

PLANS AND SPECIFICATIONS
FOR

WELL NO. 97 REPLACEMENT

SPECIFICATION NO. WW22-01

PROJECT NO. 31806



county of ventura
WATERWORKS DISTRICT NO. 1

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COUNTY OF VENTURA PUBLIC WORKS AGENCY

NOTICE INVITING BIDS, PROJECT INFORMATION FORM, & SPECIFICATIONS

FOR

PROJECT NAME: WELL NO. 97 REPLACEMENT

LOCATION: 9210 STOCKTON RD, MOORPARK, CA 93020

SPEC. NO.: WW22-01

COST ACCOUNTING PROJECT NO. 31806

DESIGNED BY: HOPKINS
GROUNDWATER
CONSULTANTS, INC.

CHECKED BY: HOMER ARREDONDO

REVIEWED BY: GABRIELA ARAUJO

PROJECT MANAGER: HOMER ARREDONDO



RECOMMENDED BY:

Project Manager

APPROVED BY:

Deputy Director of Public Works Agency

APPROVED BY:

Director of Public Works Agency

Construction bidding documents, including plans, specifications, addenda and any supplementary documents are only available on the Ventura County Public Works Agency Web Site.

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NOTICE TO BIDDERS, SUBCONTRACTORS AND SUPPLIERS **SOURCES OF INFORMATION**

DURING BIDDING PERIOD

PROJECT DOCUMENTS, PLAN HOLDERS LIST, & OTHER INFORMATION IS AVAILABLE
ON THE INTERNET AT THE BONFIRE WEBSITE AT:

<https://ventura.bonfirehub.com/portal/?tab=openOpportunities#department=Public%20Works%20Agency>

All questions concerning the plans, specifications, requirements, terms, schedule, addenda, and any other matters related to the solicitations shall be submitted using the Bonfire web site using the "Opportunity Q&A" tab.

Submit any questions early in the bidding period as an addendum may be required.

All addenda will be issued using the Bonfire web site.

Please do not call other staff members or consultant.

Note that our consultants are directed to refer all calls to the Project Managers.

AFTER BID OPENING

BID RESULTS are available on <https://www.vcpbublicworks.org/es/bidsandsubs/>,

AFTER AWARD OF CONTRACT

ALL QUESTIONS concerning project AFTER AWARD should be directed to the
Project Manager named in the Notice of Award

Any other information can be requested at (805) 654-2039

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COUNTY OF VENTURA

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PUBLIC WORKS AGENCY

NOTICE INVITING FORMAL BIDS

Bids will be received, electronically, until **2:00 p.m. on January 12, 2023**, for **Well No. 97 Replacement**, Specification No. WW22-01, which consists of **construction of the drilling of a replacement well for Well No. 97 and the destruction of the original well.**

Bids must be submitted on-line through Bonfire at:

<https://ventura.bonfirehub.com/portal/?tab=openOpportunities#department=Public%20Works%20Agency>

After the deadline for receiving bids, the bids will be opened, and the results made public.

The estimated cost of construction is \$ **2,191,661**.

All bidding documents, including plans, specifications, addenda, and any supplementary documents are available on the Bonfire website shown above.

A list of Plan Holders is available on the Bonfire website shown above.

An abstract of bids received will be available at <https://www.vcpublishworks.org/es/bidsandsubs/>

When projects are awarded, the award notification to the State will be posted at <https://www.vcpublishworks.org/es/awardedcontracts/>

Bids must be submitted electronically, using the forms provided, on the Bonfire Website.

Subcontractor list must include a valid Contractor's License Number. Contractor and any subcontractors must be registered with the Department of Industrial Relations prior to bid time.

Each bid must be accompanied by a bid guarantee in the amount of not less than 10% of the amount bid, **PAYABLE TO THE PUBLIC WORKS AGENCY** and guaranteeing that the bidder will enter into a contract in accordance with the terms of the bidding documents if award is made. The bid guarantee shall be in one of the following forms: a bid bond written by an admitted surety insurer on the form included with the Proposal form, a cashier's check drawn by a national bank, a check certified by a national bank or cash. Bid bonds must be submitted in hard copy with the original signatures of the principal and surety. Copies of the completed bond will not be accepted.

Bidders must have a Class **C-57** California Contractors license. Upon award, the Contractor will be required to furnish a Performance Bond and a Payment Bond, each in the amount of 100% of the contract price.

In accordance with Section 22300 of the Public Contract Code, securities may be substituted for funds withheld.

Bidders, contractors, and other interested parties can obtain wage rates pertaining to Ventura County projects at the link provided below.

California general prevailing wage rates for construction can be obtained from the following Web site: <http://www.dir.ca.gov/OPRL/DPreWageDetermination.htm>.

The awarded contractor must post copies of the prevailing wage determinations at each job site.

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PROJECT INFORMATION

FOR

WELL NO. 97 REPLACEMENT

**LOCATED IN
VENTURA COUNTY, CALIFORNIA**

**MAKE BID GUARANTEE TO PUBLIC WORKS AGENCY
USE FORM PROVIDED (SEE PARAGRAPH 9, INSTRUCTION TO BIDDERS).**

SPECIFICATION NO. WW22-01 INCLUDING 0 SHEETS OF PLANS

BIDS WILL BE RECEIVED ELECTRONICALLY UNTIL JANUARY 12, 2023 AT 2:00 P.M.

AGENCY IS ALLOWED 60 DAYS TO AWARD A CONTRACT (SEE SECTION 2-1.1).

THE STARTING DATE OF CONTRACT WILL BE 28 CALENDAR DAYS AFTER AWARD OF CONTRACT (SEE SECTION 6-7.4).

COMPLETION TIME IS 95 WORKING DAYS (SEE SECTION 6-7).

LIQUIDATED DAMAGES ARE \$1,144 PER CALENDAR DAY (SEE SECTION 6-9).

CONTRACTOR'S LICENSE CLASSIFICATION REQUIRED IS CLASS C-57.

LIABILITY INSURANCE CLASS REQUIRED PER SECTION 7-4 IS L-B.

FEDERAL-AID CONTRACT PROVISIONS ARE NOT INCLUDED IN THESE SPECIFICATIONS.

MANDATORY PREBID MEETING: 10:00 A.M. ON DECEMBER 15, 2022 AT THE WELL NO. 97 STATION, LOCATED AT 9210 STOCKTON RD, MOORPARK, CA 93020. (PER SECTION 01000-6)

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INSTRUCTION TO BIDDERS

1. LICENSING OF BIDDER. Before submitting bids, bidders shall be licensed in accordance with the provisions of Sections 7000 through 7145 of the Business and Professions Code of the State of California in the classification required for the work bid on. The bidder's license number, classification, and expiration date shall be inserted on Signature Sheet. The bidder's name shall correspond in all respects with the name shown on the license. License numbers and names are checked with the State.

2. SITE INSPECTION. Personally visit the worksite before submitting your bid to ascertain the existence of any surface or subsurface conditions affecting the cost of the work.

3. INTERPRETATION AND QUESTIONS. Carefully review the plans and specifications for any errors, omissions, or ambiguities. If you discover any or have specific questions, notify the Agency far enough in advance of the bid opening to allow time for the issuance of appropriate written addenda, if necessary. All questions concerning the plans, specifications, requirements, terms, schedule, addenda, and any other matters related to the solicitation shall be submitted through the Bonfire website using the "Opportunity Q&A" tab.

Written addenda shall be the sole means for modifying the plans and/or specifications prior to the bid opening. The Agency shall not be bound by oral communications purportedly modifying or interpreting the plans and/or specifications regardless of when or by whom such oral communications are made and you should not rely upon such oral communications in preparing your bid. Addenda will be posted on the Bonfire web site.

4. BID ITEMS. State in figures the unit prices, lump sum prices and extensions as indicated which shall be the prices for which you propose to supply all materials and services and perform all work required by the plans and specifications. All items described are to be construed as complete and in place. Include in the bid amount for items listed in the Bid Table the cost of performing all work shown on the plans or required by the specifications for which a specific bid item is not provided. Bid on all items listed under Schedule of Work and Prices unless otherwise indicated in the Bid Table.

5. SIGNING OF BID. Fill in all indicated blanks on the various forms provided. Bids will only be accepted if submitted electronically using the Bonfire website. Bids signed by an agent other than an owner, partner or corporate officer shall be accompanied by a power-of-attorney.

6. NON-COLLUSION AFFIDAVIT. The non-collusion affidavit required by Public Contract Code 7106 is included as a required document on the Bonfire website.

7. BID FORM NOT TO BE ALTERED. Do not change the wording of the Bid documents. Any additions, deletions, conditions, limitations or provisions by the bidder will render the Bid irregular and may cause its rejection.

8. CORRECTING BID. Corrections or adjustments to bids must be done using the Bonfire website and must be completed prior to the Bid Closure date and time.

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9. **BID GUARANTEE.** A Bid Guarantee in the amount of not less than 10% of the amount bid and guaranteeing that the bidder will enter into a contract in accordance with the terms of the bidding documents if award is made to him must be submitted. The bid guarantee shall be in one of the following forms: A bid bond written by an admitted surety insurer on the form provided, a cashier's check drawn by a national bank, a check certified by a national bank or cash.

Original hard copies of the Bid Guarantee must be submitted and received by the County prior to the Time of Bid Closure. Bid Guarantee shall be mailed or delivered to:

Public Works Agency, County of Ventura
County Surveyor's Public Counter - 3rd Floor
Hall of Administration
800 South Victoria Ave.
Ventura, California 93009-1670.

For proper handling, mark the envelope as "BID GUARANTEE – SEALED BID" and show the specification number, project title, and the Bidder's name and address.

The bid bond must have the original wet signatures of the principal and surety.

Note: Performance and Payment Bonds are required from the bidder to whom a contract is awarded. See specifications Subsection 2-4 for contract bond requirements including limitations on the sureties that may issue the bonds.

10. **SUBMITTING BID.** Submit your bid using the Bonfire website at:

www.ventura.bonfirehub.com

Only bids submitted via the Bonfire website will be considered. All documentation listed as required on that website must be completed and submitted.

11. **TIME OF BID CLOSURE.** The time and date of the Bid closure is indicated on the Bonfire website solicitation as "Close Date". No bids will be accepted after that time.

12. **REVISION OR WITHDRAWAL OF BID.** Bids submitted using the Bonfire website can only be revised or withdrawn using the website. Once submitted, a bid that requires revisions or withdrawal must be accessed via the "Completed" tab under the "Your Submissions" section and action taken to revise or "unsubmit" (withdraw).

13. **ERRORS.** Bidder will not be released on account of errors. Bids submitted using the Bonfire website will be considered final. Bidders shall be careful to ensure all information that is submitted is complete and accurate.

14. **SUBCONTRACTOR LICENSE NUMBERS.** License numbers for subcontractors must be provided at the time the bid is received using the forms provided.

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15. **PUBLIC WORKS CONTRACTOR REGISTRATION PROGRAM.** No contractor or subcontractor may be listed on a bid for a public works project unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5 [with limited exceptions from this requirement for bid purposes only under Labor Code section 1771.1(a)]

No contractor or subcontractor may be awarded a contract for public work on a public works project unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5

16. **LABOR COMPLIANCE MONITORING.** This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

The Prime Contractor shall post job site notices prescribed by regulation.

(See Chapter 8, California Code Regulation section 16451(d) for notice that previously was required for projects monitored by the Compliance Monitoring Unit.)

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Printed Name of Officer:

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LIST OF SUBCONTRACTORS

CONTRACTOR NAME: _____

Listing shall comply with the provisions of California Public Contract Code, Section 4104.

Name of Subcontractor	Contractor's License Number	Contractor's DIR Registration Number	Business Address	Items of Work

If more space is needed, add additional pages.

Public Contract Code Section 4104 provides that bidders must list:

- (a)(1) The name, the location of the place of business, and the California contractor license number of each subcontractor who will perform work or labor or 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 1 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 1 percent of the prime contractor's total bid or ten thousand dollars (\$10,000), whichever is greater.
- (b) The portion of the work that will be done by each subcontractor under this act. The prime contractor shall list only one subcontractor for each portion as is defined by the prime contractor in his or her bid.

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BID TABLESchedule of work and prices for: **WELL NO. 97 REPLACEMENT**

Item No.	Units	Approx. Quantity	Item Description	Payment Reference	Unit-Prices (In Figures)	Item Total (In Figures)
1	LS	1	Mobilization/demobilization	01001		
2	LS	1	Conductor casing	01002		
3	LF	1,400	Pilot bore drilling	01003		
4	LS	1	Geophysical logging	01004		
5	LF	1,350	Reaming pilot bore	01005		
6	LS	1	Caliper log	01006		
7	LF	720	18-inch low carbon blank steel well casing (0.375-inch wall)	01007		
8	LS	1	18-to-16-inch low carbon steel casing reducer	01007		
9	LS	1	16-inch diameter dissimilar metal adaptor	01007		
10	LF	130	16-inch blank stainless steel casing (0.375-inch wall)	01007		
11	LF	460	16-inch stainless steel wire wrap screen (0.060-inch slot)	01007		
12	LS	1	4-inch by 6-foot stainless steel entrance chute	01007		
13	LF	753	4-inch-diameter stainless steel sounding tube	01007		
14	LF	802	3.5-inch-outside-diameter stainless steel gravel feed tube	01007		
15	EA	18 sets	Centralizers	01007		
16	LF	660	Gravel pack envelope	01008		
17	LF	740	Cement sanitary seal	01009		
18	LS	1	Well alignment	01010		
19	HR	23	Swab and bail development	01011		
20	HR	31	Swab and airlift development	01011		
21	LS	1	Test pump installation and removal	01012		
22	HR	32	Hydraulic well development	01013		
23	HR	32	Production testing of well	01014		
24	LS	1	Disinfection of well	01015		
25	LS	1	Video survey	01016		
26	LS	1	Surface casing/sounding tube modification	01017		
27	LS	1	Destroy existing Well No. 97	01018		

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28	LS	1	Mud and cuttings disposal and site clean-up	01019		
29	LS	1	Fencing	01020		
30	LF	90	16-inch blank stainless steel casing (0.25-inch wall)	01007		
			Total Amount Bid			

Bid Table is shown here for informational purposes.

Bid Table shall be filled out by Bidders using the Bonfire website. Bidders will access the Schedule of Work and Prices on the Bonfire website and input their Unit Prices.

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SIGNATURE SHEET

Name: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Telephone Number: (_____)_____-_____

Email Address: _____

I make this proposal and certify or declare under penalty of perjury under the laws of the State of California that:

- The statements and attestations made and associated with this Proposal, and below my signature, are true and correct.
- The bidder has read the Bid documents and has abided by and agrees to the conditions herein and has carefully examined the project plans and read the specifications and does hereby propose to furnish all materials and do all the work required to complete the work in accordance with the plans and specifications for the unit prices or lump sums named in the Bid Table.
- The bidder, as Principal, acknowledges himself as being bound by the attached bond or other acceptable bid guarantee.

Dated: _____ At: _____
(City and State)

Signature: _____

Printed Name: _____

Position: _____
(Sole Owner, Partner, President, etc.)

Company Name: _____ Type of Organization: _____
(Individual, Partnership, Corp.)

License No.: _____ License Classification: _____

License Expiration Date: _____

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BID BOND

Enter }
 Name & }
 Address }
 of Bonding }
 Company }

KNOW ALL MEN BY THESE PRESENTS: That we _____

_____, Principal,

and _____

_____, Surety, are held and firmly bound
 unto

PUBLIC WORKS AGENCY Obligee,
 in the sum of Ten Percent of the total amount of the Bid for the payment of which we bind ourselves,
 our legal representatives, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, Principal has submitted or is about to submit a bid or proposal to Obligee on a contract for
WELL NO. 97 REPLACEMENT

NOW, THEREFORE, if that contract be awarded to principal and principal shall, within such time as specified, duly execute the contract in the prescribed form and deliver the same to obligee with all required bonds/performance securities, certificates of insurance and such other items as required in the bidding or contract documents then this obligation shall be null and void; otherwise to remain in full force and effect, and if the contract is awarded to principal and principal fails, within the time specified, to duly execute the contract in the prescribed form and deliver the same to obligee with all said required items, then surety shall pay obligee the full sum of this bond.

Surety, for value received, hereby agrees that no extension of time, change, alteration, modification, or addition to the bidding or contract documents, or of the work required thereunder, shall release or exonerate surety on this bond or in any way affect the obligation of this bond; and surety does hereby waive notice of same.

Signed, sealed and dated

 (Principal)

by _____ (Seal)

 (Surety)

by _____
 Attorney-in-Fact

**INDICATE COMPLETE ADDRESS OF SURETY TO WHICH
 CORRESPONDENCE CONCERNING THIS BOND SHOULD BE
 DIRECTED.**

Telephone No. _____

Form PW-B-1

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PREVAILING WAGE REQUIREMENT

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**COUNTY OF VENTURA
PUBLIC WORKS AGENCY**

PREVAILING RATES OF WAGES

As provided in Subsection 7-2.2 of these specifications, and in accordance with Section 1770 (*Amended by Stats. 2017, Ch. 28, Sec. 17. (SB 96) Effective June 27, 2017*), et. seq. of the California Labor Code, determinations of the generally prevailing wages for various classes of workers in Ventura County have been made by the California Director of Industrial Relations as required by the California Labor Code.

As required by California Labor Code Section 1777.5, properly indentured apprentices shall be employed on the work in the minimum ratio of not less than one apprentice for each five journeymen in a craft or trade classification. Travel and subsistence shall be paid in accordance with California Labor Code Section 1773.8.

The body awarding the contract shall cause to be inserted in the contract stipulations to effectuate this section. The stipulations shall fix the responsibility of compliance with this section for all apprenticeable occupations with the prime contractor.

The determinations made by the State are available on the Internet at

<http://www.dir.ca.gov/DLSR/PWD/Index.htm>

and are on file in the office of the Public Works Agency

The rate fixed for each craft, classification, or type of work shall be not less than the prevailing rate paid in the craft, classification, or type of work.

The Contractor shall post a copy of the wage rates at each jobsite at a location readily available to the workers.

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EXCERPTS FROM CA LABOR CODE 1725.5, 1771-1815

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Excerpts from the California Labor Code

These excerpts from the Labor Code include the sections listed in specification Section 7.2.2.2 that are required by Labor Code 1775(b)(1) to be included in all subcontracts. These excerpts also include sections recommended by the CA Department of Industrial Relations that contain information on the contractor registration requirements. These sections are furnished for the convenience of the contractor and in no way limit the required compliance with all laws.

1725.5. A contractor shall be registered pursuant to this section to be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code or engage in the performance of any public work contract that is subject to the requirements of this chapter. For the purposes of this section, "contractor" includes a subcontractor as defined by Section 1722.1.

(a) To qualify for registration under this section, a contractor shall do all of the following:

(1) (A) Register with the Department of Industrial Relations in the manner prescribed by the department and pay an initial nonrefundable application fee of four hundred dollars (\$400) to qualify for registration under this section and an annual renewal fee on or before July 1 of each year thereafter. The annual renewal fee shall be in a uniform amount set by the Director of Industrial Relations, and the initial registration and renewal fees may be adjusted no more than annually by the director to support the costs specified in Section 1771.3.

(B) Beginning June 1, 2019, a contractor may register or renew according to this subdivision in annual increments up to three years from the date of registration. Contractors who wish to do so will be required to prepay the applicable nonrefundable application or renewal fees to qualify for the number of years for which they wish to preregister.

(2) Provide evidence, disclosures, or releases as are necessary to establish all of the following:

(A) Workers' compensation coverage that meets the requirements of Division 4 (commencing with Section 3200) and includes sufficient coverage for any worker whom the contractor employs to perform work that is subject to prevailing wage requirements other than a contractor who is separately registered under this section. Coverage may be evidenced by a current and valid certificate of workers' compensation insurance or certification of self-insurance required under Section 7125 of the Business and Professions Code.

(B) If applicable, the contractor is licensed in accordance with Chapter 9 (commencing with Section 7000) of the Business and Professions Code.

(C) The contractor does not have any delinquent liability to an employee or the state for any assessment of back wages or related damages, interest, fines, or penalties pursuant to any final judgment, order, or determination by a court or any federal, state, or local administrative agency, including a confirmed arbitration award. However, for purposes of this paragraph, the contractor shall not be disqualified for any judgment, order, or determination that is under appeal, provided that the contractor has secured the payment of any amount eventually found due through a bond or other appropriate means.

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(D) The contractor is not currently debarred under Section 1777.1 or under any other federal or state law providing for the debarment of contractors from public works.

(E) The contractor has not bid on a public works contract, been listed in a bid proposal, or engaged in the performance of a contract for public works without being lawfully registered in accordance with this section, within the preceding 12 months or since the effective date of the requirements set forth in subdivision (e), whichever is earlier. If a contractor is found to be in violation of the requirements of this paragraph, the period of disqualification shall be waived if both of the following are true:

(i) The contractor has not previously been found to be in violation of the requirements of this paragraph within the preceding 12 months.

(ii) The contractor pays an additional nonrefundable penalty registration fee of two thousand dollars (\$2,000).

(b) Fees received pursuant to this section shall be deposited in the State Public Works Enforcement Fund established by Section 1771.3 and shall be used only for the purposes specified in that section.

(c) A contractor who fails to pay the renewal fee required under paragraph (1) of subdivision (a) on or before the expiration of any prior period of registration shall be prohibited from bidding on or engaging in the performance of any contract for public work until once again registered pursuant to this section. If the failure to pay the renewal fee was inadvertent, the contractor may renew its registration retroactively by paying an additional nonrefundable penalty renewal fee equal to the amount of the renewal fee within 90 days of the due date of the renewal fee.

(d) If, after a body awarding a contract accepts the contractor's bid or awards the contract, the work covered by the bid or contract is determined to be a public work to which Section 1771 applies, either as the result of a determination by the director pursuant to Section 1773.5 or a court decision, the requirements of this section shall not apply, subject to the following requirements:

(1) The body that awarded the contract failed, in the bid specification or in the contract documents, to identify as a public work that portion of the work that the determination or decision subsequently classifies as a public work.

(2) Within 20 days following service of notice on the awarding body of a determination by the Director of Industrial Relations pursuant to Section 1773.5 or a decision by a court that the contract was for public work as defined in this chapter, the contractor and any subcontractors are registered under this section or are replaced by a contractor or subcontractors who are registered under this section.

(3) The requirements of this section shall apply prospectively only to any subsequent bid, bid proposal, contract, or work performed after the awarding body is served with notice of the determination or decision referred to in paragraph (2).

(e) The requirements of this section shall apply to any bid proposal submitted on or after March 1, 2015, to any contract for public work, as defined in this chapter, executed on or after April 1, 2015, and to any work performed under a contract for public work on or after January 1, 2018, regardless of when the contract for public work was executed.

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(f) This section does not apply to work performed on a public works project of twenty-five thousand dollars (\$25,000) or less when the project is for construction, alteration, demolition, installation, or repair work or to work performed on a public works project of fifteen thousand dollars (\$15,000) or less when the project is for maintenance work.

(Amended by Stats. 2017, Ch. 28, Sec. 15. (SB 96) Effective June 27, 2017.)

1771. Except for public works projects of one thousand dollars (\$1,000) or less, not less than the general prevailing rate of per diem wages for work of a similar character in the locality in which the public work is performed, and not less than the general prevailing rate of per diem wages for holiday and overtime work fixed as provided in this chapter, shall be paid to all workers employed on public works.

This section is applicable only to work performed under contract, and is not applicable to work carried out by a public agency with its own forces. This section is applicable to contracts let for maintenance work.

(Amended by Stats. 1981, Ch. 449, Sec. 1.)

1771.1. (a) A contractor or subcontractor shall not be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code, or engage in the performance of any contract for public work, as defined in this chapter, unless currently registered and qualified to perform public work pursuant to Section 1725.5. It is not a violation of this section for an unregistered contractor to submit a bid that is authorized by Section 7029.1 of the Business and Professions Code or by Section 10164 or 20103.5 of the Public Contract Code, provided the contractor is registered to perform public work pursuant to Section 1725.5 at the time the contract is awarded.

(b) Notice of the requirement described in subdivision (a) shall be included in all bid invitations and public works contracts, and a bid shall not be accepted nor any contract or subcontract entered into without proof of the contractor or subcontractor's current registration to perform public work pursuant to Section 1725.5.

(c) An inadvertent error in listing a subcontractor who is not registered pursuant to Section 1725.5 in a bid proposal shall not be grounds for filing a bid protest or grounds for considering the bid nonresponsive, provided that any of the following apply:

(1) The subcontractor is registered prior to the bid opening.

(2) Within 24 hours after the bid opening, the subcontractor is registered and has paid the penalty registration fee specified in subparagraph (E) of paragraph (2) of subdivision (a) of Section 1725.5.

(3) The subcontractor is replaced by another registered subcontractor pursuant to Section 4107 of the Public Contract Code.

(d) Failure by a subcontractor to be registered to perform public work as required by subdivision

(a) shall be grounds under Section 4107 of the Public Contract Code for the contractor, with the consent of the awarding authority, to substitute a subcontractor who is registered to perform public work pursuant to Section 1725.5 in place of the unregistered subcontractor.

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(e) The department shall maintain on its Internet Web site a list of contractors who are currently registered to perform public work pursuant to Section 1725.5.

(f) A contract entered into with any contractor or subcontractor in violation of subdivision (a) shall be subject to cancellation, provided that a contract for public work shall not be unlawful, void, or voidable solely due to the failure of the awarding body, contractor, or any subcontractor to comply with the requirements of Section 1725.5 or this section.

(g) If the Labor Commissioner or his or her designee determines that a contractor or subcontractor engaged in the performance of any public work contract without having been registered in accordance with this section, the contractor or subcontractor shall forfeit, as a civil penalty to the state, one hundred dollars (\$100) for each day of work performed in violation of the registration requirement, not to exceed an aggregate penalty of eight thousand dollars (\$8,000) in addition to any penalty registration fee assessed pursuant to clause (ii) of subparagraph (E) of paragraph (2) of subdivision (a) of Section 1725.5.

(h) (1) In addition to, or in lieu of, any other penalty or sanction authorized pursuant to this chapter, a higher tiered public works contractor or subcontractor who is found to have entered into a subcontract with an unregistered lower tier subcontractor to perform any public work in violation of the requirements of Section 1725.5 or this section shall be subject to forfeiture, as a civil penalty to the state, of one hundred dollars (\$100) for each day the unregistered lower tier subcontractor performs work in violation of the registration requirement, not to exceed an aggregate penalty of ten thousand dollars (\$10,000).

(2) The Labor Commissioner shall use the same standards specified in subparagraph (A) of paragraph (2) of subdivision (a) of Section 1775 when determining the severity of the violation and what penalty to assess, and may waive the penalty for a first time violation that was unintentional and did not hinder the Labor Commissioner's ability to monitor and enforce compliance with the requirements of this chapter.

(3) A higher tiered public works contractor or subcontractor shall not be liable for penalties assessed pursuant to paragraph (1) if the lower tier subcontractor's performance is in violation of the requirements of Section 1725.5 due to the revocation of a previously approved registration.

(4) A subcontractor shall not be liable for any penalties assessed against a higher tiered public works contractor or subcontractor pursuant to paragraph (1). A higher tiered public works contractor or subcontractor may not require a lower tiered subcontractor to indemnify or otherwise be liable for any penalties pursuant to paragraph (1).

(i) The Labor Commissioner or his or her designee shall issue a civil wage and penalty assessment, in accordance with the provisions of Section 1741, upon determination of penalties pursuant to subdivision (g) and subparagraph (B) of paragraph (1) of subdivision (h). Review of a civil wage and penalty assessment issued under this subdivision may be requested in accordance with the provisions of Section 1742. The regulations of the Director of Industrial Relations, which govern proceedings for review of civil wage and penalty assessments and the withholding of contract payments under Article 1 (commencing with Section 1720) and Article 2 (commencing with Section 1770), shall apply.

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(j) (1) Where a contractor or subcontractor engages in the performance of any public work contract without having been registered in violation of the requirements of Section 1725.5 or this section, the Labor Commissioner shall issue and serve a stop order prohibiting the use of the unregistered contractor or the unregistered subcontractor on all public works until the unregistered contractor or unregistered subcontractor is registered. The stop order shall not apply to work by registered contractors or subcontractors on the public work.

(2) A stop order may be personally served upon the contractor or subcontractor by either of the following methods:

(A) Manual delivery of the order to the contractor or subcontractor personally.

(B) Leaving signed copies of the order with the person who is apparently in charge at the site of the public work and by thereafter mailing copies of the order by first class mail, postage prepaid to the contractor or subcontractor at the address on file with either of the following:

(i) The Contractors' State License Board.

(ii) The Secretary of State.

(3) The stop order shall be effective immediately upon service and shall be subject to appeal by the party contracting with the unregistered contractor or subcontractor, by the unregistered contractor or subcontractor, or both. The appeal, hearing, and any further review of the hearing decision shall be governed by the procedures, time limits, and other requirements specified in subdivision (a) of Section 238.1.

(k) Failure of a contractor or subcontractor, owner, director, officer, or managing agent of the contractor or subcontractor to observe a stop order issued and served upon him or her pursuant to subdivision (j) is guilty of a misdemeanor punishable by imprisonment in county jail not exceeding 60 days or by a fine not exceeding ten thousand dollars (\$10,000), or both.

(l) This section shall apply to any bid proposal submitted on or after March 1, 2015, and any contract for public work entered into on or after April 1, 2015. This section shall also apply to the performance of any public work, as defined in this chapter, on or after January 1, 2018, regardless of when the contract for public work was entered.

(m) Penalties received pursuant to this section shall be deposited in the State Public Works Enforcement Fund established by Section 1771.3 and shall be used only for the purposes specified in that section.

(n) This section shall not apply to work performed on a public works project of twenty-five thousand dollars (\$25,000) or less when the project is for construction, alteration, demolition, installation, or repair work or to work performed on a public works project of fifteen thousand dollars (\$15,000) or less when the project is for maintenance work.

(Amended by Stats. 2018, Ch. 455, Sec. 2. (SB 877) Effective September 17, 2018.)

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1775. (a) (1) The contractor and any subcontractor under the contractor shall, as a penalty to the state or political subdivision on whose behalf the contract is made or awarded, forfeit not more than two hundred dollars (\$200) for each calendar day, or portion thereof, for each worker paid less than the prevailing wage rates as determined by the director for the work or craft in which the worker is employed for any public work done under the contract by the contractor or, except as provided in subdivision (b), by any subcontractor under the contractor.

(2) (A) The amount of the penalty shall be determined by the Labor Commissioner based on consideration of both of the following:

(i) Whether the failure of the contractor or subcontractor to pay the correct rate of per diem wages was a good faith mistake and, if so, the error was promptly and voluntarily corrected when brought to the attention of the contractor or subcontractor.

(ii) Whether the contractor or subcontractor has a prior record of failing to meet its prevailing wage obligations.

(B) (i) The penalty may not be less than forty dollars (\$40) for each calendar day, or portion thereof, for each worker paid less than the prevailing wage rate, unless the failure of the contractor or subcontractor to pay the correct rate of per diem wages was a good faith mistake and, if so, the error was promptly and voluntarily corrected when brought to the attention of the contractor or subcontractor.

