' expense if the reamed borehole diameter exceeds this specification.

If the logging tool fails to descend to the desired depth, the Contractor, at their own expense, shall condition the hole to permit the logging to descend to the bottom of

the hole. Standby time will not be paid for additional cleaning and conditioning of the hole to enable logging operations to proceed.

Final Well Bore Drilling

The final borehole diameter, before setting casing, shall be 22 inches (nominal) from 50 feet to 640 feet bgs, which includes a 20-foot "rat hole" to allow space for sluffing material during well installation. The Contractor is reminded that drilling fluid properties during drilling of the final reamed hole ream must conform to those specified in the section on pilot hole drilling, above. Upon preparation for well construction, the Contractor shall conduct final conditioning of the drilling fluids until mud weight is 9.0 ppg or less and viscosity is 30 sec/qt or less, and until borehole fluids are stabilized. Sand content shall be reduced to no more than one-half percent prior to setting of the casing string.

During the reaming, the Contractor must keep the following records and be able to provide copies to the Owner and Geologist upon completion of the project:

a) A log of drilling bit types and depths at which drill bit changes are made.

b) A log of the drilling mud properties and penetration rates measured at regular intervals (no less frequent than 2-hour or 50-foot intervals) during the course of the drilling.

c) A log of the types and amounts of mud and additives added to the borehole during drilling.

d) A caliper log of the reamed borehole. Borehole diameter as measured by the caliper survey shall not exceed 25 percent of the specified bore hole diameter within the screen zones of the well. If the results of the caliper log are outside of the specifciations, the Contractor shall abandon the borehole and re-drill a new pilot and reamed borehole at their own expense.

Well Casing, Wire-Wrapped Screen, and Well Construction

This item consists of providing and installing casing, well screen, and cap as specified. All casing materials shall be new and purchased from Roscoe Moss Company. The design consists of a 12-inch-diameter ¼ -inch-wall-thickness ASTM 778 Type 304L stainless steel blank casing, and ASTM 778 wire-wrapped Type 304L stainless steel screen. Wire-wrapped screen shall consist of 0.165-inch wire and 0.217-inch rod thickness or of equivalent strength. Well screens shall be 0.040" slot. The well design is shown in Figure 2.

All casing, screens, and fittings shall be new and shall be approved in advance by the Geologist. The casing and screen shall be furnished with welding collars, alignment holes, and sufficient area at each joint to fit centralizers. Casing centralizers shall be fabricated of the same steel material as the well casing to which it is being welded, shall be placed at the top and bottom of each screen interval and every 60 feet above the uppermost screen, and shall be placed in a consistent vertical alignment. All joints shall be properly wrap-welded with a minimum of two passes and the alignment holes shall be fully welded closed to be watertight by a certified welder.

The casing shall be hung plumb and true such that a plumbness and alignment testing can be performed with a 20-foot-long dummy pipe and may be freely lowered and raised within the casing and screen interval. The outside diameter of the dummy pipe shall be no smaller than 1/2-inch less than the inside diameter of the casing or borehole being tested.The well casing shall be suspended from the surface, and shall not be set on the bottom of the borehole. If there is not adequate space to freely hang the casing during installation, the contractor shall remove the casing and condition the borehole at their own expense.

Gravel Fill Pipe

A permanent gravel fill pipe shall be installed as shown in Figure 2. The gravel fill pipe shall be 3-inch diameter steel pipe and shall be standard weight (Schedule 40) per ANSI B36.10 and must be NSF certified. For field assembly by welding, section ends shall be beveled for butt welding. All joint welds shall be free of burrs inside and out and shall be watertight. The Contractor shall demonstrate that the gravel fill

pipe is unobstructed and free of any blockages, such as by readily accepting and draining water.

Gravel Pack

The annular space within the screened interval shall be filled with a silica gravel filter pack consiting of P.W. Gillibrand RFS 3 (12/20). Filter pack materials shall meet AWWA-B100-89 standards. The filter pack shall be subject to the approval of the Geologist before delivery onsite. All material used for the filter pack shall be high silica content, well-rounded, hard, and washed clean of silt, fine sand, dirt, and foreign matter.

Before placement of the filter pack in the well, the drilling fluid shall be thinned with clean water. The drilling fluid viscosity must be below 30 sec/qt before gravel packing commences. Care must be exercised by the Contractor to avoid unbalancing the mud system. The filter pack installation shall be done slowly and continuously by pumping filter pack material through a tremie pipe with clean water so that segregation will not occur. The filter pack material shall be sterilized by continuously mixing at least 1/2-gallon of liquid sodium hypochlorite (12.5 percent) per super sack of filter pack as it is placed in the well.