(ii) The penalty may not be less than eighty dollars (\$80) for each calendar day, or portion thereof, for each worker paid less than the prevailing wage rate, if the contractor or subcontractor has been assessed penalties within the previous three years for failing to meet its prevailing wage obligations on a separate contract, unless those penalties were subsequently withdrawn or overturned.

(iii) The penalty may not be less than one hundred twenty dollars (\$120) for each calendar day, or portion thereof, for each worker paid less than the prevailing wage rate, if the Labor Commissioner determines that the violation was willful, as defined in subdivision (c) of Section 1777.1.

(C) If the amount due under this section is collected from the contractor or subcontractor, any outstanding wage claim under Chapter 1 (commencing with Section 1720) of Part 7 of Division 2 against that contractor or subcontractor shall be satisfied before applying that amount to the penalty imposed on that contractor or subcontractor pursuant to this section.

(D) The determination of the Labor Commissioner as to the amount of the penalty shall be reviewable only for abuse of discretion.

(E) The difference between the prevailing wage rates and the amount paid to each worker for each calendar day or portion thereof for which each worker was paid less than the prevailing wage rate shall be paid to each worker by the contractor or subcontractor, and the body awarding the contract shall cause to be inserted in the contract a stipulation that this section will be complied with.

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(b) If a worker employed by a subcontractor on a public works project is not paid the general prevailing rate of per diem wages by the subcontractor, the prime contractor of the project is not liable for any penalties under subdivision (a) unless the prime contractor had knowledge of that failure of the subcontractor to pay the specified prevailing rate of wages to those workers or unless the prime contractor fails to comply with all of the following requirements:

(1) The contract executed between the contractor and the subcontractor for the performance of work on the public works project shall include a copy of the provisions of this section and Sections **1771, 1776, 1777.5, 1813, and 1815**.

(2) The contractor shall monitor the payment of the specified general prevailing rate of per diem wages by the subcontractor to the employees, by periodic review of the certified payroll records of the subcontractor.

(3) Upon becoming aware of the failure of the subcontractor to pay his or her workers the specified prevailing rate of wages, the contractor shall diligently take corrective action to halt or rectify the failure, including, but not limited to, retaining sufficient funds due the subcontractor for work performed on the public works project.

(4) Prior to making final payment to the subcontractor for work performed on the public works project, the contractor shall obtain an affidavit signed under penalty of perjury from the subcontractor that the subcontractor has paid the specified general prevailing rate of per diem wages to his or her employees on the public works project and any amounts due pursuant to Section 1813.

(c) The Division of Labor Standards Enforcement shall notify the contractor on a public works project within 15 days of the receipt by the Division of Labor Standards Enforcement of a complaint of the failure of a subcontractor on that public works project to pay workers the general prevailing rate of per diem wages.

(Amended by Stats. 2011, Ch. 677, Sec. 1. (AB 551) Effective January 1, 2012.)

1776 (a) Each contractor and subcontractor shall keep accurate payroll records, showing the name, address, social security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed by him or her in connection with the public work. Each payroll record shall contain or be verified by a written declaration that it is made under penalty of perjury, stating both of the following:

(1) The information contained in the payroll record is true and correct.

(2) The employer has complied with the requirements of Sections 1771, 1811, and 1815 for any work performed by his or her employees on the public works project.

(b) The payroll records enumerated under subdivision (a) shall be certified and shall be available for inspection at all reasonable hours at the principal office of the contractor on the following basis:

(1) A certified copy of an employee's payroll record shall be made available for inspection or furnished to the employee or his or her authorized representative on request.

(2) A certified copy of all payroll records enumerated in subdivision (a) shall be made available for inspection or furnished upon request to a representative of the body awarding the contract and the Division of Labor Standards Enforcement of the Department of Industrial Relations.

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(3) A certified copy of all payroll records enumerated in subdivision (a) shall be made available upon request by the public for inspection or for copies thereof. However, a request by the public shall be made through either the body awarding the contract or the Division of Labor Standards Enforcement. If the requested payroll records have not been provided pursuant to paragraph (2), the requesting party shall, prior to being provided the records, reimburse the costs of preparation by the contractor, subcontractors, and the entity through which the request was made. The public may not be given access to the records at the principal office of the contractor.

(C) Unless required to be furnished directly to the Labor Commissioner in accordance with paragraph (3) of subdivision (a) of Section 1771.4, the certified payroll records shall be on forms provided by the Division of Labor Standards Enforcement or shall contain the same information as the forms provided by the division. The payroll records may consist of printouts of payroll data that are maintained as computer records, if the printouts contain the same information as the forms provided by the division and the printouts are verified in the manner specified in subdivision (a).

(d) A contractor or subcontractor shall file a certified copy of the records enumerated in subdivision (a) with the entity that requested the records within 10 days after receipt of a written request.

(e) Except as provided in subdivision (f), any copy of records made available for inspection as copies and furnished upon request to the public or any public agency by the awarding body or the Division of Labor Standards Enforcement shall be marked or obliterated to prevent disclosure of an individual's name, address, and social security number. The name and address of the contractor awarded the contract or the subcontractor performing the contract shall not be marked or obliterated. Any copy of records made available for inspection by, or furnished to, a multiemployer Taft-Hartley trust fund (29 U.S.C. Sec. 186(c)(5)) that requests the records for the purposes of allocating contributions to participants shall be marked or obliterated only to prevent disclosure of an individual's full social security number, but shall provide the last four digits of the social security number. Any copy of records made available for inspection by, or furnished to, a joint labor-management committee established pursuant to the federal Labor Management Cooperation Act of 1978 (29 U.S.C. Sec. 175a) shall be marked or obliterated only to prevent disclosure of an individual's social security number.

(f) (1) Notwithstanding any other provision of law, agencies that are included in the Joint Enforcement Strike Force on the Underground Economy established pursuant to Section 329 of the Unemployment Insurance Code and other law enforcement agencies investigating violations of law shall, upon request, be provided nonredacted copies of certified payroll records. Any copies of records or certified payroll made available for inspection and furnished upon request to the public by an agency included in the Joint Enforcement Strike Force on the Underground Economy or to a law enforcement agency investigating a violation of law shall be marked or redacted to prevent disclosure of an individual's name, address, and social security number.

(2) An employer shall not be liable for damages in a civil action for any reasonable act or omission taken in good faith in compliance with this subdivision.

(g) The contractor shall inform the body awarding the contract of the location of the records enumerated under subdivision (a), including the street address, city, and county, and shall, within five working days, provide a notice of a change of location and address.

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(h) The contractor or subcontractor has 10 days in which to comply, subsequent to receipt of a written notice requesting the records enumerated in subdivision (a). In the event that the contractor or subcontractor fails to comply within the 10-day period, he or she shall, as a penalty to the state or political subdivision on whose behalf the contract is made or awarded, forfeit one hundred dollars (\$100) for each calendar day, or portion thereof, for each worker, until strict compliance is effectuated. Upon the request of the Division of Labor Standards Enforcement, these penalties shall be withheld from progress payments then due. A contractor is not subject to a penalty assessment pursuant to this section due to the failure of a subcontractor to comply with this section.

(i) The body awarding the contract shall cause to be inserted in the contract stipulations to effectuate this section.

(j) The director shall adopt rules consistent with the California Public Records Act (Chapter 3.5 (commencing with Section 6250) of Division 7 of Title 1 of the Government Code) and the Information Practices Act of 1977 (Title 1.8 (commencing with Section 1798) of Part 4 of Division 3 of the Civil Code) governing the release of these records, including the establishment of reasonable fees to be charged for reproducing copies of records required by this section.
(Amended by Stats. 2014, Ch. 28, Sec. 71. (SB 854) Effective June 20, 2014.)

1777.5. (a) (1) This chapter does not prevent the employment upon public works of properly registered apprentices who are active participants in an approved apprenticeship program.

(2) For purposes of this chapter, "apprenticeship program" means a program under the jurisdiction of the California Apprenticeship Council established pursuant to Section 3070.

(b) (1) Every apprentice employed upon public works shall be paid the prevailing rate of per diem wages for apprentices in the trade to which he or she is registered and shall be employed only at the work of the craft or trade to which he or she is registered.

(2) Unless otherwise provided by a collective bargaining agreement, when a contractor requests the dispatch of an apprentice pursuant to this section to perform work on a public works project and requires the apprentice to fill out an application or undergo testing, training, an examination, or other preemployment process as a condition of employment, the apprentice shall be paid for the time spent on the required preemployment activity, including travel time to and from the required activity, if any, at the prevailing rate of per diem wages for apprentices in the trade to which he or she is registered. Unless otherwise provided by a collective bargaining agreement, a contractor is not required to compensate an apprentice for the time spent on preemployment activities if the apprentice is required to take a preemployment drug or alcohol test and he or she fails to pass that test.

(c) Only apprentices, as defined in Section 3077, who are in training under apprenticeship standards that have been approved by the Chief of the Division of Apprenticeship Standards and who are parties to written apprentice agreements under Chapter 4 (commencing with Section 3070) of Division 3 are eligible to be employed at the apprentice wage rate on public works. The employment and training of each apprentice shall be in accordance with either of the following:

(1) The apprenticeship standards and apprentice agreements under which he or she is training.

(2) The rules and regulations of the California Apprenticeship Council.

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(d) If the contractor to whom the contract is awarded by the state or any political subdivision, in performing any of the work under the contract, employs workers in any apprenticeable craft or trade, the contractor shall employ apprentices in at least the ratio set forth in this section and may apply to any apprenticeship program in the craft or trade that can provide apprentices to the site of the public work for a certificate approving the contractor under the apprenticeship standards for the employment and training of apprentices in the area or industry affected. However, the decision of the apprenticeship program to approve or deny a certificate shall be subject to review by the Administrator of Apprenticeship. The apprenticeship program or programs, upon approving the contractor, shall arrange for the dispatch of apprentices to the contractor. A contractor covered by an apprenticeship program's standards shall not be required to submit any additional application in order to include additional public works contracts under that program. "Apprenticeable craft or trade," as used in this section, means a craft or trade determined as an apprenticeable occupation in accordance with rules and regulations prescribed by the California Apprenticeship Council. As used in this section, "contractor" includes any subcontractor under a contractor who performs any public works not excluded by subdivision (o).

(e) Before commencing work on a contract for public works, every contractor shall submit contract award information to an applicable apprenticeship program that can supply apprentices to the site of the public work. The information submitted shall include an estimate of journeyman hours to be performed under the contract, the number of apprentices proposed to be employed, and the approximate dates the apprentices would be employed. A copy of this information shall also be submitted to the awarding body, if requested by the awarding body. Within 60 days after concluding work on the contract, each contractor and subcontractor shall submit to the awarding body, if requested, and to the apprenticeship program a verified statement of the journeyman and apprentice hours performed on the contract. The information under this subdivision shall be public. The apprenticeship programs shall retain this information for 12 months.

(f) The apprenticeship program supplying apprentices to the area of the site of the public work shall ensure equal employment and affirmative action in apprenticeship for women and minorities.

(g) The ratio of work performed by apprentices to journeymen employed in a particular craft or trade on the public work may be no higher than the ratio stipulated in the apprenticeship standards under which the apprenticeship program operates if the contractor agrees to be bound by those standards. However, except as otherwise provided in this section, in no case shall the ratio be less than one hour of apprentice work for every five hours of journeyman work.

(h) This ratio of apprentice work to journeyman work shall apply during any day or portion of a day when any journeyman is employed at the jobsite and shall be computed on the basis of the hours worked during the day by journeymen so employed. Any work performed by a journeyman in excess of eight hours per day or 40 hours per week shall not be used to calculate the ratio. The contractor shall employ apprentices for the number of hours computed as above before the end of the contract or, in the case of a subcontractor, before the end of the subcontract. However, the contractor shall endeavor, to the greatest extent possible, to employ apprentices during the same time period that the journeymen in the same craft or trade are employed at the jobsite. When an hourly apprenticeship ratio is not feasible for a particular craft or trade, the Administrator of Apprenticeship, upon application of an apprenticeship program, may order a minimum ratio of not less than one apprentice for each five journeymen in a craft or trade classification.

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(i) A contractor covered by this section who has agreed to be covered by an apprenticeship program's standards upon the issuance of the approval certificate, or who has been previously approved for an apprenticeship program in the craft or trade, shall employ the number of apprentices or the ratio of apprentices to journeymen stipulated in the applicable apprenticeship standards, but in no event less than the 1-to-5 ratio required by subdivision (g).

(j) Upon proper showing by a contractor that he or she employs apprentices in a particular craft or trade in the state on all of his or her contracts on an annual average of not less than one hour of apprentice work for every five hours of labor performed by journeymen, the Administrator of Apprenticeship may grant a certificate exempting the contractor from the 1-to-5 hourly ratio, as set forth in this section for that craft or trade.

(k) An apprenticeship program has the discretion to grant to a participating contractor or contractor association a certificate, which shall be subject to the approval of the Administrator of Apprenticeship, exempting the contractor from the 1-to-5 ratio set forth in this section when it finds that any one of the following conditions is met:

(1) Unemployment for the previous three-month period in the area exceeds an average of 15 percent.

(2) The number of apprentices in training in the area exceeds a ratio of 1 to 5.

(3) There is a showing that the apprenticeable craft or trade is replacing at least one-thirtieth of its journeymen annually through apprenticeship training, either on a statewide basis or on a local basis.

(4) Assignment of an apprentice to any work performed under a public works contract would create a condition that would jeopardize his or her life or the life, safety, or property of fellow employees or the public at large, or the specific task to which the apprentice is to be assigned is of a nature that training cannot be provided by a journeyman.

(l) If an exemption is granted pursuant to subdivision (k) to an organization that represents contractors in a specific trade from the 1-to-5 ratio on a local or statewide basis, the member contractors shall not be required to submit individual applications for approval to local joint apprenticeship committees, if they are already covered by the local apprenticeship standards.

(m) (1) A contractor to whom a contract is awarded, who, in performing any of the work under the contract, employs journeymen or apprentices in any apprenticeable craft or trade shall contribute to the California Apprenticeship Council the same amount that the director determines is the prevailing amount of apprenticeship training contributions in the area of the public works site. A contractor may take as a credit for payments to the council any amounts paid by the contractor to an approved apprenticeship program that can supply apprentices to the site of the public works project. The contractor may add the amount of the contributions in computing his or her bid for the contract.

(2) (A) At the conclusion of the 2002–03 fiscal year, and each fiscal year thereafter, the California Apprenticeship Council shall distribute training contributions received by the council under this subdivision, less the expenses of the Department of Industrial Relations for administering this subdivision, by making grants to approved apprenticeship programs for the purpose of training apprentices. The grant funds shall be distributed as follows:

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(i) If there is an approved multiemployer apprenticeship program serving the same craft or trade and geographic area for which the training contributions were made to the council, a grant to that program shall be made.

(ii) If there are two or more approved multiemployer apprenticeship programs serving the same craft or trade and county for which the training contributions were made to the council, the grant shall be divided among those programs based on the number of apprentices from that county registered in each program.

(iii) All training contributions not distributed under clauses (i) and (ii) shall be used to defray the future expenses of the Department of Industrial Relations for the administration and enforcement of apprenticeship standards and requirements under this code.

(B) An apprenticeship program shall only be eligible to receive grant funds pursuant to this subdivision if the apprenticeship program agrees, prior to the receipt of any grant funds, to keep adequate records that document the expenditure of grant funds and to make all records available to the Department of Industrial Relations so that the Department of Industrial Relations is able to verify that grant funds were used solely for training apprentices. For purposes of this subparagraph, adequate records include, but are not limited to, invoices, receipts, and canceled checks that account for the expenditure of grant funds. This subparagraph shall not be deemed to require an apprenticeship program to provide the Department of Industrial Relations with more documentation than is necessary to verify the appropriate expenditure of grant funds made pursuant to this subdivision.

(C) The Department of Industrial Relations shall verify that grants made pursuant to this subdivision are used solely to fund training apprentices. If an apprenticeship program is unable to demonstrate how grant funds are expended or if an apprenticeship program is found to be using grant funds for purposes other than training apprentices, then the apprenticeship program shall not be eligible to receive any future grant pursuant to this subdivision and the Department of Industrial Relations may initiate the process to rescind the registration of the apprenticeship program.

(3) All training contributions received pursuant to this subdivision shall be deposited in the Apprenticeship Training Contribution Fund, which is hereby created in the State Treasury. Upon appropriation by the Legislature, all moneys in the Apprenticeship Training Contribution Fund shall be used for the purpose of carrying out this subdivision and to pay the expenses of the Department of Industrial Relations.

(n) The body awarding the contract shall cause to be inserted in the contract stipulations to effectuate this section. The stipulations shall fix the responsibility of compliance with this section for all apprenticeable occupations with the prime contractor.

(o) This section does not apply to contracts of general contractors or to contracts of specialty contractors not bidding for work through a general or prime contractor when the contracts of general contractors or those specialty contractors involve less than thirty thousand dollars (\$30,000).

(p) An awarding body that implements an approved labor compliance program in accordance with subdivision (b) of Section 1771.5 may, with the approval of the director, assist in the enforcement of this section under the terms and conditions prescribed by the director. *(Amended by Stats. 2018, Ch. 704, Sec. 17. (AB 235) Effective September 22, 2018.)*

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1813. The contractor or subcontractor shall, as a penalty to the state or political subdivision on whose behalf the contract is made or awarded, forfeit twenty-five dollars (\$25) for each worker employed in the execution of the contract by the respective contractor or subcontractor for each calendar day during which the worker is required or permitted to work more than 8 hours in any one calendar day and 40 hours in any one calendar week in violation of the provisions of this article. In awarding any contract for public work, the awarding body shall cause to be inserted in the contract a stipulation to this effect. The awarding body shall take cognizance of all violations of this article committed in the course of the execution of the contract, and shall report them to the Division of Labor Standards Enforcement.

(Amended (as added by Stats. 1997, Ch. 757, Sec. 6) by Stats. 2002, Ch. 28, Sec. 3. Effective January 1, 2003.)

1815. Notwithstanding the provisions of Sections 1810 to 1814, inclusive, of this code, and notwithstanding any stipulation inserted in any contract pursuant to the requirements of said sections, work performed by employees of contractors in excess of 8 hours per day, and 40 hours during any one week, shall be permitted upon public work upon compensation for all hours worked in excess of 8 hours per day at not less than 1¹/₂ times the basic rate of pay.

(Amended by Stats. 1963, Ch. 964.)

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EXCERPTS FROM PUBLIC CONTRACT CODE 9204
DISPUTER RESOLUTION PROCESS

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EXCERPTS FROM PUBLIC CONTRACT CODE 9204

EFFECTIVE DATE JANUARY 1, 2017

Please note section 9204 of the Public Contract Code, set forth in full below. Contractor must follow the contractual dispute resolution process specified in the Ventura County Standard Specifications, which is consistent with section 9204.

* * *

(a) The Legislature finds and declares that it is in the best interests of the state and its citizens to ensure that all construction business performed on a public works project in the state that is complete and not in dispute is paid in full and in a timely manner.

(b) Notwithstanding any other law, including, but not limited to, Article 7.1 (commencing with Section 10240) of Chapter 1 of Part 2, Chapter 10 (commencing with Section 19100) of Part 2, and Article 1.5 (commencing with Section 20104) of Chapter 1 of Part 3, this section shall apply to any claim by a contractor in connection with a public works project.

(c) For purposes of this section:

(1) "Claim" means a separate demand by a contractor sent by registered mail or certified mail with return receipt requested, for one or more of the following:

(A) A time extension, including, without limitation, for relief from damages or penalties for delay assessed by a public entity under a contract for a public works project.

(B) Payment by the public entity of money or damages arising from work done by, or on behalf of, the contractor pursuant to the contract for a public works project and payment for which is not otherwise expressly provided or to which the claimant is not otherwise entitled.

(C) Payment of an amount that is disputed by the public entity.

(2) "Contractor" means any type of contractor within the meaning of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code who has entered into a direct contract with a public entity for a public works project.

(3)(A) "Public entity" means, without limitation, except as provided in subparagraph (B), a state agency, department, office, division, bureau, board, or commission, the California State University, the University of California, a city, including a charter city, county, including a charter county, city and county, including a charter city and county, district, special district, public authority, political subdivision, public corporation, or nonprofit transit corporation wholly owned by a public agency and formed to carry out the purposes of the public agency.

(B) "Public entity" shall not include the following:

(i) The Department of Water Resources as to any project under the jurisdiction of that department.

(ii) The Department of Transportation as to any project under the jurisdiction of that department.

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- (iii) The Department of Parks and Recreation as to any project under the jurisdiction of that department.
- (iv) The Department of Corrections and Rehabilitation with respect to any project under its jurisdiction pursuant to Chapter 11 (commencing with Section 7000) of Title 7 of Part 3 of the Penal Code.
- (v) The Military Department as to any project under the jurisdiction of that department.
- (vi) The Department of General Services as to all other projects.
- (vii) The High-Speed Rail Authority.

(4) "Public works project" means the erection, construction, alteration, repair, or improvement of any public structure, building, road, or other public improvement of any kind.

(5) "Subcontractor" means any type of contractor within the meaning of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code who either is in direct contract with a contractor or is a lower tier subcontractor.

(d)(1)(A) Upon receipt of a claim pursuant to this section, the public entity to which the claim applies shall conduct a reasonable review of the claim and, within a period not to exceed 45 days, shall provide the claimant a written statement identifying what portion of the claim is disputed and what portion is undisputed. Upon receipt of a claim, a public entity and a contractor may, by mutual agreement, extend the time period provided in this subdivision.

(B) The claimant shall furnish reasonable documentation to support the claim.

(C) If the public entity needs approval from its governing body to provide the claimant a written statement identifying the disputed portion and the undisputed portion of the claim, and the governing body does not meet within the 45 days or within the mutually agreed to extension of time following receipt of a claim sent by registered mail or certified mail, return receipt requested, the public entity shall have up to three days following the next duly publicly noticed meeting of the governing body after the 45-day period, or extension, expires to provide the claimant a written statement identifying the disputed portion and the undisputed portion.

(D) Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the public entity issues its written statement. If the public entity fails to issue a written statement, paragraph (3) shall apply.

(2)(A) If the claimant disputes the public entity's written response, or if the public entity fails to respond to a claim issued pursuant to this section within the time prescribed, the claimant may demand in writing an informal conference to meet and confer for settlement of the issues in dispute. Upon receipt of a demand in writing sent by registered mail or certified mail, return receipt requested, the public entity shall schedule a meet and confer conference within 30 days for settlement of the dispute.

(B) Within 10 business days following the conclusion of the meet and confer conference, if the claim or any portion of the claim remains in dispute, the public entity shall provide the claimant a written statement identifying the portion of the claim that remains in dispute and the portion that is undisputed. Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the public entity issues its written statement. Any disputed portion of the claim, as identified by the contractor in writing, shall be submitted to nonbinding mediation, with the public

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entity and the claimant sharing the associated costs equally. The public entity and claimant shall mutually agree to a mediator within 10 business days after the disputed portion of the claim has been identified in writing. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the claim. Each party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator. If mediation is unsuccessful, the parts of the claim remaining in dispute shall be subject to applicable procedures outside this section.

(C) For purposes of this section, mediation includes any nonbinding process, including, but not limited to, neutral evaluation or a dispute review board, in which an independent third party or board assists the parties in dispute resolution through negotiation or by issuance of an evaluation. Any mediation utilized shall conform to the timeframes in this section.

(D) Unless otherwise agreed to by the public entity and the contractor in writing, the mediation conducted pursuant to this section shall excuse any further obligation under Section 20104.4 to mediate after litigation has been commenced.

(E) This section does not preclude a public entity from requiring arbitration of disputes under private arbitration or the Public Works Contract Arbitration Program, if mediation under this section does not resolve the parties' dispute.

(3) Failure by the public entity to respond to a claim from a contractor within the time periods described in this subdivision or to otherwise meet the time requirements of this section shall result in the claim being deemed rejected in its entirety. A claim that is denied by reason of the public entity's failure to have responded to a claim, or its failure to otherwise meet the time requirements of this section, shall not constitute an adverse finding with regard to the merits of the claim or the responsibility or qualifications of the claimant.

(4) Amounts not paid in a timely manner as required by this section shall bear interest at 7 percent per annum.

(5) If a subcontractor or a lower tier subcontractor lacks legal standing to assert a claim against a public entity because privity of contract does not exist, the contractor may present to the public entity a claim on behalf of a subcontractor or lower tier subcontractor. A subcontractor may request in writing, either on his or her own behalf or on behalf of a lower tier subcontractor, that the contractor present a claim for work which was performed by the subcontractor or by a lower tier subcontractor on behalf of the subcontractor. The subcontractor requesting that the claim be presented to the public entity shall furnish reasonable documentation to support the claim. Within 45 days of receipt of this written request, the contractor shall notify the subcontractor in writing as to whether the contractor presented the claim to the public entity and, if the original contractor did not present the claim, provide the subcontractor with a statement of the reasons for not having done so.

(e) The text of this section or a summary of it shall be set forth in the plans or specifications for any public works project that may give rise to a claim under this section.

(f) A waiver of the rights granted by this section is void and contrary to public policy, provided, however, that (1) upon receipt of a claim, the parties may mutually agree to waive, in writing, mediation and proceed directly to the commencement of a civil action or binding arbitration, as applicable; and (2) a

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public entity may prescribe reasonable change order, claim, and dispute resolution procedures and requirements in addition to the provisions of this section, so long as the contractual provisions do not conflict with or otherwise impair the timeframes and procedures set forth in this section.

(g) This section applies to contracts entered into on or after January 1, 2017.

(h) Nothing in this section shall impose liability upon a public entity that makes loans or grants available through a competitive application process, for the failure of an awardee to meet its contractual obligations.

(i) This section shall remain in effect only until January 1, 2027, and as of that date is repealed, unless a later enacted statute that is enacted before January 1, 2027, deletes or extends that date.

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VENTURA COUNTY
STANDARD SPECIFICATIONS
(VCSS)

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**COUNTY OF VENTURA
PUBLIC WORKS AGENCY
STANDARD SPECIFICATIONS
PART 1 - GENERAL PROVISIONS**

SECTION 0 - SSPWC ADOPTION AND MODIFICATIONS

0-1 STANDARD SPECIFICATIONS

Except as hereinafter provided or as modified by the Special Provisions, the provisions of Parts 2 through 5 of the 2015 edition of the Standard Specifications for Public Works Construction (referred to as SSPWC), published by BNi Building News, Los Angeles, are part of these Standard Specifications.

0-2 DELETIONS

The following portions of SSPWC are hereby deleted: Part 1 and Sections 200-1.6.2, and 301-1.4.

0-3 NUMBERING OF SECTIONS

The numbering in these modifications is compatible with the numbering in SSPWC. References to whole sections of SSPWC and these modifications are preceded by the word "Section", references to parts of sections show numbers only, such as "211-5", except at the beginning of a sentence, the word "Section" precedes the number. Standard Special Provisions, if included, are numbered as Sections 901 through 999. The Special Provisions are numbered starting with Section 1000 or higher.

Cross-references contained in SSPWC to sections deleted by 0-2 hereof shall be references to the sections of like number contained herein.

0-4 ADDITIONS

The sections that follow, either, replace sections of like number in SSPWC which were deleted in 0-2 above, modify sections of SSPWC, or add material not in SSPWC.

SECTION 1 - TERMS, DEFINITIONS, ABBREVIATIONS, UNITS OF MEASURE AND SYMBOLS

1-1 GENERAL Unless otherwise stated, the words directed, required, permitted, ordered, instructed, designated, considered necessary, prescribed, approved, acceptable, satisfactory, or words of like meaning, refer to actions, expressions, and prerogatives of the Engineer.

1-2 TERMS AND DEFINITIONS

Acceptance--The formal written acceptance by the Agency of the Work which has been completed in all respects in accordance with the Plans and Specifications and any Modifications thereof.

Addendum--Written or graphic instrument issued prior to the opening of Bids which clarifies, corrects or changes the bidding or Contract Documents. The term "Addendum" shall include bulletins and all other types of written notices issued to potential bidders prior to opening of Bids.

Agency--The legal entity for which the Work is being performed.

Agreement--See Contract.

Base--A layer of specified material of planned thickness placed immediately below the pavement or surfacing.

Bid--The offer or proposal of the Bidder submitted on the prescribed form setting forth the prices for the Work.

Bidder--Any individual, firm, partnership, corporation, or combination thereof, submitting a Bid for the Work, acting directly or through a duly authorized representative.

Board--The officer or body constituting the awarding authority of the Agency.

Bond--Bid, performance and payment bond or other instrument of security.

Cash Contract--A contract financed by means other than special assessments.

Certificate of Compliance--A written document signed and submitted by a supplier or manufacturer that certifies that the material or assembled material supplied to the Work site conforms to the requirements of the Contract Documents.

Change Order--A written order to the Contractor signed by the Agency directing an addition, deletion or revision in the Work, or an adjustment in the Contract Price or the Contract time issued after the effective date of the Contract. A Change Order may or may not also be signed by the Contractor.

Code--The terms Government Code, Labor Code, etc. refer to codes of the State of California.

Consultant--A professional engineer, architect, landscape architect or other professional who designed the project or performed other services for the Agency on the project.

Contract--The written agreement between the Agency and the Contractor covering the Work.

Contract Documents--The Contract, Addenda, notice inviting bids, instruction to bidders; Bid (including documentation accompanying the Bid and any post-bid documentation submitted prior to the Notice of Award) when attached as an exhibit to the Contract, the Bonds, permits from jurisdictional regulatory agencies, Special Provisions, Plans, Standard Plans, Standard Specifications, Reference Specifications, Change Orders and Supplemental Agreements.

Contractor--The individual, partnership, corporation, joint venture, or other legal entity having a Contract with the Agency to perform the Work. In the case of work being done under permit issued by the Agency, the Permittee shall be construed to be the Contractor. The term "prime contractor" shall mean Contractor.

Contract Price--The total amount of money for which the Contract is awarded.

Contract Unit Price--The amount shown in the Bid for a single unit of an item of work.

County Sealer--The Sealer of Weights and Measures of the county in which the Contract is let.

Days--Days shall mean consecutive calendar days unless otherwise specified.

Daily Extra Work Reports--Reports on Agency furnished forms as required by 3-3.

Disputed Work--Work in which Agency and Contractor are in disagreement.

Due Notice--A written notification, given in due time, of a proposed action where such notification is required by the Contract to be given a specified interval of time (usually 48 hours or two Working Days) prior to the commencement of the contemplated action. Notification may be from Engineer to Contractor or from Contractor to Engineer.

Electrolier--Street light assembly complete, including foundation, standard, luminaire arm, luminaire, etc.

1-2 DEFINITIONS (Continued)

- Engineer--The Director of Public Works Agency acting either directly or through properly authorized agents, such agents acting within the scope of the particular duties delegated to them.
- Field Directive--A written communication from the Engineer to the Contractor that does not make any Modification to the Contract Documents. It is used only to answer Contractor's questions and to provide decisions as specified in the Contract Documents.
- Geotextile--Synthetic fiber used in civil engineering applications, serving the primary function of separation and filtration.
- House Connection Sewer--A sewer, within a public street or right of way, proposed to connect any parcel, lot, or part of a lot with a main line sewer.
- House Sewer--A sewer, wholly within private property, proposed to connect any building to a house connection sewer.
- Luminaire--The lamp housing including the optical and socket assemblies (and ballast if so specified).
- Major Bid Item--A single Contract item constituting 10% or more of the original Contract Price.
- Mast Arm--The structural member or bracket, which, when mounted on a Standard, supports the luminaire.
- Modification--Includes Change Orders and Supplemental Agreements. A Modification may only be issued after the effective date of the Contract.
- Notice of Award--The written notice by the Agency to the successful Bidder stating that upon compliance by it with the required conditions, the Agency will execute the Contract.
- Notice to Proceed--A written notice given by the Agency to the Contractor fixing the date on which the Contract time will start.
- Owner--Same meaning as Agency.
- Person--Any individual, firm, association, partnership, corporation, trust, joint venture, or other legal entity.
- Plans--The drawings, profiles, cross sections, Standard Plans, working drawings, shop drawings, and supplemental drawings, or reproductions thereof, approved by the Engineer, which show the location, character, dimensions, or details of the Work.
- Private Contract--Work subject to Agency inspection, control, and approval, involving private funds, not administered by the Agency.
- Prompt--The briefest interval of time required for a considered reply, including time required for approval by a governing body.
- Proposal--See Bid.
- Reference Specifications--Those bulletins, standards, rules, methods of analysis or testing, codes, and specifications of other agencies, engineering societies, or industrial associations referred to in the Contract Documents. These refer to the latest edition, including amendments in effect and published at the time of advertising the project or issuing the permit, unless specifically referred to by edition, volume, or date.
- Roadway--The portion of a street reserved for vehicular use.
- Service Connection--All or any portion of the conduit cable or duct including meter, between a utility distribution line and an individual consumer
- Service Lateral Connection--The interface of the House Connection Sewer with the host pipe.
- Sewer--Any conduit intended for the reception and transfer of sewage and fluid industrial waste.
- Shop Drawings--Drawings showing details of manufactured or assembled products proposed to be incorporated in the Work.
- Special Provisions--Any provisions which supplement or modify the Standard Specifications.
- Specifications--Standard Specifications, Reference Specifications, Standard Special Provisions, Special Provisions, and specifications in Change Orders or Supplemental Agreements between the Contractor and the Board.
- Standard--The shaft or pole used to support street lighting luminaire, traffic signal heads, mast arms, etc.
- Standard Plans--Details of standard structures, devices, or instructions referred to on the Plans or in the Specifications by title or number.
- Standard Special Provisions-- Special Provisions prepared in standardized form numbered in the series 401 through 499.

1-2 DEFINITIONS (Continued)

Standard Specifications--Parts 1 through 6 of this document. See Section 0. References to whole sections will be preceded by the word "Section", references to parts of sections will show numbers only, such as "3-2", except at the beginning of a sentence, the word "Section" precedes the number.

State--The State of California.

State Standard Plans--Standard Plans prepared by State of California, Business and Transportation Agency, Department of Transportation.

Stipulated Unit Price--Unit prices established by Agency in the Contract Documents.

Storm Drain--Any conduit and appurtenances intended for the reception and transfer of storm water.

Street--Any road, highway, parkway, freeway, alley, walk or way.

Subbase--A layer of specified material of planned thickness between a base and the subgrade.

Subcontractor--An individual, firm or corporation having a direct contract with the Contractor or with any other Subcontractor for the performance of a part of the Work.

Subgrade--For roadways, that portion of the roadbed on which pavement, surfacing, base, subbase, or a layer of other material is placed. For structures, the soil prepared to support a structure.

Supervision--Supervision, where used to indicate supervision by the Engineer, shall mean the performance of obligations, and the exercise of rights, specifically imposed upon and granted to the Agency in becoming a party to the Contract. Except as specifically stated herein, supervision by the Agency shall not mean active and direct superintendence of details of the Work.

Supplemental Agreement--A written amendment of the Contract Documents signed by both parties.

Surety--See 2-4.

Utility--Tracks, overhead or underground wires, pipelines, conduits, ducts, or structures, sewers or storm drains owned, operated or maintained in or across a public right of way or private easement.

Work--That which is proposed to be constructed or done under the Contract or permit, including the furnishing of all labor, materials, equipment, and services.

Working Day--See 6-7.2 and 6.7.2.1.

Working Drawings--Drawings showing details not shown on the Plans which are required to designed by the Contractor

1-3 ABBREVIATIONS

1-3.1 General. The abbreviations herein, together with others in general use, are applicable to these Standard Specifications and to all other Contract Documents.

All abbreviations and symbols used on Plans for structural steel construction shall conform to those given by the "Manual of Steel Construction" published by the American Institute of Steel Construction, Inc.

1-3.2 Common Usage

<u>Abbreviation</u>	<u>Word or Words</u>	<u>Abbreviation</u>	<u>Word or Words</u>
Aban	Abandon	l	Liters
Aband	Abandoned	Lab	Laboratory
ABS	Acrylonitrile-butadiene-styrene	Lat	Lateral
AC	Asphalt Concrete	LD	Local depression
ACP	Asbestos cement pipe	LED	Light Emitting Diode
ADA	Americans with Disabilities Act of 1990 (Public Law 101-336, 104 Stat. 1990,42 USC 12101-12213 (as amended))	LH	Lamp hole
Alt	Alternate	LL	Live load
AmerStd	American Standard	LOL	Layout line
APC	Air Placed Concrete	Long	Longitudinal
ARAM	Asphalt Rubber Aggregate Membrane	LP	Lamp post
ARHM	Asphalt Rubber Hot Mix	LPS	Low pressure sodium (Light)
AWG	American Wire Gage (non-ferrous wire)	LS	Lump sum
B/W	Back of wall	LTS	Lime treated soil
BC	Beginning of curve	m	Meters
BCR	Beginning of curb return	Maint	Maintenance
Bdry	Boundary	Max	Maximum
BF	Bottom of footing	MC	Medium curing
BM	Bench mark	MCR	Middle of curb return
BMPs	Best Management Practices	Meas	Measure
BVC	Beginning of vertical curve	MH	Manhole, maintenance hole
C&G	Curb & Gutter	Mil Spec	Military specification
C&G	Curb and gutter	Min	Minimum
CAB	Crushed aggregate base	Misc	Miscellaneous

<u>Abbreviation</u>	<u>Word or Words</u>	<u>Abbreviation</u>	<u>Word or Words</u>
CALOSHA	California Occupational Safety and Health Administration	Mon	Monument
CALTRANS	California Department of Transportation	MSDS	Material Safety Data Sheet
CAP	Corrugated aluminum pipe	Mult	Multiple
CB	Catch Basin	MUTCD	Manual on Uniform Traffic Control Devices
Cb	Curb	MVL	Mercury vapor light
CBP	Catch Basin Connection Pipe	N/A	No applicable
CBR	California Bearing Ratio	NRCP	Nonreinforced concrete pipe
C-C	Center to center	Obs	Obsolete
CCFRPM	Centrifugally Cast Fiberglass Reinforced Plastic Mortar	oc	On center
CCR	California Code of Regulations	OD	Outside diameter
CCTV	Closed Circuit TV	OE	Outer edge
CF	Cubic foot	Opp	Opposite
CF	Curb face	Orig	Original
CFR	Code of Federal Regulations	PAV	Pressure Aging Vessel
CFS	Cubic feet per second	PB	Pull box
CHDPE	Corrugated High Density Polyethylene	PC	Point of curvature
CIP	Cast iron pipe	PCC	Point of compound curvature
CIPP	Cast-in-place pipe	PCC	Portland cement concrete
CIPPC	Cast-in-place Concrete Pipe	PCVC	Point of compound vertical curve
CL	Clearance, center line	PE	Polyethylene
CLF	Chain link fence	PG	Performance Graded
CLSM	Controlled Low Strength Material	PI	Point of intersection
CMB	Crushed miscellaneous base	PL	Property line
CMC	Cement mortar-coated	PLI	Pounds per linear inch
CML	Cement mortar-lined	PMB	Processed miscellaneous base
cms	Cubic meters per second	POC	Point on curve
CO	Cleanout (Sewer)	POT	Point on tangent
Col	Column	PP	Power pole
Conc	Concrete	PRC	Point of reverse curve
Conn	Connection	PRCB	Precast Reinforced Concrete Box
Const	Construct, Construction	PRVC	Point of reverse vertical curve
Coord	Coordinate	PSI	Pounds per square inch
CQS	Cationic Quick-Setting	PT	Point of tangency
CRM	Crumb Rubber Modifier	PVC	Polyvinyl chloride
CRS	Cationic Rapid-Setting	Pvmt	Pavement
CSEP	Confined Space Entry Plan	Pvt R/W	Private right of way
CSP	Corrugated steel pipe	Q	Rate of flow in cms (CFS)
CSPA	Corrugated steel pipe arch	Quad	Quadrangle, Quadrant
CSS	Cationic Slow-Setting	R	Radius or Resistance value
CT	California Test	R&O	Rock and Oil
CTB	Cement treated base	R/W	Right of way
CV	Check valve	RA	Reclaimed Asphalt or Recycling agent
CY	Cubic yard	RAC	Recycled asphalt concrete
D	Depth, Load of pipe	RAP	Reclaimed asphalt pavement
db	Decibels	RBAC	Rubberized asphalt concrete
Dbl	Double	RC	Reinforced concrete or Rapid Curing
DF	Douglas Fir	RCB	Reinforced concrete box
Dia	Diameter	RCE	Registered civil engineer
DIP	Ductile iron pipe	RCP	Reinforced concrete pipe
DL	Dead load	RCV	Remote control valve
DT	Drain tile	Ref	Reference
Dwg	Drawing	Reinf	Reinforced or reinforcement
Dwy Appr	Driveway approach	Res	Reservoir
Dwy	Driveway	RGE	Registered geotechnical engineer
Ea	Each	RPPCC	Reclaimed Plastic Portland Cement Concrete
EC	End of curve	RR	Railroad
ECR	End of curb return	RSE	Registered structural engineer
EF	Each face	RTE	Registered traffic engineer
EG	Edge of gutter	RTFO	Rolling Thin Film Oven
EGL	Energy grade line	RW	Reclaimed Water
EI	Elevation	S	Slope
ELC	Electrolier lighting conduit	S/W	Sidewalk
ELT	Extra long ton of slurry	SC	Slow curing
Eng	Engineer, Engineering	SCCP	Steel cylinder concrete pipe
EP	Edge of pavement	SCNs	Supplementary Cementitious Materials
Esmt	Easement	SD	Storm drain
ETB	Emulsion treated base	SDR	Standard dimension ratio

<u>Abbreviation</u>	<u>Word or Words</u>	<u>Abbreviation</u>	<u>Word or Words</u>
EVC	End of vertical curve	SE	Sand Equivalent
Exc	Excavation	Sec	Section
Exist or Ex	Existing	SF	Square foot
Exp Jt	Expansion joint	SG	Specific gravity
F & C	Frame and cover	SI	International System of Units (Metric)
F & I	Furnish and install	SLC	Service Lateral Connection
F/W	Face of wall	Spec	Specifications
Fab	Fabricate	SR	Standard ratio
FAS	Flashing arrow sign	SS	Sanitary sewer
FD	Floor drain	SSB	Select sub-base
Fdn	Foundation	SSP	Structural steel plate pipe
Fed Spec	Federal Specification	SSPA	Structural steel plate pipe arch
FG	Finished grade	St Hwy	State highway
FL	Flow line	Sta	Station
FS	Finished surface	Std	Standard
ft - lb	foot – pound	Str Gr	Straight grade
Ftg	footing	Str	Straight
FW	Face of wall	Struc	Structural/Structure
Ga	Gauge	SW	Sidewalk
Galv	Galvanized	SWD	Sidewalk drain
GG	Gap graded	SWPPP	Storm Water Pollution Prevention Plan
GIP	Galvanized iron pipe	SY	Square Yard
GL	Ground line or grade line	T/W	Top of wall
GM	Gas meter	Tan	Tangent
GP	Guy pole	TC	Top of curb
Gr	Grade	TCP	Traffic control plan
Grtg	Grating	Tel	Telephone
GSP	Galvanized steel pipe	TF	Top of footing
H	High or height	Topo	Topography
HB	Hose bib	Tr	Tract
HC	House connection	Trans	Transition
HDPE	High density Polyethylene	TRMAC	Tire rubber modified asphalt concrete
HDWL	Headwall	TS	Traffic signal or transition structure
HGL	Hydraulic grade line	TSC	Traffic signal conduit
Hor, Horiz	Horizontal	TSS	Traffic signal standard
Hp	Horsepower	TTC	Temporary traffic control
HPG	High pressure gas	TW	Top of wall
HPS	High pressure sodium (Light)	Typ	Typical
HRWRA	High Range Water Reducing Admixture	U.S.	United States
Hyd, Hydr	Hydraulic	U.S.C.	United States Code
ID	Inside diameter	USA	Underground Service Alert
Incl	Include, Including	Var	Varies, Variable
Insp	Inspection	VB	Valve box
Inv	Invert	VC	Vertical curve
IP	Iron pipe	VCP	Vitrified clay pipe
J	Joules	Vert	Vertical
JC	Junction chamber	Vol	Volume
Jct	Junction	VTCSH	Vehicle Traffic Controls Signal Heads
JS	Junction structure	W	Width or Wider
Jt	Joint	WATCH	Work Area Traffic Control Handbook
kg	Kilograms	WI	Wrought iron
kPa	KiloPascals	WM	Water meter
L	Length	WPJ	Weakened plane joint
		WTAT	Wet Track Abrasion Test
		X Conn	Cross connection
		x (as in 2x4)	by
		X-Sec	Cross section

1-3.3 Institutions.

<u>Abbreviation</u>	<u>Word or Words</u>
AAN	American Association of Nurserymen
AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
AGC	Associated General Contractors of America
AISC	American Institute of Steel Construction
ANSI	American National Standards Institute
API	American Petroleum Institute
APWA	American Public Works Association
AREA	American Railway Engineering Association
ASHRAE	American Society of Heating, Refrigeration and Air-Conditioning Engineers
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
AWPA	American Wood Preserver's Association
AWS	American Welding Society
AWWA	American Water Works Association
CBSC	California Building Standards Commission
CRSI	Concrete Reinforcing Steel Institute
EIA	Electronic Industries Association
EPA	Environmental Protection Agency
ETL	Electrical Testing Laboratories
FCC	Federal Communications Commission
IAPMO	International Association of Plumbing and Mechanical Officials
ICC	International Code Council
IEEE	Institute of Electrical and Electronics Engineers
IMSA	International Municipal Signal Association
ITE	Institute of Traffic Engineers
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Association
NOAA	National Oceanic and Atmospheric Administration (Department of Commerce)
RUS	Rural Utility Service
UL	Underwriters' Laboratories, Inc.
USGS	United State Geological Survey
WFCB	Western Fire Chiefs Association

1-3.4 Building Codes. The Ventura County Building Code (VCBC) and Ventura County Fire Code (VCFC) are applicable to the Work. VCBC and VCFC adopt by reference a number of uniform and national codes. Where such codes are referenced directly in the Specifications, such references shall be to the VCBC or VCFC which adopt and modify certain provisions in the referenced codes.

<u>Abbreviation</u>	<u>Code</u>	<u>Publisher</u>
CBC	California Building Code	CBSC
DBC	Uniform Code for Abatement of Dangerous Building	ICC
UBC	Uniform Building Code	ICC
UFC	Uniform Fire Code	ICC and WFCB
UHC	Uniform Housing Code	ICC
UMC	Uniform Mechanical Code	IAPMO
UPC	Uniform Plumbing Code	IAPMO
NEC	National Electrical Code	NFPA

1-3.5 Reference Documents.

<u>Abbreviation</u>	<u>Document</u>
HDM	Highway Design Manual, State of California, Department of Transportation, Latest Edition
MUTCD	Manual on Uniform Traffic Control Devices
SSP	Standard Plans, State of California, Department of Transportation, latest edition
SPPWC	Standard Plans for Public Works Construction, Latest edition, published by BNi Building News, Los Angeles,
SSPWC	Standard Specifications for Public Works Construction, (See Section 0-1)
SSS	Standard Specifications, State of California, Department of Transportation, latest edition
VCSS	Ventura County Standard Specifications (Division 1, Sections 0 through 10, of which this section is a part)

1-4 UNITS OF MEASURE

1-4.1 General. The International System of Units, also referred to as SI or the metric system, is the principal measurement system in these Specifications and shall be used for construction, unless otherwise stated in the Contract Documents. U. S. Standard Measure, also called U. S. Customary System, are included in parenthesis. SI units and U. S. Standard Measure in parenthesis may or may not be exactly equivalent. If U. S. Standard Measures are specified for use in the Contract Documents, then all values used for construction shall be U. S. Standard Measures shown in parentheses. However, certain material Specifications and test requirements contained herein use SI units specifically and conversions to U. S. Measures have not been included in these circumstances. When U. S. Standard Measures are not included in parentheses, the SI units shall control.

Reference is also made to ASTM E 380 for definitions of various units of the SI system and a more extensive set of conversion factors.

1-4.1.1 Units for Work. Where U. S. Standard Measure units are shown on the Plans or are specified, U. S. Standard Measure shall be used for the Work.

1-4.2 Units of Measure, Equivalents and Abbreviations

One U.S. Customary Unit	(abbreviation)	Is Equal To	#	SI Unit
mil (=0.001 in)		25.4	micrometers	(μm)
inch	(in)	25.4	millimeter	(mm)
inch	(in)	2.54	centimeter	(cm)
foot	(ft)	0.3048	meter	(m)
yard	(yd)	0.9144	meter	(m)
mile		1.6093	kilometer	(km)
square foot	(ft ²)	0.0929	square meter	(m ²)
square yard	(yd ²)	0.8361	square meter	(m ²)
cubic foot	(ft ³)	0.0283	cubic meter	(m ³)
cubic yard	(yd ³)	0.7646	cubic meter	(m ³)
acre (=43,560 ft ²)		0.4047	hectare (1ha=10,000m ²)	(ha)
gallon	(gal)	3.7854	Liter	(L)
fluid ounce	(fl. oz.)	29.5735	milliliter	(mL)
pound mass (avoirdupois)	(lbs)	0.4536	kilogram	(kg)
ounce mass	(oz)	0.02835	kilogram	(kg)
ounce mass	(oz)	28.35	grams	(g)
Ton (=2000 lb avoirdupois)		0.9072	Tonne (1 Tonne = 1000 kg)	
Poise		0.10	Pascal-second	(Pa-s)
centistoke	(cs)	1.00	square millimeter/sec.	(mm ² /s)
pound force	(lbf)	4.4482	Newton	(N)
pound per square inch	(psi)	6.8948	Kilopascal	(kPa)
pound force per foot	(lbf/ft)	14.594	Newton per meter	(N/M)
foot-pound force	(ft-lbf)	1.3558	Joules	(J)
foot-pound force per second	([ft-lbf]/s)	1.3558	Watt	(W)
part per million	(ppm)	1.00	milligram/liter	(mg/L)
Degree Fahrenheit	(°F)	0.5555	Degree Celsius	(°C)

Temperature: Celsius to Fahrenheit	Temperature: Fahrenheit to Celsius
Temperature °F = (1.8 x °C) + 32	Temperature °C = (°F - 32) / 1.8

SI Units Used in Both Systems		
Ampere (A)	second (s)	Candela (cd)
Volt (V)	decibel (db)	Lumen (lm)

Common Metric Prefixes			
kilo (k)	10 ³	milli (m)	10 ⁻³
centi (c)	10 ⁻²	micro (μ)	10 ⁻⁶
		nano (n)	10 ⁻⁹
		pico (p)	10 ⁻¹²

1-5 SYMBOLS

° Degree	ℙ Property line	% Percent
' Feet or minutes	ℚ Survey line or station line	# Number
" Inches or seconds	ℚ Center line	/ per or of (between words)
Δ Delta, the central angle or angle between tangents	∠ Angle	

SECTION 2 - SCOPE AND CONTROL OF WORK

2-1 AWARD AND EXECUTION OF CONTRACT

2-1.1 Award of Contract. The right is reserved to waive minor irregularities in the proposals and to reject any or all proposals. The award of the Contract, if it be awarded, will be to the lowest responsive, responsible Bidder, determined as provided on the Proposal Form, whose Proposal complies with all the requirements prescribed. Such award, if made, will be made within the number of Days stated in the Proposal form. If the lowest responsible Bidder refuses or fails to execute the Contract, the Agency may, within 45 additional Days, consider the next lowest Bidder to be the lowest responsive, responsible Bidder. The periods of time specified above within which the award of Contract may be made shall be subject to extension for such further period as may be agreed upon in writing by the Bidder concerned. If the Bidder's bid guarantee was in the form of a bid bond, the Bidder shall also submit a statement from the Surety that the bond has been extended for the same period.

Proposals not accompanied by a properly executed Noncollusion Affidavit required by Public Contract Code Section 7106 will be considered nonresponsive and will not be considered for award.

All bids will be compared on the basis of the quantities, amounts and unit prices, or lump sums, as shown on the Bid Proposal.

Before award, the Bidder may be required to furnish acceptable evidence of adequate capability, equipment and financial resources to adequately perform the Work. Bidders found not to be so qualified may have their bids rejected. If reasonable cause exists to believe collusion exists among Bidders, or that prices Bid are unbalanced between Bid items, any or all proposals may be rejected.

Award will not be made to a Bidder who is listed by the State Labor Commissioner as ineligible to bid, work on, or be awarded public works projects.

2-1.2 Notice of Award. Within one Day after award of Contract by the Board, the Bidder to whom Contract is awarded will be notified of award by email and telephone, or if no contact is made by telephone, then by mail. Within three business days after award of Contract, a Notice of Award will be sent, transmitting the Contract Documents to such Bidder for execution. If telephone contact is made, the Bidder may request that the Contract Documents be held in Agency's office to be picked up.

2-1.3 Execution of Contract Documents. On receipt of the Contract Documents, the Bidder shall promptly obtain the required insurance coverage, certificates of insurance, power-of-attorney and Contract bonds, execute the Contract, and transmit all required documents to the Agency.

2-1.4 Failure to Execute Documents. Should the Bidder fail to furnish Agency all required documents, properly executed, prior to the starting day of the Contract time computed as provided in 6-7.4 and stated in the Notice of Award, Agency may thereafter declare the Bidder to be in default and its Proposal guarantee forfeited.

2-1.5 Return of Proposal Guarantees. Within 10 Days after the award of the Contract, Agency will return the Proposal guarantees, other than Bidder's bonds, accompanying such of the proposals as are not to be further considered in making the award. The low and second Bidder's Proposal guarantee will be held until the Contract has been executed, after which all Proposal guarantees, except Bidders' bonds and any guarantees which have been forfeited, will be returned to the respective Bidders whose proposals they accompany.

2-2 ASSIGNMENT. No Contract or portion thereof may be assigned without consent of the Board except that the Contractor may assign money due or which will accrue to it under the Contract. If given written notice, such assignment will be recognized by the Board to the extent permitted by law, but any assignment of money shall be subject to all proper withholdings in favor of the Agency and to all deductions provided for in the Contract. All money withheld, whether assigned or not, shall be subject to being used by the Agency for completion of the Work, should the Contractor be in default.

2-3 SUBCONTRACTS.

2-3.1 General. Each Bidder shall comply with the Chapter of the Public Contract Code including Sections 4100 through 4113. The following excerpts or summaries of some of the requirements of that Chapter are included below for information.

The Bidder shall set forth in the Bid, as provided in 4104:

"(a) (1) The name, the location of the place of business, and the California contractor license number of each subcontractor who will perform work or labor or 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 1 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 1 percent of the prime contractor's total bid or ten thousand dollars (\$10,000), whichever is greater.

(2) An inadvertent error in listing the California contractor license number provided pursuant to paragraph (1) shall not be grounds for filing a bid protest or grounds for considering the bid nonresponsive if the corrected contractor's license number is submitted to the public entity by the prime contractor within 24 hours after the bid opening and provided the corrected contractor's license number corresponds to the submitted name and location for that subcontractor."

If the Contractor fails to specify a Subcontractor, or specifies more than one Subcontractor for the same portion of the Work to be performed under the Contract (in excess of one-half of 1 percent of the Contractor's total bid), the Contractor shall be qualified to perform that portion itself, and shall perform that portion itself except as otherwise provided in the Code.

Except as provided in Section 4107, no prime contractor, whose Bid is accepted, shall substitute any person or Subcontractor in place of the Subcontractor listed in the original bid other than for causes and by procedures established in Section 4107.5 which provides procedures to correct a clerical error in the listing of a Subcontractor.

Section 4110 provides that a Contractor violating any of the provisions of the Chapter violates the Contract and the Board may exercise the option either to cancel the Contract or assess the Contractor a penalty in an amount of not more than 10 percent of the subcontract involved, after a public hearing.

2-3.1.1 Use of Debarred Subcontractors Prohibited. The Contractor is prohibited from performing work using a Subcontractor who is listed by the State Labor Commissioner as ineligible to work on public works projects.

2-3.2 Additional Responsibilities. The Contractor shall give personal attention to the fulfillment of the Contract and shall keep the Work under its control.

Except where the required Contractor's License Class is "B", the Contractor shall perform, with its own organization, Contract work amounting to at least 50 percent of the Contract Price except that any designated "Specialty Items" may be performed by subcontract and the amount of any such "Specialty Items" so performed may be deducted from the Contract Price before computing the amount required to be performed by the Contractor with its own organization. "Specialty Items" will be identified by the Agency in the Bid or Proposal with an "[S]". Where an entire item is subcontracted, the value of work subcontracted will be based on the Contract Unit Price. This will be determined from information submitted by the Contractor, and subject to approval by the Engineer.

Before the work of any Subcontractor is started, the Contractor shall submit to the Engineer for approval a written statement showing the work to be subcontracted giving the name, contractor license number, registration with the Department of Industrial Relations, and business of each Subcontractor and description and value of each portion of work to be subcontracted.

2-3.3 Status of Subcontractors. Subcontractors shall be considered employees of the Contractor, and the Contractor shall be responsible for their work.

2-3.3.1 Subcontracts. The Contractor shall incorporate into all subcontracts, and the Subcontractor shall incorporate into all lower tier subcontracts, all of the Plans and Specifications which are part of the Contract between the Contractor and the Agency.

2-3.3.2 Contractor Responsible. The Contractor is responsible for properly performing and completing all Work required by the Contract whether or not it employs subcontractors for certain portions of the Work. It shall coordinate the sequence and timing of its efforts and that of its subcontractors to insure the proper and timely completion of the Work.

2-3.3.3 Specialty Contractors. Where a specialty Contractor's license is required by law or by the Specifications in order to perform certain portions of the Work, the Contractor may perform such portion with its own forces if it holds the proper license. Otherwise, it shall employ a properly licensed subcontractor to perform that portion of the Work. Such requirement to employ a subcontractor does not modify the other requirements of 2-3.

2-4 CONTRACT BONDS. Before execution of the Contract by the Agency, the Bidder shall file surety bonds with the Agency to be approved by the Board in the amounts and for the purposes noted below. Bonds issued by a Surety who is listed in the latest version of U.S. Department of Treasury Circular 570, who is authorized to issue bonds in California, and whose bonding limitation shown in said circular is sufficient to provide bonds in the amount required by the Contract shall be deemed to be approved unless specifically rejected by the Agency. Bonds from all other sureties shall be accompanied by all of the documents enumerated in Code of Civil Procedure 995.660(a). The Bidder shall pay all bond premiums, costs, and incidentals.

Each bond shall incorporate, by reference, the Contract and be signed by both the Bidder and Surety and the signature of the authorized agent of the Surety shall be notarized.

The Bidder shall provide two good and sufficient surety bonds. The "Payment Bond" (Material and Labor Bond) shall be for not less than 100 percent of the Contract Price, to satisfy claims of material suppliers and mechanics and laborers employed by it on the Work. The bond shall be maintained by the Contractor in full force and effect until the Work is accepted by the Agency, and until all claims for materials and labor are paid, and shall otherwise comply with the Civil Code.

The "Performance Bond" shall be for 100 percent of the Contract Price to guaranty faithful performance of all Work, within the time prescribed, in a manner satisfactory to the Agency, and that all materials and workmanship will be free from original or developed defects. The bond must remain in effect until the end of the warranty period set forth in 6.8-2.

Should any bond become insufficient, the Contractor shall renew the bond within 10 Days after receiving notice from the Agency.

Should any Surety at any time be unsatisfactory to the Board, notice will be given the Contractor to that effect. No further payments shall be deemed due or will be made under the Contract until a new Surety shall qualify and be accepted by the Board.

Changes in the Work, or extensions of time, made pursuant to the Contract, shall in no way release the Contractor or Surety from its obligations. Notice of such changes or extensions shall be waived by the Surety.

2-4.1 Bond Forms. Bonds shall be on forms furnished by Agency.

2-5 PLANS AND SPECIFICATIONS

2-5.1 General. The Contractor shall keep at the work site a copy of the Plans and Specifications, to which the Engineer shall have access at all times.

The Plans, Specifications, and other Contract Documents shall govern the Work. The Contract Documents are intended to be complementary and cooperative. Anything specified in the Specifications and not shown on the Plans, or shown on the Plans and not specified in the Specifications, shall be as though shown or specified in both.

The Plans shall be supplemented by such working drawings and shop drawings as are necessary to adequately control the Work.

The Contractor shall ascertain the existence of any conditions affecting the cost of the Work through reasonable examination of the work site prior to submitting the Bid..

Existing improvements visible at the work site, for which no specific disposition is made on the Plans, but which interfere with the completion of the Work, shall be removed and disposed of by the Contractor.

The Contractor shall, upon discovering any error or omission in the Plans or Specifications, immediately call it to the attention of the Engineer.

2-5.1.1 Specifications Captions. Captions accompanying specification parts, sections and paragraphs are for convenience of reference only and do not limit the content of such part, section or paragraph.

The division of the Plans into parts and the division of the Specifications into divisions and sections are for the ease of reference only and does not imply the division of work between trades or subcontractors.

2-5.2 Precedence of Contract Documents. If there is a conflict between any of the Contract Documents, the document highest in precedence shall control. The precedence shall be as follows:

- 1) Permits issued by jurisdictional regulatory agencies.
- 2) Change Orders and Supplemental Agreements; whichever occurs last.
- 3) Contract/Agreement.
- 4) Addenda.
- 5) Bid/Proposal.
- 6) Special Provisions.
- 7) Plans.
- 8) Standard Plans.
- 9) Standard Specifications.
- 10) Reference Specifications.

Detail drawings shall take precedence over general drawings.

2-5.3 Shop Drawings, Working Drawings, and Submittals.