After the filter pack envelope has been placed to the design depth specified (Figure 2), a swab shall be carefully worked opposite the screened section. As the filter pack settles, more shall be added to bring the top of the filter pack to the specified elevation. This operation shall continue until there is no further measurable settlement of the filter pack envelope.

After the Geologist has approved the installation of the filter pack, the Contractor shall place a transition sand and intermediate bentionite chip seal in accordance with the selected well design (Figure 2).

Annular Sanitary Seal

Following casing installation, a sand cement seal shall be pumped via tremie pipe into the annular space of the upper portion of the well. The tremie pipe shall be placed within 5 feet of the bottom of the hole before sealing material is introduced to the hole, and raised slowly as the material is placed. The sealing material shall be

installed via tremie pipe and pumped into place (and shall not be installed by freefall). The sealing material shall be a 10.3 sack mix sand-cement and meet the requirements as described by the California Well Standards (DWR Bulletins 74-81 and 74-90).

The sealing material shall set for 24 hours before developement, as directed by DWR Bulletin 74-90. A 3 x 3 foot concrete pad extending 1 foot up from the ground surface should be poured at the time of the sanitary seal. A steel sleeve with a steel locking cap will be required as part of this project.

Initial Well Development

Following well completion, initial well development shall consist of open-ended airlifting to remove heavy drilling fluids from the well casing for a minimum of 4 hours or is to an acceptable level as determined by the Geologist. After open-ended airlifting, the Contractor shall tag and record the depth of the gravel envelope and then implement dual swabbing and airlifting techniques to remove residual drilling fluids, wall cake, and fine formation sand. Swab airlift development shall begin with the swab tool placed at the bottom of the lowermost screened interval and proceeding incrementally (10 to 20 foot intervals) upward to the top of the uppermost screen.

After reaching the top of the uppermost screen with the swab tool, the development tools shall be used to dry swab into the well a surfactant solution of AquaClear PFD, or NuWell-220, or equivalent as pre-approved by the Geologist. The surfactant solution must be completely mixed at ground surface (within the mud tank) before introduction to the casing and bore, and must be pumped into the screened interval via tremie or by use of the drill string, starting from the uppermost screen interval and working the swab tool downward to the bottom of the lowermost screen.

After an idle period of 12 to 16 hours, the surfactant solution shall be removed from the well with dual-swab airlifting techniques, slowly working the swab tool incrementally (10 to 20 foot intervals) upward to the top of the uppermost screen. Each section of screen shall be adequately developed until the produced water is clear and free of formation sand, drilling mud, and other material. Development work shall be continued until there is no appreciable settlement of the filter pack envelope and turbidity is less than 50 NTU or is to an acceptable level as determined by the

Geologist. Initial well development water shall be discharged into a tank provided by the Contractor. At the conclusion of swab airlift development, the Contractor shall install open-ended pipe to the bottom of the well and perform open-ended airlifting to clean sediment from the well sump. The Contractor shall tag and record the depth to the gravel envelope at the conclusion of initial well development.

Final Well Development

Following initial well development, the Contractor shall install a test pump for purposes of additional well development and for production testing. For bidding purposes, the size of the pump is estimated as one capable of discharging up to 1,000 gallons per minute (gpm) with a pump setting of 460 feet bgs. These pump settings and specifications are estimates only. A small diameter PVC sounding tube shall also be installed in the well to a depth immediately above the pump to allow for measurement of the water levels by an electric wireline.

The discharge line shall be equipped with a gate valve, flow meter, sample port, and a Rossum Centrifugal Sand Sampler (refer to Journal of the American Water Works Association, Vol. 46, No. 2, February 1954). During development and testing, the Contractor shall record the sand content, flow rate in gallons per minute, static and pumping water levels, specific capacity (computed), and electrical conductivity.

The final well development work conducted with the pump shall consist of initial, intermittent pumping, starting at relatively low discharge rates, with gradually increasing discharge. Development pumping shall be continued until the specific capacity has been maximized, there is no appreciable settlement of the filter pack envelope, and turbidity is less than 10 NTU. The final well development procedures shall be discussed and confirmed with the Geologist before the work begins.

Aquifer Testing

Test pumping is to begin within 5 days of initial development completion. If a subcontractor is used for test pumping, the Contractor is responsible for assuring the promptness of the test pumping contractor, as well as license and insurance, and the integrity of the well.

Test pumping procedures, flow measurement methods, and water level measurement time intervals are to be approved by the Geologist before the start of any test. The Contractor shall operate the test pump and perform data collection during the entire duration of the testing. Water from well development and aquifer testing shall be discharged to the on-site settling pond if the Owner determines water quality to be sufficiently low in suspended solids. Testing procedures shall not be altered without approval of the Geologist. Water level readings shall be obtained using an electric sounder.