2-5.3.1 General. Submittals shall be provided, at the Contractor's expense, as required in 2-5.3.2, 2-5.3.3 and 2-5.3.4, when required by the Plans or Special Provisions, or when requested by the Engineer.

Materials shall neither be furnished nor fabricated, nor shall any work for which submittals are required be performed, before the required submittals have been reviewed and accepted by the Engineer. Neither review nor acceptance of submittals by the Engineer shall relieve the Contractor from responsibility for errors, omissions, or deviations from the Contract Documents, unless such deviations were specifically called to the attention of the Engineer in the letter of transmittal. The Contractor shall be responsible for the correctness of the submittals.

The Contractor shall allow a minimum of 20 working days for review of submittals unless otherwise specified in the Special Provisions. Each submittal shall be accompanied by a letter of transmittal.

2-5.3.2 Working Drawings. Working drawings shall be of a size and scale to clearly show all necessary details.

Six copies and one reproducible shall be submitted. If no revisions are required, 3 of the copies will be returned to the Contractor. If revisions are required, the Engineer will return one copy along with the reproducible for resubmission. Upon acceptance, the Engineer will return 2 of the copies to the Contractor and retain the remaining copies and the reproducible.

Working drawings are required in the following subsections:

TABLE 2-5.3.2 (A)

Item	Section Number	Title	Subject
1	7-8.5.2	Sanitary Sewers	Sewage Bypass and Pumping
2	7.8.6.3	Water Pollution Control	Storm Water Pollution Prevention Plan
3	7-8.6.6	Water Pollution Control	Dewatering Plan
4	7-10.2.2	Work Area Traffic Control	Traffic Control Plan
5	7-10.4..2.2	Safety	Trench Shoring
6	207-8.4	Joints	Vitrified Clay Pipe
7	207-10.2.1	General	Fabricated Steel Pipe
8	300-3.2	Cofferdams	Structure Excavation & Backfill
9	303-1.6.1	General	Falsework
10	303-1.7.1	General	Placing Reinforcement
11	303-3.1	General	Prestressed Concrete Construction
12	304-1.1.1	Shop Drawings	Structural Steel
13	304-1.1.2	Falsework Plans	Structural Steel
14	304-2.1	General	Metal Hand Railings
15	306-2.1	General	Jacking Operations
16	306-3.1	General	Tunneling Operations
17	306-3.4	Tunnel Supports	Tunneling Operations
18	306-6	Remodeling Existing Sewer Facilities	Polyethylene Liner Installation
19	306-8	Microtunneling	Microtunneling Operations

Working drawings listed above as Items 4, 5, 8, 9, 11, 12, 13, 15 and 18 shall be prepared by a Civil or Structural Engineer registered by the State of California.

2-5.3.3 Shop Drawings. Shop drawings are drawings showing details of manufactured or assembled products proposed to be incorporated into the Work. Shop drawings required shall be as specified in the Special Provisions.

2-5.3.4 Supporting Information. Supporting information is information required by the Specifications for the purposes of administration of the Contract, analysis for verification of conformance with the Specifications, the operation and maintenance of a manufactured product or system to be constructed as part of the Work, and other information as may be required by the Engineer. Six copies of the supporting information shall be submitted to the Engineer prior to the start of the Work unless otherwise specified in the Special Provisions or directed by the Engineer. Supporting information for systems shall be bound together and include all manufactured items for the system. If resubmittal is not required, three copies will be returned to the Contractor. Supporting information shall consist of the following and is required unless otherwise specified in the Special Provisions:

- 1) List of Subcontractors per 2-3.2.
- 2) List of Materials per 4-1.4.
- 3) Certificates of Compliance per 4-1.5.
- 4) Construction Schedule per 6-1.
- 5) Spill Prevention and Emergency Response Plan per 7-8.5.3
- 6) Confined Space Entry Program per 7-10.4.5.1
- 7) Lean concrete base mix designs per 200-4
- 8) Concrete mix designs per 201-1.1.
- 9) Asphalt concrete mix designs per 203-6.1.
- 10) Pipeline layout diagrams per 207-2.1
- 11) Equipment and materials list per 307-1
- 12) Controller cabinet wiring diagrams per 307-17.2.2
- 13) Data, including, but not limited to, catalog sheets, manufacturer's brochures, technical bulletins, specifications, diagrams, product samples, and other information necessary to describe a system, product or item. This information is required for irrigation systems, street lighting systems, and traffic signals, and may also be required for any product, manufactured item, or system.

2-5.4 Record Drawings. The Contractor shall prepare and maintain a set of prints in the Engineer's Field Office on which the locations and description of all plumbing, mechanical, and electrical facilities, which were not detailed fully on the Plans, are marked in colored pencil. Such prints shall also indicate any authorized changes from the original Plans. Such prints shall be furnished to the Engineer before final Acceptance of the Work.

2-6 WORK TO BE DONE. The Contractor shall perform all work necessary to complete the Contract in a satisfactory manner. Unless otherwise provided, it shall furnish all materials, equipment, tools, labor and incidentals necessary to complete the Work.

All work under the Contract shall be performed in accordance with the highest standards prevailing in the trades unless otherwise specified on the Plans or in the Special Provisions. Unless otherwise specified, it is the intent that the Contractor will construct a complete facility ready for use.

2-6.1 Manufacturer's Recommendations. Where the manufacturer of any materials or equipment provides written recommendations or instructions for its use or method of installation (including labels, tags, manuals, or trade literature), such recommendations or instructions shall be complied with except where the Contract Documents specifically require deviations.

2-6.2 Testing of Installed Components. Where the specifications provide that any component of the Work is to be tested, calibrated or adjusted during or after installation, such testing shall be performed by a qualified firm, approved by the Engineer. The firm performing the testing or calibration shall be employed by and paid for by the Contractor.

2-6.3 Training of Agency Personnel. Where the specifications provide for training of Agency personnel in the use or maintenance of any component of the Work, the Contractor shall arrange for and pay for competent personnel to perform the training. Contractor shall schedule the training with the Engineer.

2-7 SUBSURFACE DATA. All soil and test hole data, groundwater elevations, and soil analyses shown on the Plans or included in the Specifications apply only at the location of the test holes and to the depths shown. Soil test reports for test holes which have been drilled are available for inspection at the office of the Engineer. Additional subsurface exploration may be performed by Bidders or the Contractor at their own expense. The indicated groundwater elevation is that existing at the date specified in the data. It is the Contractor's responsibility to determine and allow for the groundwater elevation on the date the Work is performed. A difference in groundwater elevation between what is shown in soil boring logs and what is actually encountered during construction will not be considered as a basis for Extra Work per 3-3.

Opinions, recommendations or conclusions contained in any soils report, soil boring logs, subsurface materials investigation, geological report or other similar studies, tests or reports, prepared for the Agency, are not a part of the Contract. Contractor shall be responsible for forming its own opinions and conclusions from the facts set forth in such reports.

2-8 RIGHTS-OF-WAY. Rights-of-way, easements or rights-of-entry for the Work will be provided by the Agency. Unless otherwise provided, the Contractor shall make arrangements, pay for, and assume all responsibility for acquiring, using, and disposing of additional work areas and facilities temporarily required. The Contractor shall indemnify and hold the Agency harmless from all claims for damages caused by such actions.

2-9 SURVEYING

2-9.1 Permanent Survey Markers. The Contractor shall notify the Engineer at least 7 Days before starting work to allow for the preservation of survey monuments, lot stakes (tagged), and bench marks. The Engineer, or the owner at its cost, shall file a Corner Record Form referencing survey monuments subject to disturbance in the Office of the County Surveyor prior to the start of construction and also prior to the completion of construction for the replacement of survey monuments. The Contractor shall not disturb survey monuments, lot stakes (tagged), or bench marks without the consent of the Engineer or the owner on Private Contracts. The Contractor shall bear the expense of replacing any that may be disturbed without permission. Replacement shall be done only under the direction of the Engineer by a Licensed Land Surveyor or a Registered Civil Engineer authorized to practice land surveying within the state.

When a change is made in the finished elevation of the pavement of any roadway in which a permanent survey monument is located, the Contractor shall adjust the monument cover to the new grade within 7 Days of finished paving unless otherwise specified.

2-9.2 Survey Service. The Engineer will set only the horizontal and vertical control survey points shown on the Plans. These will be set prior to the commencement of construction. The Contractor shall preserve these points as well as any other surveys established by the Engineer for use by the Contractor for the duration of their usefulness. If any survey points established by Engineer are lost or disturbed and need to be replaced, such replacement shall be by the Engineer at the expense of the Contractor. The Contractor shall employ engineers or surveyors to perform adequate surveys and staking necessary to construct the Work to the lines, elevations and grades shown on the Plans and for the Engineer's use in checking such work. Copies of the field notes or diagrams used in setting stakes shall be promptly furnished to the Engineer.

2-9.2.1 Open Areas. Where dimensions are not given on the Plans for parking lots, landscaped areas or graded areas, distances shall be scaled. Unless otherwise indicated, straight grades and smooth vertical curves shall be set between indicated elevations. Finished surfaces shall be sloped to drain in order to eliminate ponding of water.

2-9.2.2 Utilities. Section 5-5.1 requires the Contractor's cooperation during the relocation of utilities, which may require the setting of lines and grades when needed by utility owners performing relocations.

2-9.3 Contractor's Surveys. Surveying by private engineers and surveyors on the Work shall conform to the quality and practice required by the Engineer.

2-9.3.1 Errors in Surveys. The Contractor is responsible for the accuracy of all surveys except those performed by the Engineer. To assure that a survey point set by the Engineer has not been disturbed since it was set and that it was accurately set, all surveys by the Contractor shall be based on at least two survey points set by the Engineer or by other governmental surveys, in accordance with good survey practice. Should discrepancies be found between such points, the Engineer shall be notified and construction shall not proceed until the discrepancy has been resolved.

2-9.4 Line and Grade. All Work upon completion shall conform to the lines, elevations, and grades shown on the Plans.

2-9.5 Quantity Surveys. The Engineer will perform all quantity surveys for payment purposes, however, in performing such quantity surveys, it may make use of surveys performed by the Contractor.

2-9.6 Payment for Surveys. Payment for performing all of the surveying and staking as required by the Specifications and such additional surveying and staking as required by the Contractor will be made at the lump sum price set forth in the Proposal and shall be full compensation for furnishing all labor, equipment, instruments and materials necessary to perform the Work. If no bid item for surveying is included in the Proposal, the cost of surveying shall be included in the prices bid for other applicable items of work.

2-10 AUTHORITY OF BOARD AND ENGINEER. The Board has the final authority in all matters affecting the Work. Within the scope of the Contract, the Engineer has the authority to enforce compliance with the Plans and Specifications. The Contractor shall promptly comply with instructions from the Engineer or its authorized representative.

On all questions relating to quantities, the acceptability of material, equipment, or work, the execution, progress or sequence of work, and the interpretation of Specifications or drawings, the decision of the Engineer is final and binding, and shall be precedent to any payment under the Contract, unless otherwise ordered by the Board.

2-10.1 Decisions in Writing. Any and all decisions of the Engineer interpreting Specifications or drawings shall be in writing. Any purported "interpretation" which is not in writing shall not be binding upon the Agency and should not be relied upon by the Contractor.

2-11 INSPECTION

The Work is subject to inspection and approval of the Engineer. The Contractor shall notify the Engineer before noon of the working day before inspection is required. Work shall be done only in the presence of the Engineer, unless otherwise authorized. Any work done without proper inspection will be subject to rejection. The Engineer and any authorized representatives shall at all times have access to the Work during its construction at shops and yards as well as the Work site. The Contractor shall provide every reasonable facility for ascertaining that the materials and workmanship are in accordance with these specifications. Inspection of the Work shall not relieve the Contractor of the obligation to fulfill all conditions of the Contract.

2-11.1 Permit Inspections. The Contractor shall arrange for code compliance inspections by all agencies issuing permits for the Work. The Work shall not continue beyond mandatory inspection points without clearance from the controlling agency. Each agency involved shall be notified in accordance with the code they enforce or in accordance with their standard operating procedures. No extensions of time will be granted for delays occasioned by such inspections except where, through no fault of the Contractor, the inspection is delayed more than one Day beyond normal response time after proper notification has been given. It shall be the Contractor's responsibility to see that any required inspection record card is signed off before proceeding with the next phase of the Work and completely signed off on completion of the Work.

2-11.2 Structural Observation. When the plans indicate that "Structural Observation" of specific work is required prior to Permit Inspection, Contractor shall notify Engineer, in writing, at least five working days prior to the date Contractor plans to have the work ready for structural observation. If the work is not ready for structural observation on the date indicated, Contractor shall reimburse Agency the cost of structural observer's visit to the Work site. If the work to be observed is substantially complete but is found to need correction before approval by the structural observer, Contractor shall give notice of a new date, as required above.

2-12 SPECIAL NOTICES. When specified in the Specifications or as directed by the Engineer, any notice required to be given in accordance with this subsection shall be in writing, dated, and signed by the Contractor or the Engineer. Such notices shall be served by any of the following methods:

- a) Personal delivery with proof of delivery which may be made by declaration under penalty of perjury by any person over the age of 18 years. The proof of delivery shall show that delivery was performed in accordance with these provisions. Service shall be effective on the date of delivery. Notices given to the Contractor by personal delivery may be made to the Contractor's authorized representative at the Work site; or
- b) Certified mail addressed to the mailing address of the recipient postage prepaid; return receipt requested. Service shall be effective on the date of the receipt of the mailing.

Simultaneously, the Agency may send the same notice by regular mail. If a notice that is sent by certified mail is returned unsigned, then delivery shall be effective pursuant to regular mail, provided the notice that was sent by regular mail is not returned.

2-13 AGENCY PERSONNEL AND AUTHORITY

2-13.1 General. The Board has complete authority for the project within the limits prescribed by law. Pursuant to resolutions duly adopted by the Board, the authority to perform certain functions has been delegated to the Director of Public Works. Agency staff personnel and Consultants delegated thereto by the Director are authorized to perform functions limited as set forth in the following list of personnel and designated duties.

2-13.2 Engineer. The Director of the Public Works Agency of the County of Ventura is the Engineer and has general authority to administer the Contract. The Engineer has the following specific authority:

(a) To issue Contract Change Orders (CCO) and to settle claims subsequent to Acceptance as follows:

<u>Original Contract Amount</u>	<u>Maximum Amount of any Change Order or Claim Settlement</u>
\$50,000 or less	\$5,000
greater than \$50,000 and not over \$250,000	10% of the original Contract amount
greater than \$250,000 and not over \$3,950,000	\$25,000 plus 5% of the original Contract cost in excess of \$250,000.
greater than \$3,950,000	\$210,000

CCOs and claim settlements exceeding the amounts set forth above require Board approval.

- (b) To make final adjustments of quantities (FAQ) on unit price items.
- (c) To accept the Work when the Contractor has completed all obligations of the Contract, in accordance with the Plans, Specifications and other Contract Documents. The Engineer also has authority to make and record the Notice of Completion.
- (d) To approve progress and final payments under the Contract, including the provisions for withholding funds.
- (e) To determine whether performance on the Work is satisfactory. Satisfactory performance includes compliance with all contract requirements.
- (f) To approve the substitution of a Subcontractor, where allowed by law, if the listed Subcontractor does not object when notified.
- (g) To suspend the Work for the benefit of the Agency.
- (h) In the absence of the Agency Director, a Public Works Agency Department Director, as Deputy Director of Public Works, may exercise the Engineer's authority. Such action will be indicated by "Acting" with the Department Director's signature.

2-13.3 Department Director (Public Works Agency). The Department Director responsible for the project is designated in the Notice to Proceed. The Department Director has the following authority:

(a) To issue Contract Change Orders (CCO) as follows:

<u>Original Contract Amount</u>	<u>Maximum Amount of any Change Order</u>
Less than \$500,000	\$5,000
\$500,000 to \$1,000,000	1% of Bid Price
Greater than \$1,000,000	\$10,000

- (b) To issue extensions of Contract time in accordance with the Contract Documents.
- (c) To make final adjustment of quantities where the total does not exceed the amounts listed in (a) above.
- (d) To approve the substitution of subcontractors, where allowed by law, if the listed Subcontractor does not object when notified.
- (e) To determine when the Work has been completed and acknowledge in writing the completion of the Work.

2-13.4 Project manager. The Project manager responsible for the project is designated in the Notice to Proceed. This person may also be referred to as Project Engineer. The Project manager has the following authority:

- (a) To interpret the Plans and Specifications.
- (b) To make minor changes in the location or features of the Work where no change in cost is involved. Such changes in cost may not be the net of multiple changes.
- (c) To approve substitutes for material and equipment specified by proprietary names when such material and equipment meet the Contract requirements.
- (d) To approve shop drawings and submittals.
- (e) To issue stop work orders when necessary to enforce the provisions of the Contract.
- (f) To make determinations of each Working Day to be charged against the Contract time in accordance with 6-7.3.
- (g) To take over a portion of the Work for Agency's use in accordance with 6-10.
- (h) To receive all correspondence and other documents from the Contractor.
- (i) To inspect the Work and perform Final Inspection subject to review by the Department Director and the Engineer.

2-13.5 Inspector. One or more inspectors will be assigned to the project by the Project manager. Substitutes may be used during absence of the assigned inspector. The Inspector has the following authority subject to review by the Project manager, Department Director and the Engineer:

- (a) To view and inspect the Work, sample and test components (at the Work site and at offsite manufacturing locations), and to discuss the Work with the Contractor's field representative.
- (b) To determine compliance with the Plans, Specifications and other Contract Documents and to issue warnings of noncompliance.
- (c) To issue stop work notices in the following two instances only:
 - 1) Where a safety hazard exists that has an immediate potential for serious injury or death.
 - 2) Where the operation in progress, if continued for even a short period of time, could be adverse to the Agency's interests.

2-13.6 Other Agency Personnel and Consultants.

2-13.6.1 Materials Engineer. The Materials Engineer is designated in the Notice to Proceed. The Materials Engineer may assign one or more Materials Inspectors to the project.

Materials Inspectors have authority to sample and test material at the Work site and at offsite manufacturing or storage locations. They may furnish available written test results to the Contractor's field representative. At batch plants, they may issue warnings of noncompliance, but stop notices require the signature of the Materials Engineer or Project manager.

2-13.6.2 Surveyors & Technicians. Surveyors and technicians shall have free access to the site to perform their duties but have no authority related to Contract administration.

2-13.6.3 Other Persons. Other Agency personnel who are not involved in construction administration and the general public may be present at the site because it is their present place of work, as client/customers, as visitors, as future users of the facility, or as persons who will maintain the completed facility. Where the facility is to continue in use during construction, work access for Agency workers and client/customers shall be maintained as provided in the Special Provisions. Where the facility (or portion where construction is being performed) is not in use during construction, admittance to the Work site by Agency personnel not involved in construction administration and visitors may be allowed by the Contractor or by the inspector, subject to compliance with safety regulations. Such persons have no authority under the Contract and the Agency is not responsible for their comments, suggestions or directions.

2-13.6.4 Consultants. Consultants hired by the Agency shall have free access to the site to perform their duties but have no authority related to Contract administration, unless such duties are specifically identified in writing to the Contractor. When so identified, Consultant may perform the duties of certain Agency personnel described above.

SECTION 3 - CHANGES IN WORK

3-1 CHANGES REQUESTED BY THE CONTRACTOR

3-1.1 General. Changes in specified methods of construction may be made at the Contractor's request when approved in writing by the Engineer. Changes in the Plans and Specifications, requested in writing by the Contractor, which do not materially affect the Work and which are not detrimental to the Work or to the interests of the Agency, may be granted by the Board to facilitate the Work, when approved in writing by the Engineer. Nothing herein shall be construed as granting a right to the Contractor to demand acceptance of such changes.

3-1.2 Payment for Changes Requested by the Contractor. If such changes are granted, they shall be made at a reduction in cost or at no additional cost to the Agency. All costs to the Agency in reviewing the proposed change, or testing materials involved therein, shall be paid for by the Contractor, whether or not the change is approved.

3-2 CHANGES INITIATED BY THE AGENCY

3-2.1 General. The Agency may change the Plans, Specifications, character of the Work, or quantity of work, provided the total arithmetic dollar value of all such changes, both additive and deductive, does not exceed 25 percent of the Contract Price. Should it become necessary to exceed this limitation, the change shall be by written Supplemental Agreement between the Contractor and Agency, unless both parties agree to proceed with the change by Change Order.

Change orders shall be in writing and state the dollar value of the change or establish method of payment, any adjustment in Contract time, and, when negotiated prices are involved, shall provide for the Contractor's signature indicating its acceptance.

3-2.2 Payment for Changes Initiated by the Agency.

3-2.2.1 Contract Unit Prices. If a change is ordered in an item of work covered by a Contract unit price, and such change does not involve a substantial change in the character of the Work from that shown on the Plans or included in the Specifications, an adjustment in payment will be made based upon the increase or decrease in quantity and the Contract unit price. In the case of such an increase or decrease in a Major Bid Item, the use of this basis for the adjustment of payment will be limited to that portion of the change which, together with all previous changes to that item, is not in excess of 25% of the total cost of such item based on the original quantity and Contract unit price.

If a change is ordered in an item of work covered by a Contract unit price, and such change does involve a substantial change in the character of the Work from that shown on the Plans or included in the Specifications, an adjustment in payment will be made in accordance with 3-2.2.3.

Should any Contract item be deleted in its entirety, payment will be made only for actual costs incurred prior to notification of such deletion.

3-2.2.2 Stipulated Unit Prices. Stipulated unit prices are those established by the Agency in the Contract Documents, as distinguished from Contract unit prices submitted by the Contractor. Stipulated unit prices may be used for the adjustment of Contract changes.

3-2.2.3 Pricing. Adjustments in payments for changes other than those set forth in 3-2.2.1 and 3-2.2.2 will be determined by agreement between Contractor and Agency. If unable to reach agreement, the Agency may direct the Contractor to proceed on the basis of Extra Work in accordance with 3-3 or as set forth in 3-2.2.4.

3-2.2.4 Non-Agreed Prices. Agency may issue a change order directing the Contractor to proceed at a price set by the Agency or on the basis of Extra Work. If the Agency sets a price for the work covered by the change order, Contractor is entitled to payment for such work in accordance with 3-3 to the extent payment in accordance with 3-3 exceeds the price set by the Agency.

3-3 EXTRA WORK

3-3.1 General. New or unforeseen work will be classed as "Extra Work" when the Engineer determines that it is not covered by Contract Unit Prices or Stipulated Unit Prices.

3-3.2 Payment.

3-3.2.1 General. When the price for the Extra Work cannot be agreed upon, the Agency will pay for the Extra Work based on the accumulation of costs as provided herein.

3-3.2.2 Basis for Establishing Costs

(a) Labor. The cost of labor will be the current cost for wages prevailing for each craft or type of workers performing the Extra Work at the time the Extra Work is done, plus payment of health and welfare, pension, vacation, apprenticeship funds, and other direct costs included in the prevailing rates applicable to the project, as well as assessments or benefits required by lawful collective bargaining agreements. To the total of these labor costs, the labor surcharge set forth in the current CALTRANS Labor Surcharge and Equipment Rental Rates publication shall be applied.

The use of a labor classification which would increase the Extra Work cost will not be permitted unless the Contractor establishes the necessity for such additional costs.

Labor costs for equipment operators and helpers shall be reported only when such costs are not included in the invoice for the equipment rental. The labor cost for foremen shall be proportioned to all of their assigned work and only that applicable to Extra Work shall be paid. A foreman is defined as a lead working journeyman.

Nondirect labor costs including superintendence, payroll taxes, all types of insurance, and all other labor costs, not specifically provided for, shall be considered to be paid for as part of the markup of 3-3.2.3(a)(1).

(b) Materials. The cost of materials reported shall be at invoice or lowest current price at which such materials are locally available and delivered to the Work site in the quantities involved, plus sales tax, freight and delivery.

The Agency reserves the right to approve materials and sources of supply, or to supply materials to the Contractor if necessary for the progress of the Work. No markup shall be applied to any material provided by the Agency.

(c) Tool and Equipment Rental. No payment will be made for the use of tools which have a replacement value of \$200 or less.

Regardless of ownership, the rates to be used for determining equipment rental costs shall not exceed the following:

- (1) For equipment that is listed in the current CALTRANS Labor Surcharge and Equipment Rental Rates publication, the rates shown therein. The right of way delay and overtime/multiple shift factors contained therein shall be used as applicable.
- (2) For equipment not listed in said CALTRANS publication, the listed rates prevailing locally at equipment rental agencies, or distributors, at the time the work is performed.
- (3) For equipment rental that includes operators and helpers, the applicable cost from (1) or (2) above, plus the applicable labor costs as determined in accordance with (a) above.

The rental rates paid shall include the cost of fuel, oil, lubrication, supplies, small tools, necessary attachments, repairs and maintenance of any kind, depreciation, storage, insurance, and all incidentals.

Necessary loading and transportation costs for equipment used on the Extra Work shall be added to the other costs.

If equipment is used intermittently and, when not in use, could be returned to its rental source at less expense to the Agency than holding it at the work site, it shall be returned, unless the Contractor elects to keep it at the work site at no expense to the Agency.

All equipment shall be acceptable to the Engineer, in good working condition, and suitable for the purpose for which it is to be used. Manufacturer's ratings and manufacturer's approved modifications shall be used to classify equipment and it shall be powered by a unit of at least the minimum rating recommended by the manufacturer.

The reported rental rates for equipment already at the work site shall be for the duration of its use on the Extra Work, commencing at the time it is first put into actual operation on the Extra Work, plus the time required to move it from its previous site, and move it back to its previous site or to a closer site of next use.

3-3.2.2 Basis for Establishing Costs (Continued)

(d) Other Items. The Agency may authorize other items which may be required on the Extra Work. Such items include labor, service, material and equipment which are different in their nature from those required for the Work specified in the Contract and which are of a type not ordinarily available from the Contractor or any of its subcontractors.

Invoices covering all such items in detail shall be submitted with the request for payment.

(e) Invoices. Vendors' invoices for material, equipment rental, and other expenditures, shall be submitted with the request for payment. If the request for payment is not substantiated by invoices or other documentation, the Agency may establish the cost of the item involved at the lowest price which was current at the time of the report.

3-3.2.3 Markup

(a) Work by Contractor. The following percentage shall be added to the Contractor's costs and shall constitute the markup for all overhead and profits, and all other cost not specifically provided for:

- (1) Labor 33%
- (2) Materials..... 15%
- (3) Equipment Rental 15%
- (4) Other Items and Expenditures ... 15%

To the sum of the cost and markups provided for in this section, 1 percent shall be added as compensation for bonding.

(b) Work by Subcontractor. When all or any part of the Extra Work is performed by a Subcontractor, the markup established in 3-3.2.3(a) shall be applied to the Subcontractor's actual cost of such work. A markup of 10% on the first \$5,000 of the subcontracted portion of the Extra Work and a markup of 5% on work in excess of \$5,000 of the subcontracted portion of the Extra Work may be added by the Contractor.

3-3.3 Daily Extra Work Reports by Contractor. When the price for the Extra Work cannot be agreed upon, the Contractor shall submit a Daily Extra Work Report to the Engineer on forms furnished by the Agency, together with applicable delivery tickets, listing all labor, materials, and equipment involved for that day, and for other services and expenditures when authorized. Failure to submit the Daily Extra Work Report, showing the labor and equipment hours and the quantity of materials used, by the close of the next Working Day may waive any rights for that day. Failure to submit fully completed Daily Extra Work Reports, with the required supporting documentation, within ten calendar days after the Engineer makes a written request for the such reports shall waive all rights for the work covered by the requested reports. An attempt shall be made to reconcile the Daily Extra Work Report daily, and it shall be signed by the Engineer and the Contractor. In the event of disagreement, pertinent notes shall be entered by each party to explain points which cannot be resolved immediately. Each party shall retain a signed copy of the Daily Extra Work Report. Daily Extra Work Reports by Subcontractors or others shall be submitted through the Contractor.

The Daily Extra Work Report shall:

- 1) Show names of workers, classifications, and hours worked.
- 2) Describe and list quantities of materials used.
- 3) Show type of equipment, size, identification number, and hours of operation, including loading and transportation, if applicable.
- 4) Describe other services and expenditures in such detail as the Agency may require.

In addition to the Daily Extra Work Reports, the Contractor shall furnish Certified Payroll Records for the labor included in the reports before payment will be made.

3-4 CHANGED CONDITIONS. The Contractor shall notify the Engineer in writing of the following work site conditions, hereinafter called changed conditions, promptly upon their discovery and before they are disturbed:

- 1) Subsurface or latent physical conditions differing materially from those represented in the Contract;
- 2) Unknown physical conditions of an unusual nature differing materially from those ordinarily encountered and generally recognized as inherent in Work of the character being performed; and
- 3) Material differing from that represented in the Contract which the Contractor believes may be hazardous waste, as defined in Section 25117 of the Health and Safety Code that is required to be removed to a Class I, Class II or Class III disposal site in accordance with provisions of existing law.

The Engineer will promptly investigate conditions which appear to be changed conditions. If the Engineer determines that the conditions are changed conditions and that they will materially increase or decrease the costs of any portion of the Work, a Change Order will be issued adjusting the compensation for such portion of the Work in accordance with 3-2.2. If the Engineer determines that conditions are changed conditions and that they will materially affect the performance time, the Contractor, upon submitting a written request, will be granted an extension of time subject to the provisions of 6-6.

If the Engineer determines that the conditions of which it has been notified by the Contractor do not justify an adjustment in compensation, the Contractor will be so notified in writing. This notice will also advise the Contractor of its obligation to notify the Engineer, in writing, if the Contractor disagrees.

Should the Contractor disagree with such determination, it may submit a written notice of potential claim to the Engineer before commencing the disputed work. In the event of such a disagreement, the Contractor shall not be excused on account of that disagreement from any scheduled completion date provided for by the Contract, but shall proceed with all Work to be performed under the Contract. However, the Contractor shall retain any and all rights provided either by Contract or by law which pertain to the resolution of disputes and protests between the contracting parties. The Contractor shall proceed as provided in 3-5.

The Contractor's failure to give notice of changed conditions promptly upon their discovery and before they are disturbed shall constitute a waiver of all claims in connection therewith.

3-5 DISPUTED WORK. If the Contractor and the Agency are unable to reach agreement on disputed work, the Agency may direct the Contractor to proceed with the Work. Payment shall be as later determined by mediation or arbitration, if the Agency and the Contractor agree thereto, or as fixed in a court of law.

Although not to be construed as proceeding under Extra Work provisions, the Contractor shall keep and furnish records of disputed work in accordance with 3-3.

SECTION 4 - CONTROL OF MATERIALS

4-1 MATERIALS AND WORKMANSHIP

4-1.1 General. All materials, parts, and equipment furnished by the Contractor in the Work shall be new, high grade, and free from defects. Quality of work shall be in accordance with the generally accepted standards. Material and work quality shall be subject to the Engineer's approval.

Materials and work quality not conforming to the requirements of the Specifications shall be considered defective and will be subject to rejection. Defective work or material, whether in place or not, shall be removed immediately from the site by the Contractor, at its expense, when so directed by the Engineer.

If the Contractor fails to replace any defective or damaged work or material after reasonable notice, the Engineer may cause such work or materials to be replaced. The replacement expense will be deducted from the amount to be paid to the Contractor.

Used or secondhand materials, parts, and equipment may be used only if permitted by the Specifications.

4-1.1.1 Materials Furnished by Agency. Materials furnished by the Agency will be available at locations designated in the Special Provisions or if not designated in the Special Provisions, they will be delivered to a single location of Agency's choice within the project area. They shall be hauled to the site of installation by the Contractor at its expense, including any necessary loading and unloading that may be involved. The cost of handling and placing materials furnished by the Agency shall be considered as included in the price paid for the Contract item involving such furnished materials.

The Contractor will be held responsible for all materials furnished to it, and it shall pay all demurrage and storage charges. Furnished materials, after delivery to Contractor, lost or damaged from any cause whatsoever shall be replaced by the Contractor. The Contractor will be liable to the Agency for the cost of replacing lost or damaged furnished material and such costs may be deducted from any monies due or to become due the Contractor.

4-1.2 Protection of Work and Materials. The Contractor shall provide and maintain storage facilities and employ such measures as will preserve the specified quality and fitness of materials to be used in the Work. Stored materials shall be reasonably accessible for inspection. The Contractor shall also adequately protect new and existing work and all items of equipment for the duration of the Contract.

The Contractor shall not, without the Agency's consent, assign, sell, mortgage, hypothecate, or remove equipment or materials which have been installed or delivered and which may be necessary for the completion of the Contract.

4-1.3 Inspection Requirements

4-1.3.1 General. Unless otherwise specified, inspection is required at the source for asphalt concrete pavement mixtures, structural concrete, metal fabrication, metal casting, welding, concrete pipe manufacture, protective coating application, and similar shop or plant operations. Steel pipe in sizes less than 450 mm (18 inches), vitrified clay and cast iron pipe in all sizes are acceptable upon certification as to compliance with the Specifications, subject to sampling and testing by the Agency. Standard items of equipment such as electric motors, conveyors, elevators, plumbing fixtures, etc., are subject to inspection at the Work site only. Special items of equipment such as designed electrical panel boards, large pumps, sewage plant equipment, etc., are subject to inspection at the source, normally only for performance testing. The Specifications may require inspection at the source for other items not typical of those listed in this section.

4-1.3.2 Inspection of Materials Not Locally Produced. When the Contractor intends to purchase materials, fabricated products, or equipment from sources located more than 80 km (50 miles) outside the geographical limits of the Agency, an inspector or accredited testing laboratory (approved by the Engineer), shall be engaged by the Contractor at its expense, to inspect the materials, equipment or process. This approval shall be obtained before producing any material or equipment. The inspector or representative of the testing laboratory shall evaluate the materials for conformance with the Plans and Specifications. The Contractor shall forward reports required by the Engineer. No materials or equipment shall be shipped nor shall any processing, fabrication or treatment of such materials be done without proper inspection by the approved agent. Approval by said agent shall not relieve the Contractor of responsibility for complying with the Contract requirements.

4-1.3.3 Inspection by the Agency. The Agency will provide all inspection and testing laboratory services within 80 km (50 miles) of the geographical limits of the Agency.

4-1.3.4 Certificates of Compliance. The Engineer may require certificates of compliance with the Specifications for materials or manufactured items produced outside of the Work site. Such certificates will not relieve the Contractor from the requirements of providing material and manufactured items complying with the Specifications even though they have been incorporated into the Work.

4-1.4 Tests of Materials. Before incorporation in the Work, the Contractor shall submit samples of materials, as the Engineer may require, at no cost to the Agency. The Contractor, at its own expense, shall deliver the materials for testing to the place and at the time designated by the Engineer. Unless otherwise provided, all initial testing and a reasonable amount of retesting shall be performed under the direction of the Engineer, and at no expense to the Contractor. If the Contractor is to provide and pay for testing, the Specifications will so state.

The Contractor shall notify the Engineer in writing, at least 15 Days in advance, of its intention to use materials for which tests are specified, to allow sufficient time to perform the tests. The notice shall name the proposed supplier and source of material.

If the notice of intent to use is sent before the materials are available for testing or inspection, or is sent so far in advance that the materials on hand at the time will not last but will be replaced by a new lot prior to use on the Work, it will be the Contractor's responsibility to re-notify the Engineer when samples which are representative may be obtained.

4-1.5 Certification. The Engineer may waive materials testing requirements of the Specifications and accept the manufacturer's written certification that the materials to be supplied meet those requirements. Materials test data may be required as part of the certification.

4-1.6 Trade Names or Equals. The Contractor may supply any of the materials specified or offer an equivalent. The Engineer shall determine whether the material offered is equivalent to that specified. Adequate time shall be allowed for the Engineer to make this determination.

Whenever any particular material, process, or equipment is indicated by patent, proprietary or brand name, or by name of manufacturer, such wording is used for the purpose of facilitating its description and shall be deemed to be followed by the words **or equal**. A listing of materials is not intended to be comprehensive, or in order of preference. The Contractor may offer any material, process, or equipment considered to be equivalent to that indicated. The substantiation of offers shall be submitted as provided in the Contract Documents.

The Contractor shall, at its expense, furnish data concerning items offered by it as equivalent to those specified. The Contractor shall have the material tested as required by the Engineer to determine that the quality, strength, physical, chemical, or other characteristics, including durability, finish, efficiency, dimensions, service, and suitability are such that the item will fulfill its intended function.

Test methods shall be subject to the approval of the Engineer. Test results shall be reported promptly to the Engineer, who will evaluate the results and determine if the substitute item is equivalent. The Engineer's findings shall be final. Installation and use of a substitute item shall not be made until approved by the Engineer.

If a substitute offered by the Contractor is not found to be equal to the specified material, the Contractor shall furnish and install the specified material.

The specified Contract completion time shall not be affected by any circumstance developing from the provisions of this section.

4-1.6.1 Compatibility with Design. Where the size, configuration, weight, fastening locations, fastening strength, utility rough-in locations, and utility capacities of equipment or devices offered by the Contractor as equivalents do not conform to those provided for in the Contract Documents or those which are necessary for equipment or devices indicated by brand names, the Contractor shall bear all costs of redesign and changes in construction necessary to adapt the offered equipment or device to the Work.

Equipment or devices will not be considered "equal" where the life cycle cost of operation, utilities and maintenance of the offered alternate is greater than those listed by brand names. Life cycle costs shall mean utility charges (demand and usage charges), maintenance, operating personnel and replacement (equipment, installation and down time expenses) all reduced to an average annual rate using the current interest rate earned on funds invested by the County Treasurer.

4-1.6.2 Trade Names Listed. Where the Agency has listed products by brand or trade name on the Plans or in the Specifications, or both, this shall not be construed as meaning every product may be used without furnishing shop drawings, without redesign of the facility or without a change in utility rough-in requirements.

Where use of products listed on the Plans or in the Specifications, or both, or where use of a substitute proposed as an "equal" product requires shop drawings, redesign of the facility, or revisions in the size and location of rough-in utility connections, or in connecting work, the Contractor shall provide any necessary shop drawings, or shall cause the preparation of any necessary redesign or revisions to the Plans at its own expense and shall bear the full cost of any necessary additional construction or reconstruction work. No work described in shop drawings, a redesign, or a revision to the Plans shall be undertaken until such shop drawings, redesign, or revisions have been approved by the Engineer. Any proposed redesign or revision to the Plans shall be accompanied by complete computations and details prepared by an appropriate licensed design professional.

4-1.7 Weighing Equipment. All scales used for proportioning materials shall be inspected for accuracy and certified within the past 12 months by the State of California Bureau of Weights and Measures, by the County Director or Sealer of Weights and Measures, or by a scale mechanic registered with or licensed by the County.

The accuracy of the work of a scale service agency, except as stated herein, shall meet the standards of the California Business and Professions Code and the California Code of Regulations pertaining to weighing devices. A certificate of compliance shall be presented, prior to operation, to the Engineer for approval and shall be renewed whenever required by the Engineer at no cost to the Agency.

All scales shall be arranged so they may be read easily from the operator's platform or area. They shall indicate the true net weight without the application of any factor. The figures of the scales shall be clearly legible. Scales shall be accurate to within 1 percent when tested with the plant shut down. Weighing equipment shall be so insulated against vibration or moving of other operating equipment in the plant area that the error in weighing with the entire plant running will not exceed 2 percent for any setting nor 1.5 percent for any batch.

4-1.8 Calibration of Testing Equipment. Testing equipment, such as, but not limited to, pressure gages, metering devices, hydraulic systems, force (load) measuring instruments, and strain-measuring devices shall be calibrated by a testing agency acceptable to the Engineer at intervals not to exceed 12 months and following repairs, modification, or relocation of the equipment. Calibration certificates shall be provided when requested by the Engineer.

SECTION 5 - UTILITIES

5-1 LOCATION. The Permittee (in the case of Private Contracts) and the Agency (in the case of Cash or Assessment Act Contracts), will search known substructure records and furnish the Contractor with copies of documents which describe the location of utility substructures, or will indicate on the Plans for the project those substructures (except for service connections) which may affect the Work. Information regarding removal, relocation, abandonment, or installation of new utilities will be furnished to prospective bidders.

Where underground main distribution conduits such as water, gas, sewer, electric power, telephone, or cable television are shown on the Plans, the Contractor shall assume that every property parcel will be served by a service connection for each type of utility.

As provided in Section 4216 of the California Government Code, at least 2 working days prior to commencing any excavation, the Contractor shall contact the regional notification center (Underground Service Alert of Southern California) and obtain an inquiry identification number.

The California Department of Transportation is not required by Section 4216 to become a member of the regional notification center. The Contractor shall contact it for location of its subsurface installations.

The Contractor shall determine the location and depth of all utilities, including service connections, which have been marked by the respective owners and which may affect or be affected by its operations. If no pay item is provided in the Contract for this work, full compensation for such work shall be considered as included in the prices bid for other items of work.

5-2 PROTECTION. The Contractor shall not interrupt the service function or disturb the support of any utility without authority from the owner or order from the Agency. All valves, switches, vaults, and meters shall be maintained readily accessible for emergency shutoff.

Where protection is required to ensure support of utilities located as shown on the Plans or in accordance with 5-1, the Contractor shall, unless otherwise provided, furnish and place the necessary protection at its expense.

Upon learning of the existence and location of any utility omitted from or shown incorrectly on the Plans, the Contractor shall immediately notify the Engineer in writing. When authorized by the Engineer, support or protection of the utility will be paid for as provided in 3-2.2.3 or 3-3.

The Contractor shall immediately notify the Engineer and the utility owner if any utility is disturbed or damaged. The Contractor shall bear the costs of repair or replacement of any utility damaged if located as noted in 5-1.

When placing concrete around or contiguous to any non-metallic utility installation, the Contractor shall at its expense:

1. Furnish and install a 50 mm (2 inch) cushion of expansion joint material or other similar resilient material; or
2. Provide a sleeve or other opening which will result in a 50 mm (2 inch) minimum-clear annular space between the concrete and the utility; or
3. Provide other acceptable means to prevent embedment in or bonding to the concrete.

Where concrete is used for backfill or for structures which would result in embedment, or partial embedment, of a metallic utility installation; or where the coating, bedding or other cathodic protection system is exposed or damaged by the Contractor's operations, the Contractor shall notify the Engineer and arrange to secure the advice of the affected utility owner regarding the procedures required to maintain or restore the integrity of the system.

5-3 REMOVAL. Unless otherwise specified, the Contractor shall remove all interfering portions of utilities shown on the Plans or indicated in the Bid documents as "abandoned" or "to be abandoned in place". Before starting removal operations, the Contractor shall ascertain from the Agency whether the abandonment is complete, and the costs involved in the removal and disposal shall be included in the Bid for the items of work necessitating such removals.

5-4 RELOCATION. When feasible, the owners responsible for utilities within the area affected by the Work will complete their necessary installations, relocations, repairs, or replacements before commencement of work by the Contractor. When the Plans or Specifications indicate that a utility installation is to be relocated, altered, or constructed by others, the Agency will conduct all negotiations with the owners and work will be done at no cost to the Contractor, except as provided in 301-1.6. Utilities which are relocated in order to avoid interference shall be protected in their position and the cost of such protection shall be included in the Bid for the items of work necessitating such relocation.

After award of the Contract, portions of utilities which are found to interfere with the Work will be relocated, altered or reconstructed by the owners, or the Engineer may order changes in the Work to avoid interference. Such changes will be paid for in accordance with 3-2.

When the Plans or Specifications provide for the Contractor to alter, relocate, or reconstruct a utility, all costs for such work shall be included in the Bid for the items of work necessitating such work. Temporary or permanent relocation or alteration of utilities requested by the Contractor for its convenience shall be its responsibility and it shall make all arrangements and bear all costs.

The utility owner will relocate service connections as necessary within the limits of the Work or within temporary construction or slope easements. When directed by the Engineer, the Contractor shall arrange for the relocation of service connections as necessary between the meter and property line, or between a meter and the limits of temporary construction or slope easements. The relocation of such service connections will be paid for in accordance with provisions of 3-3. Payment will include the restoration of all existing improvements which may be affected thereby. The Contractor may agree with the owner of any utility to disconnect and reconnect interfering service connections. The Agency will not be involved in any such agreement.

5-5 DELAYS. The Contractor shall notify the Engineer of its construction schedule insofar as it affects the protection, removal, or relocation of utilities. Said notification shall be included as a part of the construction schedule required in 6-1. The Contractor shall notify the Engineer in writing of any subsequent changes in the construction schedule which will affect the time available for protection, removal, or relocation of utilities.

The Contractor will not be entitled to damages or additional payment for delays attributable to utility relocations or alterations if correctly located, noted, and completed in accordance with 5-1.

The Contractor may be given an extension of time for unforeseen delays attributable to unreasonably protracted interference by utilities in performing work correctly shown on the Plans.

The Agency will assume responsibility for the timely removal, relocation, or protection of existing main or trunkline utility facilities within the area affected by the Work if such utilities are not identified in the Contract Documents. The Contractor will not be assessed liquidated damages for any delay caused by failure of Agency to provide for the timely removal, relocation, or protection of such existing facilities.

If the Contractor sustains loss due to delays attributable to interferences, relocations, or alterations not covered by 5-1, which could not have been avoided by the judicious handling of forces, equipment, or plant, there shall be paid to the Contractor such amount as the Engineer may find to be fair and reasonable compensation for such part of the Contractor's actual loss as was unavoidable and the Contractor may be granted an extension of time.

5-5.1 Cooperation During Utility Relocation. When utilities are to be relocated during construction, the Contractor shall cooperate and coordinate with the respective utility owners so they may relocate their facilities to clear the Work. Delays in relocation of utilities which result from failure to cooperate and coordinate will not be a cause for an extension of time or Non-Working Days.

5-6 COOPERATION. When necessary, the Contractor shall so conduct its operations as to permit access to the Work site and provide time for utility work to be accomplished during the progress of the Work.

SECTION 6 - PROSECUTION, PROGRESS AND ACCEPTANCE OF WORK

6-1 CONSTRUCTION SCHEDULE AND COMMENCEMENT OF WORK.

The requirements of this section concerning submission of construction schedules shall not apply to projects where the time allowed to complete the Work is less than 25 Working Days or the total Contract Price bid is less than \$75,000 unless required by the special provisions.

The Contractor shall submit a construction schedule concurrently with the submittal of signed Contract, Contract bonds, and certificate of insurance. The Notice to Proceed will be delayed until the schedule is received. See 6-7.4, Starting of Contract Time.

When required by the Special Provisions, a revised schedule shall be submitted monthly prior to each progress payment closure date. Processing of the progress payment will be delayed until such revised schedule complying with this section is received.

The construction schedule shall be in the form of a Construction Element vs. Time Chart as shown in Appendix B-1 and a Work Complete vs. Time Chart as shown in Appendix B-2.

The B-1 Chart shall be in sufficient detail to show the chronological relationship of all activities of the project including, but not limited to, estimated starting and completion dates of various activities, submittal of shop drawings to the Engineer for approval, procurement of materials, and scheduling of equipment. The B-1 Chart shall recognize the requirements of 5-5. The B-1 Chart shall reflect obtaining all materials and completing all Work under the Contract within the specified time and in accordance with these Specifications. If the Contractor intends to complete the Work prior to the time for completion, the intended date of completion shall be set forth in the B-1 Chart and the Contractor shall execute a Contract Change Order that changes the number of Working Days allowed for completion to conform with such intended completion date. The Change Order shall not change the Contract Price.

The Contractor may submit a computer generated schedule in lieu of the form in Appendix B-1 and B-2, provided all of the elements shown on that form or specified herein are included.

An updated construction schedule shall be submitted prior to the next progress payment closure date whenever the actual percent Work complete versus percent time elapsed curve falls below and to the right of the dotted line shown on Appendix B-2.

If the Contractor desires to make a major change in its method of operations after commencing construction, or if its schedule fails to reflect the actual progress, it shall submit to the Agency a revised construction schedule in advance of beginning revised operations.

Revised and updated schedules shall show actual completion to the date of the revision in the lower segmented bar for each item.

The construction schedule shall be prepared as follows (see examples in Appendices C-1 and C-2):

1. On the B-1 Chart:

- a. Enter the project name and Specification No. as shown on the notice inviting bids and the Contractors name.
- b. List the items of Work either individually or combined where items are part of the same element of the Work.
- c. Assign a value for each horizontal space plotting interval in Working Days as follows: 1 working day for total Contract time of less than 100 working days, 2 for 100 to 200 working days and 5 for longer projects. Enter the value used in the space provided in the lower part of the form.
- d. At the end of performance time and draw a vertical line and label it "End Performance Time". Enter numbers at 10 times the plotting interval at the top of intermediate vertical lines.
- e. Shade in a bar in the upper segmented section for each work item to indicate the period during which Work will be performed. Move-in time and delivery time for materials shall be shown if significant to the schedule.

6-1 CONSTRUCTION SCHEDULE AND COMMENCEMENT OF WORK. (Continued)

2. On the B-2 Chart:

- a. Enter the project name and Specification No. as shown on the notice inviting bids.
- b. At time intervals of 10 or 20 working days:
 - (1) Compute the cumulative dollar value of Work which is expected to be completed for each item of Work, including the value of the completed portion of lump-sum items.
 - (2) Divide the values computed in "b(1)" by the Total Contract Price to determine the percentage of the entire Contract planned for completion at the end of each time interval.
 - (3) Divide the days of performance time at the end of each time interval by the total Contract performance time to obtain the percentage of elapsed performance time.
- c. Plot each percentage of completion value figure computed in "b(2)" against the corresponding percentage of completion time computed in "b(3)" using scales on the bottom and left side of chart.
- d. Connect points plotted in "c" with a line which will show the planned progress for the entire job.

If the proposed percent Work complete versus percent time elapsed line falls below and to the right of the dotted line drawn on the B-2 Chart, the Contractor shall provide sufficient information and backup to show that the Work can be completed on time.

6-1.1 Beginning of Work. The issuance of Notice to Proceed by Agency shall constitute the Contractor's authority to enter upon the site of the Work and to begin operations provided it has also notified Engineer at least 24 hours in advance. Entry upon the site without authority will be treated as trespassing.

6-1.2 Starting Work. The Contractor may start work at any time after the Notice to Proceed is issued but work shall begin within 15 Days after the starting date for the Contract, or at such other time as may be indicated in the Special Provisions. The actual date on which the Contractor starts work will not affect the required time for completion as provided for in 6-7 and 6-7.1.

6-1.3 Work Sequence. If required by the Special Provisions, the Contractor shall start construction operations on that part of the Work designated by the Engineer.

6-1.4 Resources Required. The Work shall be conducted in such a manner and with sufficient materials, equipment, and labor to insure its completion in accordance with the Plans and Specifications within the time set forth in the Contract.

6-2 PROSECUTION OF WORK. To minimize public inconvenience and possible hazard and to restore streets and other Work areas to their original condition and former state of usefulness as soon as practicable, the Contractor shall diligently prosecute the Work to completion. If, in the Engineer's opinion, the Contractor fails to prosecute the Work to the extent that the above purposes are not being accomplished, the Contractor shall, upon orders from the Engineer, immediately take the steps necessary to fully accomplish said purposes. All costs of prosecuting the Work as described herein shall be absorbed in the Contractor's bid. Should the Contractor fail to take the necessary steps to fully accomplish said purposes, after orders of the Engineer to do so, the Engineer may suspend the Work in whole or in part, until the Contractor takes said steps.

As soon as possible under the provisions of these Specifications, the Contractor shall backfill all excavations and restore to usefulness all improvements existing prior to the start of the Work.

If Work is suspended through no fault of the Agency, all expenses and losses incurred by the Contractor during such suspensions shall be borne by the Contractor. If the Contractor fails to properly provide for public safety, traffic, and protection of the Work during periods of suspension, the Agency may elect to do so, and deduct the cost thereof from monies due the Contractor. Such action will not relieve the Contractor from liability.

6-3 SUSPENSION OF WORK

6-3.1 General. The Work may be suspended in whole or in part when determined by the Engineer that the suspension is necessary in the interest of the Agency. The Contractor shall comply immediately with any written order of the Engineer. Such suspension shall be without liability to the Contractor on the part of the Agency except as otherwise specified in 6-6.3.

6-3.2 Archaeological and Paleontological Discoveries. If discovery is made of items of archaeological or paleontological interest, the Contractor shall immediately cease excavation in the area of discovery and shall not continue until ordered by the Engineer. When resumed, excavation operations within the area of discovery shall be as directed by the Engineer.

Discoveries which may be encountered may include, but not be limited to, dwelling sites, stone implements or other artifacts, animal bones, human bones and fossils.

The Contractor shall be entitled to an extension of time and compensation in accordance with the provisions of 6-6.

6-3.3 Temporary Suspension of Work. Should suspension of Work be ordered by reason of the failure of the Contractor to carry out orders or to perform any provisions of the Contract; or by reason of weather conditions being unsuitable for performing any item or items of Work; the Contractor, at its expense, shall do all the work necessary to provide a safe, smooth, and unobstructed passageway through construction for use by public traffic during the period of such suspension. In the event that the Contractor fails to perform the work above specified, the Agency may perform such work and the cost thereof will be deducted from monies due or to become due the Contractor.

If the Engineer orders a suspension of all of the Work, or a portion of the Work which is the current controlling operation or operations, due to unsuitable weather or to such other conditions as are considered unfavorable to the suitable prosecution of the Work, the days on which the suspension is in effect shall not be considered Working Days.

If a portion of Work at the time of such suspension is not a current controlling operation or operations, but subsequently does become the current controlling operation or operations, the determination of Working Days will be made on the basis of the then current controlling operation or operations.

If a suspension of Work is ordered by the Engineer due to the failure on the part of the Contractor to carry out orders given or to perform any provision of the Contract, the Days on which the suspension order is in effect shall be considered Working Days if such days are Working Days as defined.

6-4 TERMINATION OF THE CONTRACT FOR DEFAULT..

6.4.1 General. If, prior to the acceptance of the Work, the Contractor:

a) becomes insolvent, assigns its assets for the benefit of its creditors, is unable to pay its debts as they become due, or is otherwise financially unable to complete the Work,
b) abandons the Work by failing to report to the Work site and diligently prosecute the Work to completion,
c) disregards written instructions from the Agency or materially violates provisions of the Contract Documents,

d) fails to prosecute the Work according to the schedule approved by the Engineer,
e) disregards laws or regulations of any public body having jurisdiction, or
f) commits continuous or repeated violations of regulatory or statutory safety requirements, then the Agency will consider the Contractor in default of the Contract.

Notices, and other written communications regarding default between the Contractor, the Agency, and the Surety shall be transmitted in accordance with 2-12.

6-4.2 Notice to Cure. The Agency will issue a written notice to cure the default to the Contractor and its Surety. The Contractor shall commence satisfactory corrective actions within 5 Working Days after receipt.

6-4.3 Notice of Termination for Default. If the Contractor fails to commence satisfactory corrective action within 5 Working Days after receipt of the notice to cure, or to diligently continue satisfactory and timely correction of the default thereafter, then the Agency will consider the Contractor in default of the Contract and:

a) will terminate the Contractor's right to perform under the Contract by issuing a written notice of termination for default to the Contractor and its Surety,
b) may use any materials, equipment, tools or other facilities furnished by the Contractor to secure and maintain the Work site, and
c) may furnish labor, equipment, and materials the Agency deems necessary to secure and maintain the Work site. The provisions of this subsection shall be in addition to all other legal rights and remedies available to the Agency.

6-4.4 Responsibilities of the Surety. Upon receipt of the written notice of termination for default, the Surety shall immediately assume all rights, obligations and liabilities of the Contractor under the Contract. If the Surety fails to protect and maintain the Work site, the Agency may do so, and may recover all costs incurred. The Surety shall notify the Agency that it is assuming all rights, obligations and liabilities of the Contractor under the Contract and all money that is due, or would become due, to the Contractor shall be payable to the Surety as the Work progresses, subject to the terms of the Contract.

Within 15 Working Days of receipt of the written notice of termination for default, the Surety shall submit to the Agency a written plan detailing the course of action it intends to take to remedy the default. The Agency will review the plan and notify the Surety if the plan is satisfactory. If the Surety fails to submit a satisfactory plan, or if the Surety fails to maintain progress according to the plan accepted by the Agency, the Agency may, upon 48 hours written notice, exclude the Surety from the premises, take possession of all material and equipment, and complete the Work in any way the Agency deems to be expedient. The cost of completing the Work by the Agency shall be charged against the Surety and may be deducted from any monies due, or which would become due, the Surety. If the amounts due under the Contract are insufficient for completion, the Surety shall pay to the Agency, within 30 days after the Agency submits an invoice, all costs in excess of the remaining Contract Price.

6-4.5 Payment. The Surety will be paid for completion of the Work in accordance with 9-3 less the value of damages caused to the Agency by acts of the Contractor.

6-5 TERMINATION OF CONTRACT. The Board may terminate the Contract at its own discretion or when conditions encountered during the Work make it impossible or impracticable to proceed, or when the Agency is prevented from proceeding with the Contract by act of God, by law, or by official action of a public authority.

The Agency will issue a written notice of termination for convenience in accordance with 2-12. Upon receipt, the Contractor shall immediately cease work, except work the Contractor is directed to complete by the Engineer or required to complete for public safety and convenience. The Contractor shall immediately notify Subcontractors and suppliers to immediately cease their work.

The Contractor will be paid without duplication for:

- a) work completed in accordance with the Contract Documents prior to the effective date of termination for convenience;
- b) reasonable costs incurred in settlement of terminated contracts with Subcontractors, suppliers and others; and
- c) reasonable expenses directly attributable to termination.

The Contractor shall submit a final termination settlement proposal to the Agency no later than 90 days from the effective date of termination, unless extended, in writing, by the Agency upon written request by the Contractor.

If the Contractor fails to submit a proposal, the Agency may determine the amount, if any, due the Contractor as a result of the termination. The Agency will pay the Contractor the amount it determines to be reasonable. If the Contractor disagrees with the amount determined by the Agency as being reasonable, the Contractor shall provide notice to the Agency within 30 days of receipt of payment. Any amount due shall be as later determined by arbitration, if the Agency and the Contractor agree thereto, or as fixed in a court of law.

6-6 DELAYS AND EXTENSIONS OF TIME

6-6.1 General. If delays are caused by unforeseen events beyond the control of the Contractor, such delays will entitle the Contractor to an extension of time as provided herein, but the Contractor will not be entitled to damages or additional payment due to such delays, except as provided in 6-6.3. Such unforeseen events may include war, government regulations, labor disputes, strikes, fires, floods, adverse weather necessitating cessation of work, other similar action of the elements, inability to obtain materials, equipment or labor, required Extra Work, or other specific events as may be further described in the Specifications.

No extension of time will be granted for a delay caused by the Contractor's inability to obtain materials unless the Contractor furnishes to the Engineer documentary proof of the inability to obtain such materials in a timely manner in accordance with the sequence of the Contractor's operations and the approved construction schedule.

If delays beyond the Contractor's control are caused by events other than those mentioned above, but substantially equal in gravity to those enumerated, and an extension of time is deemed by the Engineer to be in the best interests of the Agency, an extension of time may be granted, but the Contractor will not be entitled to damages or additional payment due to such delays, except as provided in 6-6.3.

If delays beyond the Contractor's control are caused solely by action or inaction by the Agency, such delays will entitle the Contractor to an extension of time as provided in 6-6.2.

6-6.2 Extensions of Time. Extensions of time, when granted, will be based upon the effect of delays to the Work as a whole and will not be granted for noncontrolling delays to minor included portions of Work unless it can be shown that such delays did, in fact, delay the progress of the Work as a whole.

6-6.3 Payment for Delays to Contractor. The Contractor will be compensated for damages incurred due to delays for which the Agency is responsible if such delays are unreasonable in the circumstances involved and were not within the contemplation of the parties when the Contract was awarded to the Contractor and delay the Work as a whole. Such actual costs will be determined by the Engineer. The Agency will not be liable for, and in making this determination the Engineer will exclude, all damages which the Engineer determines the Contractor could have avoided by any reasonable means including, without limitation, the judicious handling of forces, equipment, or plant.

6-6.4 Written Notice and Report. If the Contractor desires payment for a delay as specified in 6-6.3 or an extension of time, it shall, within 30 Days after the beginning of the delay, file with the Agency a written request and report as to the cause and extent of the delay. The request for payment or extension must be made at least 15 Days before the specified completion date. Failure by the Contractor to file these items within the time specified will be considered grounds for refusal by the Agency to consider such request.

6-6.4.1 Documentation of Delays. When the Contractor requests an extension of time for delay due to inability to obtain materials or equipment, the documentary proof required by 6-6.1 shall include the following:

1. Date Engineer was notified of delay.
2. Date the delay began.
3. Exact description of material or equipment causing delay.
4. Documentation showing when and from whom ordered.
5. Documentation of promise to deliver.
6. Documentation of actual delivery date.
7. Description of how late delivery caused delay (include construction schedule).
8. Documentation of measures taken to get prompt delivery.
9. Documentation of attempts to get delivery from other sources.
10. Description of steps taken in project scheduling to minimize effects of late delivery.
11. Description of steps taken to get project back on schedule after actual delivery.
12. Statement of actual time lost as a result of late delivery.

6-7 TIME OF COMPLETION

6-7.1 General. The Contractor shall complete the Work within the time set forth in the Contract. The Contractor shall complete each portion of the Work within such time as set forth in the Contract for such portion. Unless otherwise specified, the time of completion of the Contract shall be expressed in Working Day

6-7.2 Working Day. A Working Day is any day within the period between the start of the Contract time as defined in 6-1 and the date provided in the Contract for completion or upon field acceptance by the Engineer of all Work provided for in the Contract, whichever occurs first, other than:

- (1) Saturday,
- (2) Sunday,
- (3) any day designated as a holiday by the Agency,
- (4) any other day designated as a holiday in a Master Labor Agreement entered into by the Contractor or on behalf of the Contractor as an eligible member of a Contractor Association,
- (5) any day the Contractor is prevented from working at the beginning of the workday for cause as defined in 6-6.1,
- (6) any day the Contractor is prevented from working during the first 5 hours of the workday with at least 60 percent of the normal work force for cause as defined in 6-6.1.