The Contractor shall tag and record the depth to the gravel envelope at the conclusion of final development. Following well development, the pumping tests shall consist of an 8-hour step-drawdown test, a 24-hour constant discharge test, and a 4-hour recovery test. If any data from these tests are lost, then the test shall be repeated at the Contractor's expense.

Full recovery of the water level in the well must be attained before the start of the step-drawdown test. The step-drawdown test shall consist of a sequence four, two-hour-long pumping intervals at four separate pumping rates, beginning with the lowest rate. Each step pumping rate shall be held as nearly constant as possible during the step, and pumping of each step shall be at a progressively higher rate. Data recording intervals during each of the steps shall be no more than 5 minutes.

After the well has fully recovered from the step-drawdown test, the Contractor shall conduct a constant discharge test at a continuous flow rate as specified by the Geologist for a period of 24 hours. During the constant discharge test, measurements of the flow rate and corresponding water level shall be made at the following elapsed times after the start of the test: 1, 2, 3, 4, 5, 7, 10, 15, 20, 25, 30, 40, 50, 60, 80, 100, and 120 minutes, and every hour thereafter for the remainder of the test. The flow rate shall be kept constant and within 5 percent of the specified pumping rates. If the water level monitoring equipment or pump fail to operate continuously during this test, or if data are lost, the Geologist may request the Contractor to start the test over after the well has recovered at the Contractor's expense.

Average sand content shall not exceed 5 parts per million (ppm) during any 5-minute interval for the duration of constant rate test.

Turbidity requirement should not be applicable during the first 15 minutes of pumping and thereafter, turbidity should not exceed 5 nephelometric turbidity units (NTUs) for the remaining duration of the constant rate test.

Before termination of the pumping test, the Geologist will obtain a water sample for water quality analyses. The pumping test shall not be terminated before the Geologist collects the water sample.

Immediately after termination of the constant discharge test, the rate of recovery of the water level shall be monitored for a period of 4 hours. The water shall be recorded at the same time intervals as the constant discharge test monitoring intervals.

Upon pump removal, the contractor shall tag the bottom of the well sump. If sediment is present, the contractor shall remove the sediment from the sump. The contractor shall tag and record the depth of the gravel envelope.

Video Survey

After test pump removal and before performing final disinfection of the well, the Contractor shall conduct a color video survey of the entire casing and screen assembly. The video survey shall be conducted with a downhole camera assembly with both downhole view and side scan capabilities. The side scan camera must be housed in a rotating housing assembly to avoid the fish eye effect of an internal rotating camera.

The digital record (complete video and PDF summary) of the survey shall be provided to the Geologist for review. Upon review of the video, if the Geologist determines that any portion of the video record is incomplete or of inadequate quality (i.e., clarity, to allow visual inspection of the inside of the well), the Contractor shall rerun the survey at their expense. The video should be of sufficient quality to evaluate the integrity of all joints, screen openings, and the entire inside surface of the casing assembly. For this reason, the Contractor may choose to run potable water into the well before conducting the video survey.

Final Well Disinfection and Wellhead Completion

At the conclusion of all work to be conducted in the well structure, the Contractor shall perform a final disinfection. The disinfecting agent shall be 12.5 percent sodium hypochlorite, furnished or prepared in liquid form and placed in the well through a hose or tremie of sufficient length to extend to the bottom of the well. The disinfecting agent shall be applied through the hose, which is to be raised and lowered to achieve uniform distribution of the solution throughout the well. A residual chlorine level of not less than 2 ppm shall remain in the well and shall be verified by the Contractor to the satisfaction of the Geologist.

Wellhead completion will consist of a 3 x 3 foot concrete pad extending one foot above ground surface, including a capped steel sleeve with a locking mechanism to cover the well casing.

Figures

FIGURE 1

Site Map

Well #8 Installation
Technical Specifications
Mission Hills Community
Services District
Santa Barbara County, California

LEGEND

- Proposed Well #8
- Source Water (Fire Hydrant)
- Site Access
- Sound Wall Barrier
- Pipe Laydown Area
- County Retention Basin (approx. dimensions)
- Approximate Work Area

Approximate Utility Alignment

- Gas
- Sewer
- Water

NOTE

Utility alignments depicted in this figure are approximate and not to be used for design or construction. Other utilities may be present. It is the Contractor's responsibility to verify all utility locations through services such as Dig Alert or equivalent.