6-7.2.1 Holidays. Solely for the purposes of paragraph (3) of 6-7.2, the following days are designated as holidays by the Agency.

	A	B
<u>MONTH</u>	<u>AGENCY EMPLOYEE HOLIDAYS</u>	<u>OTHER DESIGNATED HOLIDAYS</u>
January	1st day; 3rd Monday	None
February.....	3rd Monday	12th day
March.....	None.....	31st day
March-April	None.....	One Friday between March 21 and April 23 designated as Good Friday
May	Last Monday.....	None
June	None.....	None
July.....	4th day.....	None
August.....	None.....	None
September	1st Monday.....	9th day
October	None.....	2nd Monday
November	11 th day; 4th Thursday.....	the Friday following the 4th Thursday
December	25th	23rd day, only if Thursday or Friday; 24th day; 31st day

If any day listed above falls on Saturday, the preceding Friday is the holiday. If any day listed above falls on Sunday, the succeeding Monday is the holiday.

No extra holiday shall result when such Friday or Monday is already designated as a holiday.

A copy of a Working Day calendar incorporating the above-listed holidays and used by the Agency for Contract time accounting purpose will be furnished to the Contractor upon request.

The term "holiday" as used in this section shall not be construed as being the same as "holiday" within the meaning of 7-2.2.

The Contractor may perform work on the holidays designated in Column A above provided it has obtained prior written approval of the Engineer at least two Days in advance of performing the work. The Contractor may perform work on the holidays designated in Column B above provided the Contractor notifies the Engineer two Days in advance of the holiday.

6-7.2.2 Landscape Maintenance Period. Where a landscape maintenance period is specified, the portion of the time in such period that follows the completion of all other Work required by the Contract shall not be Working Days for Contract time accounting.

6-7.3 Contract Time Accounting. The Engineer will make a daily determination of each Working Day to be charged against the Contract time. These determinations will be discussed and the Contractor will be furnished a periodic statement showing the allowable number of Working Days of Contract time, as adjusted, at the beginning of the reporting period. The statement will also indicate the number of Working Days charged during the reporting period and the number of Working Days of Contract time remaining. If the Contractor does not agree with the statement, the Contractor must file a written protest within 15 Days after receipt, setting forth the facts of the protest. Otherwise, the statement will be deemed to have been accepted.

6-7.4 Starting Date for Contract Time and Notice to Proceed. The starting date for Contract time accounting will be determined by adding the number of Days indicated on the Proposal form to the date the Contract is awarded, however the Agency may, at its option, delay the starting date by not more than 60 calendar Days if necessary to obtain permits, rights-of-way, or approval of federal or State authorities, or when prevented from starting the project due to causes beyond its control. Notice to Proceed will be issued within 7 calendar Days after the Contract, bonds, certificates of insurance and other documents have been returned, properly completed by the Contractor, unless the starting date is delayed as herein provided. If the Agency delays the Contract starting date, Notice to Proceed will be issued at least 7 calendar Days prior to the new starting date. Any delay caused by failure of the Contractor to properly complete or timely return the Contract Documents shall not change the Contract starting date and shall not be a cause for extending the Contract time. The Notice of Award will indicate a probable Contract starting date. The Notice to Proceed will indicate the actual Contract starting date, computed as herein described.

6-8 COMPLETION, ACCEPTANCE AND WARRANTY.

6-8.1 Completion and Acceptance. Acknowledgment of completion of the Work will occur prior to Acceptance by the Agency. Acceptance will only occur after all Contract requirements have been fulfilled, such as training, submission of warranties, maintenance manuals, record drawings, Release on Contract and the like. Acceptance by the Agency will occur when the Engineer signs the Notice of Completion. The Work will be inspected by the Engineer promptly upon receipt of the Contractor's written assertion that the Work has been completed. If, in the Engineer's judgment, the Work has been completed in accordance with the Plans and Specifications, the Engineer will acknowledge completion of the Work. Completion of the Work, as used above, shall include the Contractor showing evidence of having received an occupancy clearance from Building and Safety, or other permit issuing agency, when a building, plumbing electrical, grading, or other permit is required for the Work. The Engineer will, in acknowledging completion of the Work, set forth in writing the date when the Work was completed. This will be the date when the Contractor is relieved from responsibility to protect the Work. This will also be the date to which liquidated damages will be computed.

6-8.2 Warranty and Correction

6-8.2.1 Warranty The Contractor warrants to the Agency that materials and equipment furnished under the Contract will be new, unless otherwise specified in the Contract Documents, and of good quality, that the Work will be free from defects in materials and workmanship and that the Work will conform to the requirements of the Contract Documents. Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective by the Agency. This warranty excludes damage or defect caused by abuse (other than by the Contractor or those under the control of the Contractor), modifications not executed by the Contractor, or improper or insufficient maintenance. This warranty excludes normal wear and tear. Nothing in this warranty is intended to limit any manufacturer's warranty which provides the Agency with greater warranty rights.

6-8.2.2 Correction Period For a period of one (1) year from the date of acceptance of the Work by the Agency, the Contractor shall repair or replace any defective workmanship or materials or Work not in conformance with the Contract Documents after notice to do so from the Engineer, and within the time specified in the notice. If the Contractor fails to make such repair or replacement within the time specified in the notice, the Agency may perform the repair or replacement and the Contractor and the Contractor's sureties shall be liable for the cost thereof. The one (1) year period referenced in this section 6-8.2.2 applies only to the Contractor's obligation to repair or replace defective workmanship or materials or Work not in conformance with the Contract Documents and is not intended to constitute a period of limitations for any other rights or remedies the Agency may have regarding the Contractor's other obligations under the Contract Documents.

6-8.3 No Waiver of Legal Rights. The Agency shall not be precluded or estopped by any measurement, estimate, or certificate made either before or after the completion and Acceptance of the Work and payment therefor from showing the true amount and character of the Work performed and materials furnished by the Contractor, nor from showing that any such measurement, estimate, or certificate is untrue or is incorrectly made, nor that the Work or materials do not in fact conform to the Contract.

The Agency shall not be precluded or estopped, notwithstanding any such measurement, estimate, or certificate and payment in accordance therewith, from recovering from the Contractor or its sureties, or both, such damages as it may sustain by reason of the Contractor's failure to comply with the terms of the Contract.

Neither the Acceptance by the Engineer or by its representative, nor any payment for or Acceptance of the whole or any part of the Work, nor any extension of time, nor any possession taken by the Engineer shall operate as a waiver of any portion of the Contract or of any power herein reserved, or of any right to damages.

A waiver of any breach of the Contract shall not be held to be a waiver of any other or subsequent breach.

6-8.4 Landscape Maintenance Period. Final Acceptance of the Contract shall follow the satisfactory completion of all Contract Work, including the landscape maintenance period if one is specified.

6-8.5 Non-complying Work. Neither the final certificate of payment nor any provision in the Contract Documents, nor partial or entire occupancy of the premises by the Agency, shall constitute an Acceptance of Work not done in accordance with the Contract Documents or relieve the Contractor of liability in respect to any express warranties or responsibility for faulty materials or workmanship.

6-8.6 Written Warranties. The Contractor shall obtain and deliver to the Engineer all written warranties required to be furnished by the Specifications. Each of such warranty shall be underwritten by the Contractor for the full period prescribed therein, and shall bear its endorsement to such effect.

6-9 LIQUIDATED DAMAGES. Failure of the Contractor to complete the Work within the time allowed will result in damages being sustained by the Agency. Such damages are, and will continue to be, impracticable and extremely difficult to determine. For each consecutive calendar day in excess of the time specified, as adjusted in accordance with 6-6, for completion of the Work the Contractor shall pay to the Agency, or have withheld from monies due it, the sum of \$250, unless otherwise provided in the Contract Documents.

Execution of the Contract under these Specifications shall constitute agreement by the Agency and Contractor that \$250 per day is the minimum value of the costs and actual damage caused by failure of the Contractor to complete the Work within the allotted time, that such sum is liquidated damages and shall not be construed as a penalty, and that such sum may be deducted from payments due the Contractor if such delay occurs.

6-10 USE OF IMPROVEMENT DURING CONSTRUCTION. The Agency reserves the right to take over and utilize all or part of any completed facility or appurtenance. The Contractor will be notified in writing in advance of such action. Such action by the Agency will relieve the Contractor of responsibility for injury or damage to said completed portions of the improvement resulting from use by public traffic or from the action of the elements or from any other cause, except injury or damage resulting from the Contractor's operations or negligence. The Contractor will not be required to reclean such portions of the improvement before field completion, except for cleanup made necessary by its operations. Nothing in this section shall be construed as relieving the Contractor from full responsibility for correcting defective work or materials.

In the event the Agency exercises its right to place into service and utilize all or part of any completed facility or appurtenance, the Agency shall assume the responsibility and liability for injury to persons or property arising out of or resulting from the utilization of the facility or appurtenance so placed into service, except for any willful or negligent act or omission by the Contractor, Subcontractor, their officers, employees or agents.

6-10.1 Use of Improvements - Exceptions. The provisions of 6-10 shall not apply to projects for the repair, modification, enlargement or improvement of existing facilities that are to remain in use during construction except where a portion of the project which is completely independent from the rest of the Work can be completed and put into use by the Agency.

On projects on public roads, after satisfactory completion of an isolated section of the Work involving roadway improvements or repairs, when all temporary signs and other temporary Contractor facilities have been removed, the section is not being used as a detour, the section is no longer under the Contractor's control, and the section is opened to public traffic through the end of the Contract period, that section of the Work shall be taken over by the Agency as provided in 6-10. The Contractor shall indicate to the Engineer in writing when the conditions of this paragraph have been complied with and shall specify the limits of the section involved. Any taking over of the Work by the Agency shall be effective only when formal written notification is issued by the Agency.

6-11 NOTICE OF POTENTIAL CLAIM FOR ADDITIONAL COMPENSATION. Procedures for notice of claims in specific situations and circumstances are provided in the following sections:

- 3-4 Changed Conditions
- 6-6.4 Delay and Extensions of Time
- 6-7.3 Contract Time Accounting

Compliance with this section is not prerequisite to assertion of a claim involving those sections or based on differences in measurements or errors of computation as to Contract quantities.

Compliance with the provisions of this section is required in all other situations and circumstances.

It is the intention of this section that differences arising between the parties under and by virtue of the Contract be brought to the attention of the Engineer at the earliest possible time in order that such matters may be settled, if possible, or other appropriate action taken to resolve such differences.

The Contractor shall give the Engineer written notice of a potential claim, setting forth: (1) the reasons for which the Contractor believes additional compensation will or may be due; (2) the nature of the costs involved; and (3) insofar as possible, the amount of the potential claim.

If the claim is based upon an act or failure to act by the Engineer, the said notice must be given to the Engineer prior to the date when the work giving rise to the potential claim is commenced; in all other cases the said notice must be given to the Engineer within 15 Days after the happening of the event, thing or occurrence giving rise to the potential claim.

The Contractor shall not be entitled to the payment of any additional compensation where the written notice of potential claim has not been given to the Engineer in the manner required by and within the time limitations of this section.

6-12 DISPUTES AND CLAIMS; PROCEDURE.

6-12.1 GENERAL. Any and all decisions made on appeal pursuant to this section shall be in writing. Any "decision" purportedly made pursuant to this section which is not in writing shall not be binding upon the Agency and should not be relied upon by the Contractor.

Filing or giving the notices required under 3-4, 6-6.4, 6-7.3 and 6-11 is prerequisite to recovery under a Contractor's claim for additional compensation; nothing in this section shall excuse the Contractor from its duty to file or give the required notices, or from performing other duties required by the Contract Documents.

6-12.2 ADMINISTRATIVE REVIEW. Prior to proceeding under 6-12.3 or filing a Complaint in Arbitration, the Contractor shall exhaust its administrative remedies by submitting its claim for review and decision by the following Agency staff in the following sequence:

Project Manager, responsible for the project
Department Director (Public Works Agency), responsible for the project.
Director of the Public Works Agency (the Engineer)

If the Contractor disputes the Project Manager's decision on its claim, the Contractor shall submit the claim to the Department Director. If the Contractor disputes the Department Director's decision on its claim, the Contractor shall submit the claim to the Engineer. Agency staff decisions shall state the portion of the claim that is undisputed if any.

The Project Manager may elect to forward a claim submitted by the Contractor directly to the Department Director. The Project Manager must give the Contractor notice of that election and the Contractor may supplement its claim within 7 Days of such notice (unless the parties agree in writing to a different time) and its claim will be deemed submitted on the earlier of the day it supplements its claim, the day it states in writing that it will not supplement its claim or the day time to supplement expires. The Department Director may forward a claim timely submitted by the Contractor directly to the Engineer instead of making a decision on the claim, in which case no notice or opportunity to supplement the claim is required, and the claim shall be deemed timely submitted to the Engineer.

The Engineer's decision on the claim shall be the Agency's final decision.

Claims submitted to the Department Director and the Engineer shall be submitted in writing and shall include:

- a. A copy of the disputed decision.
- b. A statement as to why the Contractor believes the decision is in error.
- c. All information, argument, documents and evidence (collectively, materials) that the Contractor wishes to have considered in the review. Where the request for review is made to the Engineer, in lieu of resubmitting materials which have already been submitted to the Department Director, the Contractor may include with the request a list of the materials the Contractor wants the Engineer to consider. Any additional materials and evidence not previously submitted to the Department Director shall be included with the request to the Engineer, if the Contractor wishes them to be considered. If relevant evidence is not available at the time the request is made to the Department Director or the Engineer, the Contractor shall identify such evidence and include a statement as to when such evidence will be submitted.

The Project Manager shall issue a decision on a claim within 10 Days of receipt; if the Project Manager does not do so, then the Project manager will be deemed to have decided to reject the claim in its entirety as of the conclusion of the 10th Day after receipt. The Contractor shall submit a claim to the Department Director for review and decision within 7 Days of receipt of the Project Manager's decision or of the time the Project Manager is deemed to have decided to reject the claim, whichever is applicable. The Department Director shall issue a decision on a claim within 10 Days of the timely submission of the claim; if the Department Director does not do so, then the Department Director will be deemed to have decided to reject the claim in its entirety as of the conclusion of the 10th Day after timely submission. The Contractor shall submit a claim to the Engineer for review and decision within 7 Days of receipt of the Department Director's decision or of the time the Department Director is deemed to have decided to reject the claim, whichever is applicable. If a claim is timely submitted to the Engineer and the Engineer fails to issue a decision on that claim within the time limits prescribed for issuing a written statement under Public Contract Code, section 9204, subdivision (d)(1), the Engineer shall be deemed to have decided to reject the claim in its entirety. At any time after the Project Manager receives a claim, the Agency and Contractor may agree in writing to different time limits than those set forth in this paragraph.

6-12.3 MEET AND CONFER; MEDIATION If the Contractor disputes the Agency's final decision, the Contractor may demand in writing an informal conference to meet and confer for settlement of the issues in dispute. Upon receipt of a demand in writing sent by registered mail or certified mail, return receipt requested, the Agency shall schedule a meet and confer conference within 30 Days for settlement of the dispute.

Within 10 business days following the conclusion of the meet and confer conference, if the claim or any portion of the claim remains in dispute, the Agency shall provide the Contractor a written statement identifying the portion of the claim that remains in dispute and the portion that is undisputed. Any payment due on an undisputed portion of the claim shall be processed and made within 60 Days after the Agency issues its written statement. Any disputed portion of the claim, as identified by the Contractor in writing, shall be submitted to nonbinding mediation, with the Agency and the Contractor sharing the associated costs equally. The Agency

and Contractor shall agree to a mediator within 10 business days after the disputed portion of the claim has been identified in writing. If the Agency and Contractor cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the claim. Each party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator. If mediation is unsuccessful, the parts of the claim remaining in dispute shall be subject to applicable procedures outside this section.

For purposes of this section, mediation includes any nonbinding process, including, but not limited to, neutral evaluation or a dispute review board, in which an independent third party or board assists the parties in dispute resolution through negotiation or by issuance of an evaluation. Any mediation utilized shall conform to the timeframes in this section.

Failure by the Agency to meet the time requirements of this section shall result in the portion of the claim that remains in dispute being deemed rejected in its entirety.

The parties may agree to waive, in writing, mediation under this section.

6-12.4 ARBITRATION. Claims and disputes arising under or related to the performance of the Contract, for which mediation under 6-12.3 was waived or unsuccessful except for claims which have been released by execution of the "Release on Contract" as provided in 9-4, shall be resolved by arbitration unless the Agency and the Contractor agree in writing, after the claim or dispute has arisen, to waive arbitration and to have the claim or dispute litigated in a court of competent jurisdiction. Arbitration shall be pursuant to Article 7.1 (commencing with Section 10240) of Chapter 1 of Part 2 of the Public Contract Code and the regulations promulgated thereto, Chapter 4 (commencing with Section 1300) of Division 2 of Title 1 of the California Code of Regulations. The arbitration decision shall be decided under and in accordance with California law, supported by substantial evidence and, in writing, contain the basis for the decision, findings of fact, and conclusions of law.

Arbitration shall be initiated by a Complaint in Arbitration made in compliance with the requirements of said Chapter 4. A Complaint in Arbitration by the Contractor shall be filed not later than 90 calendar Days after receipt of the final written decision of the Agency on the claim or dispute or within 300 Days after Acceptance of the Work by the Agency if no written decision has been issued. For the purposes of this section, "Acceptance of the Work by the Agency" shall be defined as the date the Notice of Completion is filed.

Where an election is made by either party to use the Simplified Claims Procedure provided under Sections 1340-1346 of said Chapter 4, the parties may mutually agree to waive representation by counsel.

All contracts valued at more than \$25,000 between the Contractor and its subcontractors and suppliers shall include a provision that the subcontractors and suppliers shall be bound to the Contractor to the same extent that the Contractor is bound to the Agency by all terms and provisions of the Contract, including this arbitration provision.

6-13 CONTRACTOR'S WORK HOURS

6-13.1 Working Hours Limitations. Except as otherwise specified, no work shall be performed by the Contractor at the Work site between the hours of 7:00 p.m. and 7:00 a.m. the following day, nor shall work be performed on Saturdays, Sundays or holidays listed in 6-7.2.1.

6-13.2 Regular Work Schedule. The Contractor shall furnish a work schedule with the Construction Schedule required by 6-1 and inform the Engineer at least two Days in advance of changing the schedule. The schedule shall include the times for starting and ending work on each day. Such starting and ending times shall not be more than 10 1/2 hours apart.

6-13.3 Exceptions. The limitations on working hours and days shall not apply to emergency work made necessary by unusual conditions where such work is necessary to protect the Work, to protect the property of others, to protect life, or to ensure the orderly flow of traffic.

The limitations of this section shall not apply where work at times other than allowed by 6-13.1 and 6-13.2 is necessary in order to make utility connections or is required by other provisions contained in these Specifications in order to perform the work in the manner specified. In these cases, the Contractor shall obtain prior written approval of the Engineer at least two Days in advance of performing the work.

SECTION 7 - RESPONSIBILITIES OF THE CONTRACTOR

7-1 THE CONTRACTOR'S EQUIPMENT AND FACILITIES.

7-1.1 General. The Contractor shall furnish and maintain in good condition all equipment and facilities as required for the proper execution and inspection of the Work.

The Contractor shall provide and maintain enclosed toilets for the use of employees engaged in the Work. These accommodations shall be maintained in a neat and sanitary condition, and regularly pumped out.

7-1.2 Temporary Utility Services. The Contractor shall, at its own expense, make all arrangements necessary for the provision of temporary utility services necessary for its own use during performance of the Work.

The Contractor shall not draw water from any fire hydrant (except to extinguish a fire), without obtaining permission from the water utility owner.

7-1.3 Crushing and Screening Operations. Unless otherwise specified in the Special Provisions, the establishment and operation of portable screens and crushers will not be allowed on or adjacent to the Work site.

7-2 LABOR

7-2.1 General. The Contractor, its agents, and employees shall be bound by and comply with applicable provisions of the Labor Code and Federal, State, and local laws related to labor.

Any worker found by the Engineer to be incompetent, intemperate, troublesome, disorderly, or otherwise objectionable, or who fails to perform the Work properly and acceptably, shall be immediately removed from the Work site by the Contractor and shall not be reemployed in the performance on the Work.

7-2.1.1 Special Qualifications. Where the Engineer determines certain portions of the Work require experience, training, certification or other special qualifications that may not be possessed by the average journeyman, such portions of the Work will be specifically identified in the Special Provisions and the special qualifications identified.

When work requiring special qualifications is being performed, a person with such qualifications must be in immediate charge of the work. The person may be a lead journeyman, foreman or trade superintendent. The general superintendent or a foreman who is not specifically assigned to the area where the identified work is being performed will not be considered to be in immediate charge of the work.

Written certification of the required qualifications shall be furnished to the Engineer at least one week prior to the time work is commenced on the work requiring such qualifications. Such certification is subject to review and acceptance by the Engineer. If, during performance of work requiring special qualifications, the qualified person becomes temporarily or permanently unavailable to the Contractor, work shall not proceed until a qualified replacement has been accepted by the Engineer. The Engineer will promptly consider the certification of the replacement.

If identified work is performed without a person having the special qualifications in charge, the Engineer may, at its sole discretion, order such work removed and replaced at the Contractor's expense.

If, after certification is accepted, the Engineer finds that the certification was inaccurate, or work on the project indicates a lack of the knowledge and experience to supervise the work, the Engineer may order the work stopped until an acceptable replacement has been certified, accepted and is in charge.

7-2.2 Prevailing Wages. Pursuant to Section 1773.2 of the Labor Code, the current prevailing rate of per diem wages at the time of the Bid as determined by the Director of the Department of Industrial Relations (DIR) are on file at the office of the Engineer. The Contractor shall post a copy of these rates at the Work site. Pursuant to Section 1774 of the Labor Code, the Contractor and any Subcontractors shall pay not less than the specified prevailing rates of wages to workers employed on the Contract. If the Contract is Federally-funded, the Contractor and any Subcontractors shall not pay less than the higher of these rates or the rates determined by the United States Department of Labor. Pursuant to Section 1775 of the Labor Code, the Contractor and any Subcontractors, shall, as a penalty to the Agency, forfeit the prescribed amounts per calendar day, or portion thereof, for each worker paid less than the prevailing wage rates. The project is subject to the compliance monitoring and enforcement by the California Department of Industrial Relations (DIR). The contractor is responsible for posting job site notices as prescribed by regulation pursuant to Labor Code section 1771.4, subdivision (a)(2). The Contractor and each Subcontractor, if any, must be registered with the DIR pursuant to Labor Code section 1725.5 and section 1771.1. The Contractor and each Subcontractor, if any, must submit certified payrolls to the Labor Commissioner pursuant to Labor Code 1771.4.

7-2.2.1 Apprentices. Apprentices shall be employed on the Work in accordance with Labor Code Section 1777.5. The Contractor is responsible for compliance with Labor Code Section 1777.5 for all apprenticeable occupations whether employed directly or through subcontractors.

7-2.2.2 Contractors' Duties Concerning Labor Code Compliance. As required by Labor Code 1775(b)(1), Labor Code Sections 1771, 1775, 1776, 1777.5, 1813 and 1815 are required to be included in the contract between the Contractor and subcontractors. The Contractor agrees to comply with these sections and all remaining provisions of the Labor Code.

7-2.3 Payroll Records. Pursuant to Section 1776 of the Labor Code the Contractor and each Subcontractor, if any, shall keep, make available, and submit to the Engineer within ten (10) days of receipt of a written request,

certified payroll records. Pursuant to Labor Code section 1776, subsection (h), the Contractor and each Subcontractor, if any, shall, as a penalty to the Agency, forfeit the prescribed amount for each calendar day, or portion thereof, for each worker, the Contractor and each Subcontractor, if any, fails to comply with that subsection until strict compliance is effectuated. The Contractor and each Subcontractor, if any, waives any right to any notice or hearing on the forfeiture of such penalties pursuant to Labor Code sections 1726 or 1771.6. The contractor shall include the in its subcontracts as required to make this paragraph effective as to each Subcontractor. Upon written request, the Contractor shall withhold penalties forfeited by a Subcontractor pursuant to Labor Code section 1776, subsection (h), and this paragraph from payment due to such Subcontractor and remit such penalties withheld to the Agency.

7-2.4 Hours of Labor. Pursuant to Section 1810 of the Labor Code, 8 hours of labor shall constitute a legal day's work. Pursuant to Section 1813 of the Labor Code, the Contractor and any Subcontractors, shall, as a penalty to the Agency, forfeit the prescribed amount per calendar day for each worker required or permitted to work more than 8 hours in any 1 calendar day and 40 hours in any 1 calendar week without being compensated in accordance with Section 1815.

Pursuant to Section 1810 of the Labor Code, 8 hours of labor shall constitute a legal day's work. Pursuant to Section 1813 of the Labor Code, the Contractor and each Subcontractor, if any, shall, as a penalty to the Agency, forfeit the prescribed amount per calendar day for each worker required or permitted to work more than 8 hours in any 1 calendar day and 40 hours in any 1 calendar week without being compensated in accordance with Section 1815. Contractor and each Subcontractor, if any, waives any right to any notice or hearing on the forfeiture of such penalties pursuant to Labor Code sections 1726 and 1771.6. Contractor shall include terms in its subcontracts as required to make this paragraph effective as to each Subcontractor. Upon written request, Contractor shall withhold penalties forfeited by a Subcontractor pursuant to Labor Code section 1813 and this paragraph from payments due to such Subcontractor and remit such penalties withheld to the Agency

7-3 INDEPENDENCE OF CONTRACTOR, INDEMNIFICATION AND POLLUTION

7-3.1 Independence of Contractor. It is understood and agreed that Contractor is at all times an independent contractor and that no relationship of employer-employee exists between the parties hereto. Contractor will not be entitled to any benefits payable to employees of County, including but not limited to overtime, retirement benefits, workers' compensation benefits, injury leave or other leave benefits. County is not required to make any tax or benefit deductions from the compensation payable to Contractor under the provisions of this Agreement. As an independent contractor, Contractor hereby holds County harmless from any and all claims that may be made against County based upon any contention by any third party that an employer-employee relationship exists by reason of the Agreement.

If, in the performance of this Agreement, any third persons are employed by Contractor, such persons will be entirely and exclusively under the direction, supervision and control of Contractor. All terms of employment, including hours, wages, working conditions, discipline, hiring and discharging or any other terms of employment or requirements of law, will be determined by Contractor. County will have no right or authority over such persons or the terms of such employment, except as provided in this Agreement.

7-3.2 Indemnification and Hold Harmless Clause. All activities arising out of or relating to the performance of the Work covered by this Contract shall be at the risk of Contractor. To the fullest extent permitted by law, Contractor shall defend (at Agency's request), indemnify and hold harmless Agency, and the County of Ventura if the County of Ventura is not the entity defined as Agency under this Contract, including all of their boards, agencies, departments, officers, employees, agents and volunteers (collectively, "Indemnatee"), against any and all claims, suits, actions, legal or administrative proceedings, judgments, debts, demands, damages, including injury or death to any person or persons, and damage to any property including loss of use resulting therefrom, incidental and consequential damages, liabilities, interest, costs, attorneys' fees and expenses of whatsoever kind of nature, whether arising before, during or after commencement or completion of this Contract, whether against Contractor and Indemnatee or which are in any manner, directly, indirectly, in whole or in part, arising from any act, omission, fault or negligence, whether active or passive, of Contractor, a Subcontractor or anyone directly or indirectly employed by them or anyone for whose acts they may be liable in connection with or incident to the Contract, even though the same may have resulted from the joint, concurring or contributory negligence, or from the passive negligence, of Indemnatee or any other person or persons, unless the same be caused by the sole negligence of Indemnatee, or except to the extent caused by the active negligence or willful misconduct of Indemnatee.

The Agency will notify the Contractor of the receipt of any third party claims.

7-3.3 Contamination and Pollution. Contractor, solely at its own cost and expense, will provide clean up of any premises, property or natural resources contaminated or polluted due to Contractor activities. Any fines, penalties, punitive or exemplary damages assigned due to contaminating or polluting activities of the Contractor will be borne entirely by the Contractor.

7-4 INSURANCE REQUIREMENTS

Contractor, at its sole cost and expense, shall obtain and maintain in full force during the term of this Contract the following types of insurance:

7-4.1 Workers' Compensation Insurance.

7-4.1.1 Coverage. Workers' Compensation coverage, in full compliance with Labor Code 3700, for all employees of Contractor and Employer's Liability in the minimum amount of \$1,000,000. The Agency, the County of Ventura, its officers, employees or Consultants, will not be responsible for any claims in law or equity occasioned by failure of Contractor to comply with this paragraph.

7-4.1.2 Certification. Before execution of the Contract by Agency, Contractor shall file with the Engineer the following signed certification:

"I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the Work of this Contract."

7-4.2 Commercial General Liability Insurance

7-4.2.1 Minimum Limits and Scope; Insurance Classes. "Occurrence" coverage in the minimum amount of:

<u>Coverage Class</u>	<u>Coverage</u>
L-A	\$ 1,000,000 combined single limit (CSL) bodily injury and property damage each occurrence and \$1,000,000 aggregate
L-B	\$ 1,000,000 CSL bodily injury and property damage each occurrence and \$2,000,000 aggregate
L-C	\$ 5,000,000 CSL bodily injury and property damage each occurrence and \$5,000,000 aggregate
L-D	\$ 10,000,000 CSL bodily injury and property damage each occurrence and \$10,000,000 aggregate

If no coverage class is specified in "Proposal", coverage class L-B shall apply.

If Contractor maintains higher limits than the minimums shown above, the Agency requires and shall be entitled to coverage for the higher limits maintained by the Contractor. Any available insurance proceeds in excess of the specified minimum limits of insurance and coverage shall be available to the Agency.

Coverages shall include premises/operations; products/completed operations; independent contractors; underground, explosion and collapse hazards; personal and advertising injury; broad form property damage; and broad form blanket contractual.

7-4.2.2 Coverage Exceptions. On projects where no explosives will be used and no demolition is involved, the coverage for explosion may be omitted. On projects where no excavation is involved, the coverage for underground hazard may be omitted. The omission of said coverages is at Agency's option, and shall not abrogate Contractor's responsibilities for indemnification as set forth in these Specifications.

7-4.2.3 Excess Liability Policies. All Excess Liability policies, if used, shall be on an "umbrella" or following form of the primary layer of coverage.

7-4.3 Commercial Automobile Liability Insurance

Coverage in the minimum amount of \$1,000,000 CSL bodily injury and property damage, including automobile liability, any auto.

7-4.4 Property Insurance

Contractor shall arrange for its own "Course of Construction" insurance on the project to protect its interests, as Agency does not have this coverage.

Contractor is responsible for delivering to Agency Work completed in accordance with the Contract except as provided in 7-18 (Acts of God). Should the Work being constructed be damaged by fire or other causes during construction, it shall be replaced by Contractor in accordance with the requirements of the Plans and Specifications without additional expense to Agency.

7-4.5 Other Insurance Provisions.

7-4.5.1 Insurance Company Qualifications. All insurance required shall be issued by (a) an admitted company or admitted companies authorized to transact business in the State of California which have a BEST rating of B+ or higher and a Financial Size Category (FSC) of VII or larger or (b) a California approved Surplus Line carrier or carriers which have a BEST rating of A or higher and a Financial Size Category (FSC) of VII or larger.

Workers compensation insurance not meeting the above requirements but meeting all other requirements of the specifications, will be accepted.

7-4.5.2 Primary Coverage. All insurance required shall be primary coverage as respects Agency and any insurance or self-insurance maintained by Agency or the County of Ventura shall be in excess of Contractor's insurance coverage and shall not contribute to it.

7-4.5.3 Aggregate Limits Exceeded. Agency shall not be notified immediately if any aggregate insurance limit is exceeded. Contractor shall purchase additional coverage to meet requirements.

7-4.5.4 Liability in Excess of Limits. Insurance coverage in the minimum amounts set forth herein shall not be construed to relieve Contractor for liability in excess of such coverage, nor shall it preclude Agency or the County of Ventura from taking such other actions as is available to it under any other provisions of this Contract or otherwise in law.

7-4.5.5 Additional Insured Endorsements. The Agency, the County of Ventura (if not defined as Agency) and all special Districts governed by the County of Ventura Board of Supervisors, and their officials, employees, and volunteers shall be named as Additional Insured as respects Work done by or on behalf of Contractor under the Contract on all policies required (except workers' compensation). With respect to Contractor's commercial general Liability insurance, Additional Insured coverage shall include both ongoing and completed operations.

7-4.5.6 Waiver of Subrogation Rights. Contractor agrees to waive all rights of subrogation against the Agency, the County of Ventura, including its boards, and all special Districts governed by the Board of Supervisors, for losses arising directly or indirectly from the activities or Work performed by Contractor under the Contract (applies only to Workers' Compensation and Commercial General Liability).

7-4.5.7 Cancellation Notice Required. In the case of policy cancellation, Agency shall be notified by the insurance company or companies as provided for in the policy. Contractor shall notify Agency of any and all policy cancellations within three working days of the cancellation.

7-4.5.8 Documentation Required. Prior to execution of the Contract by Agency, Contractor shall provide Agency with Certificates of Insurance for all required coverages (see Appendix A for example), all required endorsement(s) and a copy of its course of insurance policy.

It is the responsibility of Contractor to confirm that all terms and conditions of Section 7-4 Insurance Requirements are complied with by any and all subcontractors that Contractor may use in the completion of the Contract.

7-5 PERMITS. The Agency will obtain, at no cost to the Contractor, all encroachment and building permits necessary to perform Contract Work in streets, highways, railways or other rights of way, unless the necessity for such permit(s) is created by a method of operation chosen by the Contractor. The Contractor shall obtain and pay for all costs incurred for permits necessitated by its operations such as, but not limited to, those permits required for night Work, overload, blasting and demolition.

The Contractor shall pay all business taxes or license fees that are required for the Work.

7-5.1 Highway and Railroad Permits. The Engineer will obtain the basic State highway and railroad encroachment permits which will include checking of plans. However, the Contractor must also obtain permits from these agencies. Inspection fees charged by these agencies must be paid by the Contractor.

7-5.2 Grading Ordinance

7-5.2.1 General. All excavation, filling and grading operations in Ventura County are governed by the Ventura County Grading Ordinance or City Ordinances, except within the project right of way shown on the Plans.

7-5.2.2 Permits Required. Work outside the project right of way which involves excavation or filling of soils is subject to all requirements of the applicable grading ordinance. The requirements may include, but are not limited to, submitting of a grading plan prepared by a Civil Engineer, obtaining a grading permit, paying the permit fee, posting a grading bond, hiring professionals for engineering and testing services, compacting fills, constructing drainage facilities and providing erosion protection.

7-5.2.3 Imported and Exported Material. To insure that neither the Agency nor the Contractor is a party to aiding or abetting any property owner (who is ultimately responsible) to violate the applicable grading ordinance, no material shall be imported from or exported or wasted outside the project right of way until the Contractor has furnished the Engineer a copy of the grading permit covering such operation on land where material is to be deposited or excavated, unless exempt.

7-5.2.4 Exemptions from Permit. No grading permit is required of the Contractor for Work performed within the project right of way shown on the Plans or on borrow or disposal areas shown on the Plans or described in the Special Provisions and which are specifically designated as being exempt from such permit requirements.

7-5.3 Building Permit.

7-5.3.1 Agency Furnished Permits. Except as provided in **7-5.3.2**, Agency will submit the plans for the Work to Department of Building and Safety, and other building related permit issuing agencies, for plan check and make the corrections necessary for the issuance of building and related permits. Agency will Pay plan check and permit fees for the Work. The Contractor may be required to furnish information to the permit issuing agencies, as required for the issuance of permits, and sign the permit.

7-5.3.2 Contractor Furnished Permits. Components or systems, required by the Contract, may require the preparation of plans and calculations to obtain approvals or permits from state or local building, fire prevention, public health, safety, environmental protection and other agencies in addition to the basic permits arranged for by the Agency as provided in **7-5.3.1**. Contractor shall take all actions in a timely manner to obtain such approvals or permits so as not to delay completion of the Work beyond the time provided in **6-7**. Contractor shall include all costs and consider the time required to obtain approvals or permits in the Contract price bid.

7-5.4 Coastal Zone Permits

7-5.4.1 Agency Furnished Permits. Permits required for Work on the project within rights of way furnished by the Agency within the Coastal Zone will be obtained by the Agency.

7-5.4.2 Contractor Furnished Permits. Permits required for the Contractor's operations outside of rights of way furnished by the Agency must be obtained by the Contractor. Such permits are required for brush removal, grading, dredging, disposal of material and many other operations within the Coastal Zone.

7-6 THE CONTRACTOR'S REPRESENTATIVE. Before starting work, the Contractor shall designate in writing a representative who shall have complete authority to act for it. An alternative representative may be designated as well. The representative or alternate shall be present at the Work site whenever work is in progress or whenever actions of the elements necessitate its presence to take measures necessary to protect the Work, persons, or property. Any order or communication given to this representative shall be deemed delivered to the Contractor. A joint venture shall designate only one representative and alternate. In the absence of the Contractor or its representative, instructions or directions may be given by the Engineer to the superintendent or person in charge of the specific work to which the order applies. Such order shall be complied with promptly and referred to the Contractor or its representative.

In order to communicate with the Agency, the Contractor's representative, superintendent, or person in charge of specific work shall be able to speak, read, and write the English language.

7-7 COOPERATION AND COLLATERAL WORK. The Contractor shall be responsible for ascertaining the nature and extent of any simultaneous, collateral, and essential work by others. The Agency, its workers and contractors and others, shall have the right to operate within or adjacent to the Work site during the performance of such work.

The Agency, the Contractor, and each of such workers, contractors and others, shall coordinate their operations and cooperate to minimize interference.

The Contractor shall include in its Bid all costs involved as a result of coordinating its work with others. The Contractor will not be entitled to additional compensation from the Agency for damages resulting from such simultaneous, collateral, and essential work. If necessary to avoid or minimize such damage or delay, the Contractor shall redeploy its work force to other parts of the Work.

Should the Contractor be delayed by the Agency, and such delay could not have been reasonably foreseen or prevented by the Contractor, the Engineer will determine the extent of the delay, the effect on the Work, and any extension of time.

7-8 WORK SITE MAINTENANCE

7-8.1 General Throughout all phases of construction, including suspension of the Work, and until acceptance per 6-8, the Contractor shall keep the Work site clean and free from rubbish and debris. Rubbish and debris collected on the Work site shall only be stored in roll-off, enclosed containers prior to disposal. Stockpiles of such will not be allowed.

When required by the Special Provisions, the Contractor shall provide a self-loading motorized street sweeper equipped with a functional water spray system. The sweeper shall clean all paved areas within the Work site and all paved haul routes at least once each working day.

The Contractor shall ensure there is no spillage along haul routes. Any such spillage shall be removed immediately and the area cleaned.

Should the Contractor fail to keep the Work site free from rubbish and debris, the Engineer may suspend the Work per 6-3 until the condition is corrected.

7-8.2 Air Pollution Control The Contractor shall not discharge smoke, dust, equipment exhaust, or any other air contaminants into the atmosphere in such quantity as will violate any Federal, State, or local regulations.

The Contractor shall also abate dust nuisance by cleaning, sweeping and spraying with water, or other means as necessary. The use of water shall conform to 7-8.6.

7-8.3 Noise Control. Noise generated from the Contractor's operations shall be controlled as specified in the Special Provisions.

7-8.4 Storage of Equipment and Materials.

7-8.4.1 General Materials and equipment shall be removed from the Work site as soon as they are no longer necessary. Before inspection by the Engineer for acceptance, the Work site shall be cleared of equipment, unused materials, and rubbish so as to present a satisfactory clean and neat appearance.

Excess excavated material shall be removed from the Work site immediately unless otherwise specified in the Special Provisions.

Forms and form lumber shall be removed from the Work site as soon as practicable after stripping.

7-8.4.2 Storage in Public Streets. Construction materials and equipment shall not be stored in streets, roads, or highways for more than 5 days after unloading unless otherwise specified in the Special Provisions or approved by the Engineer. All materials or equipment not installed or used in construction within 5 days after unloading shall be stored at a location approved by the Engineer.

Excavated material, except that which is to be used as backfill in the adjacent trench, shall not be stored in public streets unless otherwise specified in the Special Provisions or approved by the Engineer. Immediately after placing backfill, all excess material shall be removed from the Work site.

7-8.5 Sanitary Sewers.

7-8.5.1 General. The flow of sewage shall not be interrupted. Should the Contractor disrupt the operation of existing sanitary sewer facilities, or should disruption be necessary for performance of the Work, the Contractor shall bypass the sewage flow around the Work. Sewage shall be conveyed in closed conduits and disposed of in a sanitary sewer system. Sewage shall not be permitted to flow in trenches nor be covered by backfill.

Whenever sewage bypass and pumping is required by the Plans or Specifications, or the Contractor so elects to perform, the Contractor shall submit per 2-5.3 a working drawing conforming to 7-8.5.2 detailing its proposed plan of sewage bypass and pumping.

7-8.5.2 Sewage Bypass and Pumping Plan. The plan shall indicate the locations and capacities of all pumps, sumps, suction and discharge lines. Equipment and piping shall be sized to handle the peak flow of the section of sewer line to be bypassed and pumped. Equipment and piping shall conform to 7-10, the Plans, and the Special Provisions. Bypass piping, when crossing areas subject to traffic loads, shall be constructed in trenches with adequate cover and otherwise protected from damage due to traffic. Lay-flat hose or aluminum piping with an adequate casing and/or traffic plates may be allowed if so approved by the Engineer. Bypass pump suction and

discharge lines that extend into manholes shall be rigid hose or hard pipe. Lay flat hose will not be allowed to extend into manholes. The Contractor shall provide a backup bypass pumping system in case of malfunction. The backup bypass system shall provide 100 percent standby capability, and be in place and ready for immediate use.

Each standby pump shall be a complete unit with its own suction and discharge piping. In addition to the backup system, the Contractor shall furnish and operate vacuum trucks when required by the Plans or Special Provisions.

7-8.5.3 Spill Prevention and Emergency Response Plan. The Contractor shall prepare and submit per 2-5.3 a spill prevention and emergency response plan. The plan shall address implementation of measures to prevent sewage spills, procedures for spill control and containment, notifications, emergency response, cleanup, and spill and damage reporting.

The plan shall account for all storm drain systems and water courses within the vicinity of the Work which could be affected by a sewage spill. Catch basins that could receive spilled sewage shall be identified Unless otherwise specified in the Special Provisions, these catch basins shall be sealed prior to operating the bypass and pumping system. The Contractor shall remove all material used to seal the catch basins when the bypass and pumping system operations are complete.

The Contractor shall be fully responsible for containing any sewage spillage, preventing any sewage from reaching a watercourse, recovery and legal disposal of any spilled sewage, any fines or penalties associated with the sewage spill imposed upon by the Agency and/or the Contractor by jurisdictional regulatory agencies, and any other expenses or liabilities related to the sewage spill.

7-8.6 Water Pollution Control The Contractor shall prevent, control, and abate discharges of pollutants from the construction site in order to protect the storm drain system, which includes pipes, channels, streams, waterways, and other bodies of water, by the construction, installation or performance of water pollution control measures as shown on the Stormwater Pollution Control Plan (SWPCP) or Stormwater Pollution Prevention Plan (SWPPP) depending on the land area affected by the construction activity. The Contractor shall ensure compliance with the current State NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activity (General Construction Permit), NPDES No. CAS000002 and current Ventura County NPDES Municipal Separate Storm Sewer System (MS4) Permit No. CAS004002.

7-8.6.1 Compliance with NPDES General Construction Permit

7-8.6.1.1 Construction Sites

If the Work involves construction activity that results in soil disturbance of one acre or more of total land area, or results in soil disturbances of less than one acre but is a part of a work area larger than one acre, the Contractor shall comply with the requirements of the General Construction Permit NPDES No. CAS000002. Construction activity includes clearing, grading, excavation, stockpiling, and reconstruction of existing facilities involving removal and replacement. Construction activity does not include routine maintenance such as, maintenance of original line and grade, hydraulic capacity, or original purpose of the facility.

The Contractor shall comply with requirements of the General Construction Permit (NPDES No. CAS000002), obtained by the Agency, including a site-specific Storm Water Pollution Prevention Plan (SWPPP) for the Work to be developed by Qualified SWPPP Developer (QSD) and implemented by the Qualified SWPPP Practitioner (QSP). After July 1, 2010, the Agency will electronically file all required Permit Registration Documents (PRDs) through the State Water Board's Stormwater Multi-Application and Report Tracking System (SMARTS) website, as required prior to the commencement of construction activity. PRDs consist of the Notice of Intent (NOI), Risk Assessment, Post-Construction Calculations, a Site Map, the SWPPP, a signed certification statement by the Legally Responsible Party (LRP), and the first annual fee. For the Permit application, the Contractor shall submit to Project Manager the following:

- The completed site-specific Risk Assessment
- Post-construction calculations if applicable for the project, and
- Site-specific SWPPP developed in accordance with applicable Permits.

7-8.6.1.2 Linear Utility Projects; Contractor shall comply with the requirements of the General Construction Permit NPDES No. CAS000002 for Linear Underground/Overhead projects (LUPs) one acre or greater.

7-8.6.2 Compliance with NPDES MS4 Permit

7-8.6.2.1 Construction Sites Less Than One Acre The Contractor shall ensure implementation of an effective combination of erosion and sediment control Best Management Practices (BMPs) listed in **Table 6** of the Ventura County NPDES MS4 Permit. The Contractor shall develop and implement a Storm Water Pollution Control Plan (SWPCP).

7-8.6.2.2 Construction Sites One Acre but Less Than 5 Acres The Contractor shall ensure implementation of an effective combination of appropriate erosion and sediment control BMPs from **Table 7** (BMPs at Construction sites 1 acre or greater but less than 5 acres) of the Ventura County NPDES MS4 Permit in addition to the ones identified in **Table 6** (BMPs at Construction sites less than 1 acre) to prevent erosion and sediment loss, and the discharge of construction wastes. For all construction sites one acre or greater, the Contractor shall submit the SWPPP to the Agency for review and certification as the Local SWPPP.

7-8.6.2.3 Construction Sites 5 Acres and Greater The Contractor shall ensure implementation of an effective combination of the following BMPs in **Tables 8** (BMPs at Construction sites 5 acres or greater) in addition to the ones identified in **Table 6** (BMPs at Construction sites less than 1 acre) and **Table 7** (BMPs at Construction sites 1 acre or greater but less than 5 acres) at all construction sites 5 acres and greater to prevent erosion and sediment loss, and the discharge of construction wastes. For all construction sites one acre or greater, the Contractor shall submit the SWPPP to the Agency for review and certification as the Local SWPPP.

7-8.6.2.4 Enhanced Construction BMP Implementation

Construction sites located on hillsides, adjacent or directly discharging to CWA 303(d) listed waters for siltation or sediment, and directly adjacent to Environmentally Sensitive Areas are termed "high risk sites." Contractor shall implement enhanced practices that preclude impacts to water quality posed by the high risk sites.

Contractor shall ensure that high risk sites are inspected by the Qualified SWPPP Developer, Qualified SWPPP Practitioner, or Certified Professionals in Erosion and Sediment Control (CPESC) at the time of BMP installation, at least weekly during the wet season, and at least once each 24 hour period during a storm event that generates runoff from the site, to identify BMPs that need maintenance to operate effectively, that have failed or could fail to operate as intended.

During the wet season, the area of disturbance shall be limited to the area that can be controlled with an effective combination of erosion and sediment control BMPs. Enhanced sediment controls should be used in combination with erosion controls and should target portions of the site that cannot be effectively controlled by standard erosion controls described above. Effective sediment and erosion control BMPs proposed by the Contractor shall include the BMPs listed in Table 9 (Enhanced Construction BMP Implementation) of the NPDES MS4 Permit. The Contractor shall implement the BMPs listed in Table 9 unless shown unnecessary. Also, the Contractor shall retain records of the inspection and a determination and rationale of the BMPs selected to control runoff.

7-8.6.3 Plan.

7-8.6.3.1 The SWPCP, required for construction projects less than one acre, shall be prepared in accordance with the requirements of current Ventura County NPDES MS4 Permit No. CAS004002 and County Ordinance No. 4142.

7-8.6.3.2 The SWPPP, required for construction projects one acre or greater, shall be prepared in accordance with the requirements of the state's General Construction Permit NPDES Permit CAS000002, Ventura Countywide Stormwater Quality Management Program, NPDES MS4 Permit No. CAS004002, and County Ordinance No. 4142.

7-8.6.3.3 The SWPCP/SWPPP shall identify potential pollutant sources on the construction site that may affect the quality of discharges, whether non-stormwater or stormwater, from the site and design the use and placement of water pollution control measures, BMPs, to effectively prohibit the entry of pollutants from the site into the storm drain system during construction. At a minimum, and depending on the size of the project area, the SWPCP/SWPPP will include all appropriate minimum BMPs as required by the Ventura Countywide Stormwater Quality Management Program, NPDES MS4 Permit No. CAS004002 (Tables 6 through 9). The SWPCP/SWPPP must utilize the measures recommended in the California Stormwater Quality Association (CASQA) Stormwater BMPs Handbook for Construction (January 2003 version until July 1, 2010 and 2009 version after July 1, 2010). Starting July 1, 2010 SWPPP shall be prepared by QSD as defined in the NPDES Permit CAS000002. The Contractor shall complete, sign and submit the SWPCP/SWPPP for review and final approval by the Project Engineer, prior to issuance of the Notice to Proceed as provided in 6-7.4.

7-8.6.3.4 For all construction projects one acre and greater, the Contractor shall submit the SWPPP to the Agency for review and certification as Local SWPPP in accordance with NPDES MS4 Permit No. CAS004002 prior to the Notice to Proceed as provided in 6-7.4.

7-8.6.4 Measures. All water pollution control measures shall conform to the requirements of the submitted SWPCP/SWPPP. If circumstances during the course of construction require changes to the original SWPCP/SWPPP, a revised SWPCP/SWPPP shall be promptly submitted to the Project Manager in each instance. The SWPPP shall be amended or revised by QSD. A copy of the current SWPCP/SWPPP including revisions and amendments shall be kept at the site to ensure that field personnel has access to the current document at all times. If measures being taken are inadequate to control water pollution effectively, the Project Manager may direct the Contractor to revise the operations and no further work shall be performed until adequate water pollution control measures are implemented. Effective September 2, 2011, implementation of the SWPPP shall be overseen by the Contractor's QSP as defined in the General Construction Permit NPDES No. CAS000002. All work installed by the Contractor in connection with the SWPCP/SWPPP but not specified to become a permanent part of the Work shall be removed and the site restored in so far as practical to its original condition prior to completion of the Work.

7-8.6.4.1 Post-Construction Standards; Contractor shall ensure that applicable post-construction standards are implemented to meet applicable project requirements of the Ventura County NPDES MS4 Permit and General Construction Permit NPDES No. CAS000002 (effective September 2, 2012).

7-8.6.4.2 Active Treatment Systems; Contractor shall comply with requirements of the General Construction Permit NPDES No. CAS000002 for active treatment systems as applicable.

7-8.6.5 Monitoring and Reporting

7-8.6.5.1 Monitoring; In accordance with the General Construction Permit NPDES No. CAS000002, the Contractor shall develop and implement monitoring program for Risk Level 2 and 3 sites. In addition at Risk Level 3 sites, contractor shall perform receiving water monitoring to meet Permit requirements.

7-8.6.5.2 Reporting; the Contractor shall ensure that all submittals and reports are prepared and submitted to the RWQCB in accordance with the applicable Permits. At minimum the reports will include Annual Report (for applicable projects due September 1st), Rain Event Action Plan (due 48 hrs prior to the rain event for the applicable projects), Numeric Action Levels (NAL) Exceedance Report (as required), Numeric Effluent Limitations (NELs) Violation Report (within 24 hours after NEL exceedance is identified). Contractor shall submit required reports to the Project Manager for review and approval prior to submittal to the RWQCB.

7-8.6.6 Dewatering Activities. All dewatering activities shall be performed in accordance with applicable regulatory requirements issued by the Los Angeles Regional Water Quality Control Board, including specific requirements contained in the Waste Discharge Requirements (WDR) when issued for the Work.

7-8.6.7 Payment. The Contract lump sum price for water pollution control shall include full compensation for furnishing all labor, materials, tools, equipment, services and incidentals and for doing all work involved in water pollution control as specified herein. Payment for water pollution control will be made as the Work proceeds, and is in compliance with the approved Water Pollution Control Plan, on the following basis.

Partial payment estimate (excluding mobilization & water pollution control payments) as a percentage of the original Contract price (excluding the mobilization & water pollution control Bid items).		Cumulative amount of water pollution control pay item earned is the lesser of the amounts as computed by these two columns.	
Equal to or greater than	Less than	Percentage of water pollution control pay item	Percentage of the original Contract total.
5	10	10	1
10	20	20	2
20	50	50	3
50	Completion of Work	75	5
Completion of Work		100	

Where no Bid item is provided for water pollution control, payment for water pollution control shall be considered to be included in the other Bid items.

7-8.7 Drainage Control. The Contractor shall maintain drainage within and through the Work areas. Earth dams will not be permitted in paved areas. Temporary dams of sandbags, asphaltic concrete or other acceptable material will be permitted when necessary to protect the Work, provided their use does not create a hazard or nuisance to the public. Such dams shall be removed from the site as soon as their use is no longer necessary.

7-8.8 Final Cleaning. At the completion of the Work, the Contractor shall remove all waste materials and rubbish from and about the project, as well as all tools, construction equipment, temporary facilities, machinery, and surplus materials.

At completion of construction and just prior to final inspection, the Contractor shall thoroughly clean the interior and exterior of the buildings, including hardware, floors, roofs, sills, ledges, glass, or other surfaces where debris, plaster, paint, spots, and dirt or dust may have collected. All glass shall be washed clean and polished. Remove all grease, stains, labels, fingerprints, and other foreign materials from interior and exterior surfaces. Repair, patch, and touch up marred surfaces to match adjacent finishes.

The Contractor shall use only experienced workmen or professional cleaners for final cleaning. It shall use only cleaning materials recommended by the manufacturer of the surface to be cleaned, and use cleaning materials only on surfaces recommended by the cleaning material manufacturer.

It shall broom-clean all paved surfaces and rake-clean other surfaces of grounds.

The Contractor shall replace air conditioning filters if units were operated during construction, and clean all ducts, blowers, and coils if air conditioning units were operated without filters during construction.

After cleaning, the Contractor shall maintain the building in a clean condition until it is accepted by the Agency.

7-9 PROTECTION AND RESTORATION OF EXISTING IMPROVEMENTS. The Contractor shall be responsible for the protection of public and private property adjacent to the Work and shall exercise due caution to avoid damage to such property.

The Contractor shall repair or replace all existing improvements within the right-of-way which are not designated for removal (e.g., curbs, sidewalks, driveways, fences, walls, signs, utility installations, pavement, structures, etc.) which are damaged or removed as a result of its operations. When a portion of a sprinkler system within the right-of-way must be removed, the remaining lines shall be capped. Repairs and replacements shall be at least equal to existing improvements and shall match them in finish and dimension.

Maintenance of street and traffic signal systems that are damaged, temporarily removed or relocated shall be done in conformance with 307-1.5.

Trees, lawns, and shrubbery that are not designated to be removed shall be protected from damage or injury. If damaged or removed because of the Contractor's operations, they shall be restored or replaced in as nearly the original condition and location as is reasonably possible. Lawns shall be reseeded and covered with suitable mulch.

The Contractor shall give reasonable notice to occupants or owners of adjacent property to permit them to salvage or relocate plants, trees, fences, sprinklers and other improvements which are designated for removal and would be destroyed because of the Work.

All costs to the Contractor for protecting, removing, and restoring existing improvements shall be absorbed in its bid.

In existing buildings, all surfaces, equipment, furniture and other property shall be protected from loss or damage by or as result of the Contractor's operations. The Contractor shall replace damaged property or shall repair and restore it to its previous condition. Patching, painting, replacement of wall, ceiling and floor covering and similar Work shall be done in such a manner that the repaired Work will not be readily noticeable.

7-10 PUBLIC CONVENIENCE AND SAFETY

7-10.1 Access.

7-10.1.1 General. The Contractor's operations shall cause no unnecessary inconvenience to the public or businesses in the vicinity of the Work. The Contractor shall have no greater length or quantity of Work under construction than can be properly prosecuted with a minimum of inconvenience to the public and other contractors engaged in adjacent or related work.

The Contractor shall provide continuous and unobstructed access to the adjacent properties unless otherwise specified in the Special Provisions or approved by Engineer. Work requiring traffic lane closures shall only be performed between the hours specified in the Special Provisions or shown on the TCP. Traffic shall be permitted to pass through the Work site, unless otherwise specified in the Special Provisions or shown on the TCP.

7-10.1.1.1 Vehicular Access. Vehicular access to residential driveways shall be maintained to the property line except when necessary construction precludes such access. If backfill has been completed to the extent that safe access may be provided and the street is opened to local traffic, the Contractor shall immediately clear the street and driveways and provide and maintain access.

7-10.1.1.2 Pedestrian Access. Safe, adequate, and ADA compliant pedestrian access shall be maintained unless otherwise approved by the Engineer. 7-10.2 Work Area Traffic Control.

7-10.2 Traffic Control

7-10.2.1 General. Work area traffic control shall conform to the California MUTCD, WATCH, or as specified in the Special Provisions. The total length of the traffic control zone shall include a buffer space, advance signing, striping transitions in advance of the Work site, existing striping, signing, and raised medians.

7-10.2.2 Traffic Control Plan.

7-10.2.2.1 General. If so specified in the Special Provisions or on the permit, the Contractor shall submit a TCP in accordance with 2-5.3. The sheets of the TCP shall display the title, phase identification, name of the firm preparing the TCP, name and stamp of the Registered Traffic or Civil Engineer, approval block for each jurisdictional agency, north arrow, sheet number, and number of sheets comprising the TCP. General notes and symbol definitions shall be included when required. Adequate dimensioning shall be provided to allow for proper field installation. The TCP shall be drawn to a 1 inch = 40 feet scale on common size sheets, either 8-1/2 inches x 11 inches, 8-1/2 inches x 14 inches, 11 inches x 17 inches, or 2-foot x 3-foot plan sheets as dictated by the length of the Work.

The requirements in the Special Provisions shall govern the design of the proposed TCP.

7-10.2.2.2 Payment. Payment for preparation of the TCP shall be included in the appropriate lump sum Bid items. If no Bid items have been provided, payment shall be included in the various Bid items unless otherwise specified in the Special Provisions.

7-10.3 Haul Routes. Unless otherwise specified in the Special Provisions, the haul route(s) shall be determined by the Contractor.

7-10.4 Safety.

7-10.4.1 Work Site Safety.

7-10.4.1.1 General. The Contractor shall provide safety measures as necessary to protect the public and workers within, or in the vicinity of, the Work site. The Contractor shall ensure that its operations will not create safety hazards. The Contractor shall provide safety equipment, material, and assistance to Agency personnel so that they may properly inspect all phases of the Work. When asbestos is being removed, the requirements of the CCR Title 8, Div. 1, Chapter 4, Subchapter 4 and Subchapter 7 shall be implemented.

7-10.4.1.2 Work Site Safety Official. The Contractor shall designate in writing a "Project Safety Official" who shall be at the Work site at all times, and who shall be thoroughly familiar with the Contractor's Injury and Illness Prevention Program (IIPP) and Code of Safe Practices (CSP). The Project Safety Official shall be available at all times to abate any potential safety hazards and shall have the authority and responsibility to shut down an unsafe operation, if necessary.

7-10.4.2 Safety Orders.

7-10.4.2.1 General. The Contractor shall have at the Work site, copies or suitable extracts of Construction Safety Orders, Tunnel Safety Orders, and General Industry Safety Orders issued by the State Division of Industrial Safety. Prior to beginning any excavation 5 feet in depth or greater, the Contractor shall submit to the Engineer, the name of the "Competent Person" as defined in CCR, Title 8, Section 1504, in accordance with 2-5.3. The "Competent Person" shall be present at the Work site as required by Cal-OSHA.

7-10.4.2.2 Shoring Plan. Before excavating any trench 5 feet (105m) or more in depth, the Contractor shall submit in accordance with 2-5.3 a detailed working drawing (shoring plan) showing the design of the shoring, bracing, sloping, or other provisions used for the workers' protection. If the shoring plan varies from the shoring system standards, the shoring plan shall be prepared by a registered Structural or Civil Engineer. The shoring plan shall accommodate existing underground utilities. No excavation shall start until the Engineer has accepted the shoring plan and the Contractor has obtained a permit from the State Division of Industrial Safety. A copy of the permit shall be submitted to the Engineer in accordance with 2-5.3. If the Contractor fails to submit a shoring plan or fails to comply with an accepted shoring plan, the Contractor shall suspend work at the affected location(s) when directed to do so by the Engineer. Such a directive shall not be the basis of a claim for Extra Work and the Contractor shall not receive additional compensation or Contract time due to the suspension.

7-10.4.2.3 Payment. Payment for shoring shall be included in the Bid item provided therefor. Payment for compliance with the provisions of the safety orders and all other laws, ordinances, and regulations shall be included in the various Bid items.

7-10.4.3 Use of Explosives. Explosives may be used only when authorized in writing by the Engineer, or as otherwise specified in the Special Provisions.

Explosives shall be handled, used, and stored in accordance with all applicable regulations.

Prior to blasting, the Contractor shall comply with the following requirements:

- a) The jurisdictional law enforcement agency shall be notified 24 hours in advance of blasting.
- b) The jurisdictional fire department shall be notified 24 hours in advance of blasting.
- c) Blasting activities and schedule milestones shall be included in the Contractor's construction schedule per 6-1.