N

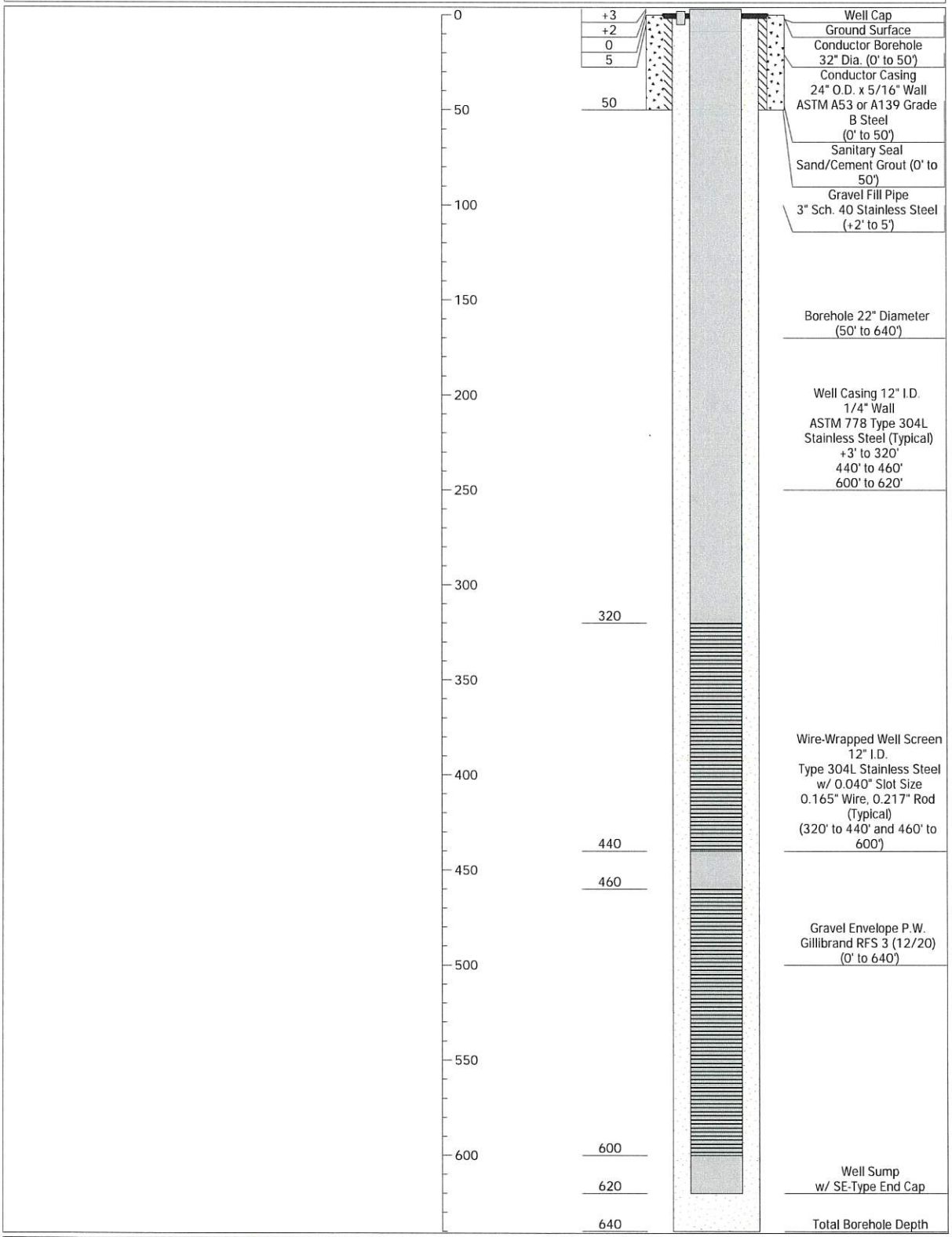
0 40 80 120
FEET

Date: January 30, 2025
Data Sources: BLM, ESRI, USGS, Imagery (2022)

GSI Water Solutions, Inc.

Document Path: Y:\2249_Mission_Hills_CSD\Source_Figures\001_Well#8\001_Well_Design\Figure1_Site_Map.aprx, Figure1_Site_Map, bramos

WELL #8
PRELIMINARY WELL DESIGN



Construction Date:	PENDING
CA DWR Well Record:	PENDING
Drilling Contractor:	PENDING
Drilling Method:	PENDING
Capacity:	X gpm
Drawdown:	X ft (12-hours)
Specific Capacity:	X gpm/ft of drawdown

Scale: 1 inch = 50 feet

Ver.	Schematic Type	Drawn By	Date
1	Preliminary Design	A. Webb	12/13/2024
2	Preliminary Design	T. Sherman	02/04/2025	

Designed by: T. Sherman
Checked by: B. Franz and R. Hoffman

GSI Water Solutions, Inc.

FIGURE 2
Well #8 Preliminary Design
Well #8 Installation Technical Specifications
Mission Hills Community Services District

P:\2249 - Mission Hills CSD\01 - Mission Hills CSD - Well 8\Task 1 - Well Design, Tech Specs, Bid Support\Well Design\Prelim