For a Private Contract, specific permission shall be obtained from the Agency in writing, prior to any blasting operations in addition to the above requirements.

The Engineer's approval of the use of explosives shall not relieve the Contractor from liability for claims caused by blasting operations.

7-10.4.4 Hazardous Substances. An MSDS as described in CCR, Title 8, Section 5194, shall be maintained at the Work site for all hazardous material used by the Contractor. Material usage shall be accomplished with strict adherence to California Division of Industrial Safety requirements and all manufacturer warnings and application instructions listed on the MSDS and on the product container label. The Contractor shall notify the Engineer if a specified product cannot be used under safe conditions. **7-10.4.5 Confined Spaces.** **7-10.4.5.1 Confined Space Entry Program (CSEP).** The Contractor shall be responsible for implementing, administering and maintaining a CSEP in accordance with CCR, Title 8, Sections 5156, 5157 and 5158.

Prior to the start of the Work, the Contractor shall prepare and submit a CSEP in accordance with 2-5.3. The CSEP shall address all potential physical and environmental hazards and contain procedures for safe entry into confined spaces such as the following:

- a) Training of personnel
- b) Purging and cleaning the space of materials and residue
- c) Potential isolation and control of energy and material inflow
- d) Controlled access to the space
- e) Atmospheric testing of the space
- f) Ventilation of the space
- g) Special hazards consideration
- h) Personal protective equipment
- i) Rescue plan provisions

The submittal shall include the names of the Contractor's personnel, including each Subcontractor's personnel, assigned to the Work that will have CSEP responsibilities, their CSEP training, and their specific assignment and responsibility in carrying out the CSEP.

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- a) Training of personnel.
- b) Purging and cleaning the space of materials and residue.
- c) Potential isolation and control of energy and material inflow.
- d) Controlled access to the space.
- e) Atmospheric testing of the space.
- f) Ventilation of the space.
- g) Special hazards consideration.
- h) Personal protective equipment.
- i) Rescue plan provisions.

The submittal shall include the names of the Contractor's personnel, including each Subcontractor's personnel, assigned to the Work that will have CSEP responsibilities, their CSEP training, and their specific assignment and responsibility in carrying out the CSEP.

7-10.4.5.2 Permit-Required Confined Spaces. Entry into permit-required confined spaces as defined in CCR, Title 8, Section 5157 may be required as a part of the Work. Manholes, tanks, vaults, pipelines, excavations, or other enclosed or partially enclosed spaces shall be considered permit-required confined spaces until the pre-entry procedures demonstrate otherwise. The Contractor shall implement a permit-required CSEP prior to performing any work in a permit-required confined space. A copy of the permit shall be available at all times for review by the Contractor and the Engineer at the Work site.

7-10.4.5.3 Payment. Payment for the CSEP shall be included in the Bid items for which the CSEP is required.

7-10.5 Security and Protective Devices.

7-10.5.1 General. Security and protective devices shall consist of fencing, steel plates, or other devices as specified in the Special Provisions to protect open excavations

7-10.5.2 Security Fencing. The Contractor shall completely fence open excavations. Security fencing shall conform to 304-3.5. Security fencing shall remain in place unless workers are present and construction operations are in progress during which time the Contractor shall provide equivalent security..

7-10.5.3 Steel Plate Covers. The Contractor shall provide steel plate covers as necessary to protect from accidental entry into openings, trenches, and excavations.

7-11 PATENT FEES OR ROYALTIES. The Contractor shall absorb in its Bid, the patent fees or royalties on any patented article or process which may be furnished or used in the Work. The Contractor shall indemnify and hold the Agency harmless from any legal action that may be brought for infringement of patents.

7-12 ADVERTISING. The names of contractors, subcontractors, architects, or engineers, with their addresses and the designation of their particular specialties, may be displayed on removable signs. The size and location of such signs shall be subject to the Engineer's approval.

Commercial advertising matter shall not be attached or painted on the surfaces of buildings, fences, canopies, or barricades.

7-13 LAWS TO BE OBSERVED. The Contractor shall keep fully informed of State and National laws and County and Municipal ordinances and regulations which in any manner affect those employed in the Work or the materials used in the Work or in any way affect the conduct of the Work. It shall at all times observe and comply with all such laws, ordinances and regulations.

7-13.1 Mined Materials. Mined material from California surface mines, used on the Work, shall be from a mine identified in the list published by the California Department of Conservation (referred to as 3098 List), as required by Public Contract Code 20676. This list is available on the Internet at www.conservation.ca.gov/OMR/ab_3098_list/index.htm.

7-14 ANTITRUST CLAIMS. Section 7103.5 of the Public Contract Code provides:

"In entering into a public works contract or a subcontract to supply goods, services, or materials pursuant to a public works contract, the contractor or subcontractor offers and agrees to assign to the awarding body all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2 [commencing with Section 16700] of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services, or materials pursuant to the public works contract or subcontract. This assignment shall be made and become effective at the time the awarding body tenders final payment to the contractor, without further acknowledgement by the parties."

7-15 RECYCLABLE CONSTRUCTION & DEMOLITION WASTES. Ventura County Ordinance Code Section, 4421 et seq, requires that if any recyclable solid wastes or marketable reusable materials will be generated on the site of the Work within the unincorporated areas of Ventura County, the Contractor shall prepare a Construction & Demolition Debris Waste Diversion Plan and submit it to the Ventura County Public Works Agency, Water & Sanitation Department - Integrated Waste Management Division (IWMD). The Contractor shall prepare and file Construction & Demolition Debris Waste Diversion Reporting Forms as required by the IWMD.

For projects within the unincorporated areas of Ventura County, the Contractor shall submit an IWMD Form B-Recycling Plan approved by IWMD prior to issuance of the Notice to Proceed as provided in 6-7.4.

For projects within the unincorporated areas of Ventura County, the Contractor shall submit an IWMD Form C-Reporting Form approved by IWMD prior to the Engineer preparing the final estimate as provided in 9-3.2.

If the site of the Work is within an incorporated city, the Contractor shall comply with all the recycling, solid waste diversion, and hauling requirements of that incorporated city.

7-16 BLANK

7-17 LOSS OR DAMAGE TO THE WORK. The Contractor is responsible for delivering to the Agency Work completed in accordance with the Contract except as provided in 7-18. Should the Work being constructed be damaged by fire or other causes before Acceptance by the Agency, it shall be replaced in accordance with the requirements of the Plans and Specifications without additional expense to the Agency. The Agency does not carry "Course of Construction" insurance on the Work. Contractor should arrange for its own insurance to protect its interests.

7-18 ACTS OF GOD. As provided in Section 7105 of the California Public Contract Code, the Contractor shall not be responsible for the cost of repairing or restoring damaged portions of the Work determined to have been proximately caused by an act of God in excess of 5 percent of the contracted amount, provided that the Work damaged was built in accordance with accepted and applicable building standards and the Specifications and Drawings. The Contractor shall obtain insurance to indemnify the Agency for any damage to the Work caused by an act of God if the premium of said insurance coverage is called for as a separate bid item in the bidding schedule for the Work. For purposes of this section, the term "acts of God" shall include only the following occurrences or conditions and effects: earthquakes in excess of a magnitude of 3.5 on the Richter Scale, and tidal waves.

SECTION 8 - FACILITIES FOR AGENCY PERSONNEL

8-1 GENERAL. A field office shall be provided when required by the Plans or Special Provisions. The field office shall be at a suitable location approved by the Engineer.

A field office shall be a weather-tight building of suitable proportions with 16 m² (120 sq. ft.) of floor area, at least one door, and a window area of 2 m² (22 Sq. Ft.). A field office may be a building or a separate room in a building the Contractor may be required to provide or that it may desire to provide for its own use. In either case, the room shall have a separate exterior door. All doors shall be provided with hasps for padlocks.

The office shall be convenient to the Work. It shall be adequately heated, ventilated, electrically lighted, and provided with telephone service, all at the expense of the Contractor or plant owner. Offices are for the exclusive use of Agency personnel, unless otherwise provided herein.

Field offices at the worksite shall be removed upon completion of the Work.

All costs incurred in furnishing, maintaining, servicing, and removing a field office required at the Work site shall be included in the price bid for such item. If such item is required by the Plans or Specifications and no bid item is provided in the Proposal, the costs shall be absorbed in the other items for which bids are entered. Buildings and equipment furnished by the Contractor at the Work site under the provisions of this section are the property of the Contractor.

The first progress payment will not be approved until all facilities are in place and fully comply with the Specifications.

8-2 EQUIPMENT FOR FIELD OFFICES. Unless otherwise specified, a field office shall be equipped with:

- Plan table, 0.75 m x 1.5 m (2 1/2 ft. x 5 ft.) or larger
- Plan rack, capacity to hold two sets of project Plans plus all shop drawings
- Desk and chair
- Two lockers with hasps for padlocks

SECTION 9 - MEASUREMENT AND PAYMENT

9-1 MEASUREMENT OF QUANTITIES FOR UNIT PRICE WORK

9-1.1 General. Unless otherwise specified, quantities of work shall be determined from measurements or dimensions in horizontal planes. However, linear quantities of pipe, piling, fencing, and timber shall be considered as being the true length measured along longitudinal axis.

Unless otherwise provided in Specifications, volumetric quantities shall be the product of the mean area of vertical or horizontal sections and the intervening horizontal or vertical dimension. The planimeter shall be considered an instrument of precision adapted to measurement of all areas.

9-1.2 Methods of Measurement. Materials and items of Work which are to be paid for on the basis of measurement shall be measured in accordance with the methods stipulated in the particular sections involved.

9-1.3 Certified Weights. When payment is to be made on the basis of weight, the weighing shall be done on certified platform scales or, when approved by the Engineer, on a completely automated weighing and recording system. The Contractor shall furnish the Engineer with duplicate licensed weighmaster's certificates showing actual net weights. The Agency will accept the certificate as evidence of weights delivered.

9-1.4 Units of Measurement. Measurements shall be in accordance with 1-4.1 and 1-4.2. A metric ton or "tonne" is equal to 1000 kilograms and the unit of liquid measure is a Liter (in U.S. Standard Measures, a pound is an avoirdupois pound; a ton is 2000 pounds avoirdupois; and the unit of liquid measure is a gallon).

9-2 LUMP SUM BID ITEMS. Items for which quantities are indicated as "Lump Sum", "L.S." or "Job" shall be paid for at the price indicated in the Proposal. Such payment shall be full compensation for the items of Work and all Work appurtenant thereto.

When required by the Specifications or requested by the Engineer, the Contractor shall submit to the Engineer within 15 Days after award of Contract, a detailed schedule in triplicate, to be used only as a basis for determining progress payments on a lump sum contract or any designated lump sum bid item. This schedule should equal in total the lump sum bid and shall be in such form and sufficiently detailed as to satisfy the Engineer that it correctly represents a reasonable apportionment of the lump sum. If Mobilization or Water Pollution Control are included in the detailed schedule, those items will be paid for as provided in 9-3.4.2 and 7-8.6.4, receptively.

9-3 PAYMENT

9-3.1 General. The quantities listed in the Bid schedule will not govern final payment unless identified by Agency on the Proposal as [F]. The symbol "[F]" indicates that the quantities shown on the Proposal form are the final pay quantities. Payment to the Contractor (except those items identified as [F]) will be made only for the actual quantities of Contract items constructed in accordance with the Plans and Specifications. Upon completion of construction, if the actual quantities show either an increase or decrease from the quantities given in the Bid schedule, the Contract Unit Prices will prevail subject to the provisions of 3-2.2.1. Payment for those items identified as [F] will be based on the quantities shown on the Proposal unless changed as provided in 3-2.2.1.

The unit and lump sum prices to be paid shall be full compensation for the items of work and all appurtenant work, including furnishing all materials, labor, equipment, tools and incidentals.

Payment for items shown on the Plans or required by the Specifications, for which no pay item is provided, shall be considered included in the prices named for the other items shown on the Proposal.

Payment will not be made for materials wasted or disposed of in a manner not called for under the Contract. This includes rejected material not unloaded from vehicles, material rejected after it has been placed and material placed outside of the Plan lines. No compensation will be allowed for disposing of rejected or excess material.

Whenever any portion of the Work is performed by the Agency at the Contractor's request, the cost thereof shall be charged against the Contractor, and may be deducted from any amount due or becoming due from the Agency.

Whenever immediate action is required to prevent injury, death, or property damage, and precautions which are the Contractor's responsibility have not been taken and are not reasonably expected to be taken, the Agency may, after reasonable attempt to notify the Contractor, cause such precautions to be taken and shall charge the cost thereof against the Contractor, or may deduct such cost from any amount due or becoming due from the Agency. Agency action or inaction under such circumstances shall not be construed as relieving the Contractor or its Surety from liability.

9-3.1 General. (Continued)

Payment shall not relieve the Contractor from its obligations under the Contract; nor shall such payment be construed to be Acceptance of any of the Work. Payment shall not be construed as the transfer of ownership of any equipment or materials to the Agency. Responsibility of ownership shall remain with the Contractor who shall be obligated to store, protect, repair, replace, rebuild, or otherwise restore any fully or partially completed work or structure for which payment has been made; or replace any materials or equipment required to be provided under the Contract which may be damaged, lost, stolen or otherwise degraded in any way prior to completion of the Work under the Contract, except as provided in 6-10.

Warranty periods shall not be affected by any payment but shall commence on the date equipment or material is placed into service at the written direction of the Engineer. In the event such items are not placed into service prior to partial or final completion of the Work, the warranty periods will commence on the date set forth as the date of field completion in the Engineer's acknowledgement of completion.

If, within the time fixed by law, a properly executed notice to stop payment is filed with the Agency, due to the Contractor's failure to pay for labor or materials used in the Work, all money due for such labor or materials will be withheld from payment to the Contractor in accordance with applicable laws.

At the expiration of 35 Days from the date of recording of the Notice of Completion, or as prescribed by law, the amount deducted from the final estimate and retained by the Agency will be paid to the Contractor except such amounts as are required by law to be withheld by properly executed and filed notices to stop payment, or as may be authorized by the Contract to be further retained.

9-3.2 Partial and Final Payment. The Engineer will, after award of Contract, establish a closure date for the purpose of making monthly progress payments. The Contractor may request in writing that such monthly closure date be changed. The Engineer may approve such request when it is compatible with the Agency's payment procedure.

Each month, the Engineer will make an approximate measurement of the Work performed to the closure date and, as a basis for making monthly payments, estimate its value based on the Contract Unit Prices or as provided for in 9-2. When the Work has been satisfactorily completed, the Engineer will determine the quantity of Work performed and prepare the final estimate.

Work not conforming to the Contract Documents shall not be measured for payment.

Conformance with the Contract Documents shall be, in addition to constructing the Work in accordance with the Contract Documents, the Contractor's compliance with those portions of the Contract Documents not directly related to the completed Work, including but not limited to: construction and maintenance of detours; diversion and control of water; protection and repair of existing facilities of the Agency and adjacent owners; site maintenance; coordination with utilities and other contractors on the site; proper survey procedures and records; obtaining required permits and inspections; complying with working hour limitations; providing a Contractor's representative while Work is being performed; complying with environmental requirements; maintaining access and safety for users of facilities that are to remain in service during construction; and obeying all laws affecting the Work.

Payment for Extra Work will be made only on approved Daily Extra Work Reports with supporting documentation as required in 3-3.

From each progress estimate, 5 percent will be deducted and retained by the Agency, and the remainder less the amount of all previous payment will be paid to the Contractor.

No progress payment made to the Contractor or its sureties will constitute a waiver of the liquidated damages under 6-9.

9-3.2 Partial and Final Payment. (Continued)

As provided for in Sections 22300 of the California Public Contract Code, the Contractor may substitute securities for any monies withheld by the Agency to ensure performance under the Contract. In substituting securities, the Contractor may either:

- a. Deposit qualifying securities already owned by the Contractor with the Escrow prior to the Contract payment date, or
- b. Direct the Agency to send retained funds to the Escrow to be invested by the Escrow in qualifying securities as directed by the Contractor.

9-3.2.1 Release of Withheld Contract Funds. Pursuant to Public Contract Code Section 22300, Contractor has the option to deposit securities with an Escrow Agent as a substitute for retention earnings required to be withheld by Agency pursuant to the construction Contract between the Agency and the Contractor. A form of Escrow Agreement for Security Deposits in Lieu of Retention has been adopted by the Agency as one of the Contract Documents; procedures for implementing the provisions of the Escrow Agreement are contained in Escrow Instructions which shall become effective upon exercise of the option by the Contractor.

The Contractor shall take the following steps if it desires to substitute securities:

- a. Execute the Escrow Agreement for Security Deposits in Lieu of Retention.
- b. Furnish to the Escrow Agent a power of attorney and other forms necessary to empower the Escrow Agent to convert the securities to cash.
- c. Furnish to the Escrow Agent the securities described.
- d. Pay the Escrow Agent's fees and costs.

When the Contractor deposits with the Escrow Agent securities in lieu of money required to be withheld from progress payments, a sum of money equivalent to the current cash value of the securities as determined by the Escrow Agent shall be released to the Contractor by, or upon the direction of, the Agency.

If the total of the money plus the current cash conversion value of securities on deposit should fall below the aggregate amount of the sums required to be withheld from progress payments pursuant to 9-3.1 and 9-3.2, an amount equal to the difference shall be withheld from the next regular progress payment in addition to the amount which would ordinarily be withheld pursuant to 9-3.1 and 9-3.2. If the next regular progress payment is less than the total of the amounts to be withheld therefrom, the Contractor shall immediately either deposit with the Agency cash in the amount of the difference or deposit with the Escrow Agent additional securities having a current cash conversion value equal to or greater than the difference.

The Contractor shall be the beneficial owner of any such securities on deposit with the Escrow Agency and shall be entitled to any interest earned thereon prior to conversion. The Agency may direct the Escrow Agency to convert securities with the Escrow Agency into cash, and to deliver the cash to the Agency, in any case where the Contractor is in default, including the following:

- a. where the Agency would be entitled to use funds withheld pursuant to 9-3.1 and 9-3.2 to satisfy claims of workers, materials suppliers or subcontractors, or to complete or correct work which the Contractor has failed or refused to complete or correct, or
- b. where the Contractor has failed to comply with the requirements of this section respecting the deposit of additional cash or securities to make up for a fall in the value of securities already on deposit with the Escrow Agency.

The Agency may hold and use cash resulting from such a conversion of securities in the same manner as it would be entitled to hold and use funds withheld pursuant to 9-3.1 and 9-3.2.

9-3.2.2 Timely Progress Payments. As required by Public Contract Code Section 20104.50, the Contractor is informed that should a progress payment not be made within 30 Days after receipt of an undisputed and properly submitted payment request from the Contractor, the Agency shall pay interest to the Contractor on the unpaid amount at the rate set forth in the Code of Civil Procedures, Section 685.010(a). Agency shall promptly review payment requests, and if not determined to be proper, document to the Contractor, within 7 Days, the reasons why the request is not proper.

Contractor should refer to the code sections cited for further information.

9-3.3 Delivered Materials. Payment for the cost of materials and equipment delivered to the Work site but not incorporated in the Work will be included in the progress estimate if, prior to the closure date for the monthly progress payment, the material or equipment is listed by the Contractor on the Agency's form together with date of delivery, vendor's or Subcontractor's name and cost; is accompanied by a copy of an invoice showing the cost thereof; has an aggregate cost in excess of \$5,000 for each progress payment; is currently on the Work site at an approved location and in good condition; and is one of the following:

1. Precast concrete units weighing more than 100 kilograms (200 pounds) each.
2. Structural steel members weighing more than 100 kilograms (200 pounds) each.
3. Individual pieces of electrical equipment costing over \$1,000 each.
4. Individual pieces of mechanical equipment costing over \$1,000 each.
5. Reinforced concrete pipe of any size.
6. Storm drainage pipe 900 mm (36") in diameter and larger.
7. Water and sewer pipe 300 mm (12") in diameter and larger.
8. Finish hardware for doors.
9. Other individual items of equipment costing over \$1,000 each
10. Materials where the aggregate value of a single type of material exceeds \$1,000 and is either:
 - a) Fabricated or cut to fit the Work before delivery, or
 - b) Of a size or type not available from any manufacturer without a special production run.

On unit price Bid items, the amount paid for materials or equipment delivered but not incorporated in the Work shall not exceed 75% of the amount of the Bid item which includes such material or equipment.

On lump sum Bid items, the amount paid for materials and equipment delivered and not incorporated in the Work shall not exceed 75% of the item in the approved schedule submitted in accordance with 9-2 of which such materials or equipment is a part.

Should materials or equipment previously paid for be damaged, destroyed, stolen or removed from the Work site, the payment previously made therefor will be deducted from the next progress payment, unless such materials or equipment are replaced prior thereto.

On the closure date for progress payments, as provided in 9-3.2, the Contractor shall certify that all materials and equipment not incorporated into the Work, for which payment has previously been made or is being requested, is still at the Work site and in good condition. Failure to provide such certification will be cause for deducting previous payments for materials not incorporated in the Work from the amount due the Contractor in the progress payment.

Payment for materials or equipment, as provided herein, shall not constitute approval or acceptance thereof nor shall such payment modify or abridge any of the rights the Agency has under the Specifications or at law nor relieve the Surety of any of its obligations under the bonds.

9-3.4 Mobilization

9-3.4.1 Scope. Mobilization includes preliminary services, work and operations, including but not limited to, furnishing required bonds, obtaining necessary permits and work areas, providing a specified field office, the movement of labor, supplies, equipment and incidentals to the Work site, and for all other work, services and operations which must be performed or for which costs are incurred prior to performing work of the other Contract items.

9-3.4.2 Payment. The Contract lump sum price bid for mobilization shall include full compensation for furnishing all labor, materials, tools, equipment, services and incidentals and for doing all work involved in mobilization as specified herein. Payment for mobilization will be made as the Work proceeds on the following basis except that where a field office is required by the Specifications, no payment for mobilization will be made until the specified field office has been provided:

Partial payment estimate (excluding mobilization & water pollution control payments) as a percentage of the original Contract price (excluding the mobilization & water pollution control Bid items).		Cumulative amount of mobilization pay item earned is the lesser of the amounts as computed by these two columns.	
Equal to or greater than	Less than	Percentage of mobilization pay item	Percentage of the original Contract total.
5	10	50	5
10	20	75	7.5
20	50	95	9.5
50	Completion of Work	100	10
Completion of Work		100	

Where no Bid item is provided for mobilization, payment for mobilization shall be considered to be included in the other Bid items.

9-4 TERMINATION OF AGENCY LIABILITY. After completion of all work required by the contract, Agency will furnish Contractor a Release on Contract form stating the amount of total authorized payments for the project. Contractor shall execute and return said form within 21 days of receipt. Said form shall release and discharge the Agency from all claims of and liability to the Contractor for all manner of debts, demands, accounts, claims, and causes of action under or by virtue of said Contract except:

- a. The claim against the Agency for the remainder, if any, of the amounts retained as provided in 9-3.2, and any amounts retained as required by Stop Notices or Labor Code provisions.
- b. Any unsettled claims or disputes listed on the Release on Contract form which has been processed in compliance with the requirements for making claims under the Contract, including given timely notice pursuant to the applicable provisions of the Contract and following the procedure set forth in 6-12.

Acceptance of the Release on Contract by the Agency shall not be deemed a waiver or release of the Agency's right to contest either the substantive or procedural validity of any listed unsettled claims or disputes.

When executing the Release on Contract, the Contractor shall certify that each unsettled claim or dispute listed thereon has been processed in compliance with the requirements for making claims under the Contract, including giving timely notice pursuant to the applicable provisions of the Contract and following the procedures for resolution of disputes or claims set forth in 6-12 and that acceptance of the Release on Contract by the Agency shall not be deemed a waiver or release of the Agency's right to contest either the substantive or procedural validity of any listed unsettled claims or disputes.

If Contractor fails to execute and submit a Release on Contract within the 21 day time period set forth above, the Release on Contract shall be deemed to have been submitted with no unsettled claims or disputes listed on the Release on Contract. A payment of \$1.00 will be made to the Contractor for such Release on Contract and waiver.

SECTION 10 - DIVERSION, CONTROL AND REMOVAL OF WATER

10-1 DESCRIPTION. This section covers the diversion, control and removal of all water entering into the construction area or otherwise affecting construction activities.

10-2 REQUIREMENTS. All permanent construction shall be performed in a site free from water unless otherwise provided for in the Special Provisions. The Contractor shall construct, maintain, and operate all necessary cofferdams, pumps, channels, flumes, drains, well points and/or other temporary diversion, protective, and water removal works required for diversion, control and removal of all water, whether surface or groundwater, whatever its source, during construction.

Inundation of partially completed Work due to lack of control during non-working periods will not be permitted, and may be cause for requiring removal and replacement of Work already completed.

The Contractor shall be responsible for obtaining the use of any property in addition to that provided for in the Plans and Specifications, which may be required for the diversion, protective, and water removal works so as not to create a hazard to persons or property or to interfere with the water rights of others.

It shall be understood and agreed that the Contractor shall hold the Agency and the Engineer harmless from legal action taken by any third party with respect to construction and operations of the diversion and protective works.

10-3 DIVERSION AND CONTROL WORKS.

Prior to beginning of work involving diversion, control and removal of water, the Contractor shall submit a water control plan to the Engineer. In the event circumstances during the course of construction require changes to the original water control plan, a revised water control plan shall be promptly submitted to the Engineer in each instance. No responsibility shall accrue to the Engineer or the Agency as a result of the plan or as a result of knowledge of the plan.

Construction and operation of the diversion, control and removal works shall be in accordance with the water control plan submitted, except deviations therefrom may be specifically approved by the Engineer.

All works installed by the Contractor in connection with dewatering, control, and diversion of water but not specified to become a permanent part of the Work, shall be removed and the site restored, insofar as practical, to its original condition prior to completion of construction or when directed by the Engineer.

10-4 PAYMENT. No separate Bid item is included. Payment for this item of Work will be considered to be included in the payments made for other items of Contract Work to which water control is incidental.

PART 2 CONSTRUCTION MATERIALS

SECTION 200 - ROCK MATERIALS

200-1 ROCK PRODUCTS

200-1.6 Stone for Riprap

200-1.6.1A Alternate Stone for Riprap. As an alternate to the requirements of Subsection 200-1.6, the sample may be subject to the following tests:

TESTS	TEST METHOD NO.	REQUIREMENTS
Apparent Specific Gravity	ASTM C 127	2.40 Min.
Resistance to Abrasion	ASTM C 535, Grading 1	35% Max.
Soundness	Section 211-8	10% Max.
Wet and Dry Loss	Section 211-9	5% Max.
Solubility	Section 211-10	No Loss

All rock shall be angular or subangular in shape. Angular shall be defined as having sharp corners and straight planes on all faces, with no evidence of wear caused by wind, water or abrasion. Subangular shall be defined the same as angular except that evidence of wear by wind, water or abrasion may be allowed. Determination of angularity will be made by the Engineer.

200-1.6.2 Riprap Size

The individual classes of rock used for riprap shall conform to the following:

Rock Sizes	RIPRAP CLASSES					
	1-Tonne (1-Ton)	½-Tonne (½-Ton)	¼-Tonne (¼-Ton)	Light	Facing	Cobble
	PERCENTAGE LARGER THAN					
2-Tonne (2-Ton)	0-5					
1-Tonne (1-Ton)	50-100	0-5				
½-Tonne (½-Ton)		50-100	0-5			
¼-Tonne (¼-Ton)	90-100		50-100	0-5		
100-kg (200-lb)		90-100		50-100	0-5	
35-kg (75-lb)			90-100	90-100	50-100	0-5
10-kg (25-lb)					90-100	95-100
0.5-kg (1-lb)	100	100	100	100	100	100

The amount of material smaller than the smallest size listed in the table for any class of riprap shall not exceed the percentage limit listed in the table determined on a weight basis.

Compliance with the percentage limit shown in the table for all other sizes of the individual pieces of any class of riprap shall be determined by the ratio of the number of individual pieces larger than the specified size compared to the total number of individual pieces larger than the smallest size listed in the table for that class.

Flat or needle shapes will not be accepted unless the thickness of individual pieces is greater than 1/3 the length.

Before placing in final location, depositing, or stockpiling within the project limits, each individual load of riprap must meet the size requirements of the class specified.

SECTION 206 - MISCELLANEOUS METAL ITEMS

206-3 GRAY IRON AND DUCTILE IRON CASTINGS

206-3.3.2A Manhole Frame and Cover Sets

Unless otherwise specified, manhole frames and covers shall be in accordance with the following Standard Plans contained in the SPPWC:

Clear Opening Diameter mm (Inches)	SPPWC Plan No.	Catalog Numbers	
		Alhambra Foundry	Long Beach Iron Works
600 (24)	630-1	A-1495	X-162
675 (27)	631-1	A-1496	X-164
750 (30)	632-1	A-1497	X-163
900 (36)	633-1	A-1498	X-106A

206-5 METAL RAILINGS.

206-5.2 Flexible Metal Guard Rail Materials.

206-5.2A Flexible Metal Guard Rail Materials; Modification. The "Construction" grade Douglas Fir for "posts, including blocks" does not have to be "free of heart center".

SECTION 210 - PAINT AND PROTECTIVE COATINGS

210-6 STORM DRAIN HARDWARE. All storm drain hardware, including manhole frames and covers, grates, protection bars, steps, etc., shall be protected from corrosion.

Storm drain hardware made of cast iron shall be protected by painting with, or dipping in, a commercial grade asphalt paint. Storm drain hardware made of steel shall be galvanized.

SECTION 211 - MATERIAL TESTS

211-6 SIEVE ANALYSIS. Sieve analysis shall be performed in accordance with ASTM C136.

211-7 Sand Equivalent Test. This test is intended to serve as a field test to indicate the presence or absence of plastic fine material. The test shall be run in accordance with Calif. test 217 or ASTM D2419. When testing material containing asphalt, this test method shall be modified by drying the sample at a temperature not exceeding 38°C (100°F).

211-8 R-VALUE. Resistance (R-value) shall be determined by California Test 301.

211-9 SPECIFIC GRAVITY AND ABSORPTION. Apparent specific gravity, bulk specific gravity and absorption shall be determined by California Test 206, 207, 208, 209, 224, 225, or 308, Method C where zinc stearate may be substituted for paraffin.

211-10 LOS ANGELES RATTLER TEST. Loss in Los Angeles Rattler shall be determined by California Test 211.

211-11 SOUNDNESS. For riprap, the soundness shall be determined in accordance with Calif. Test 214, excluding sections D, E, G.2.b, and H, and adding the following:

- a. The test sample shall be prepared by breaking or sawing a representative sampling of riprap into particles passing the 75 mm (three inch) and retained on the 50 mm (two inch) sieve. If there are a variety of rock types or degrees of weathering within a rock type, each unique type or condition must meet the loss requirement.
- b. The test sample size shall be 25,000 grams (55 lbs.) \pm 1 percent.
- c. All particles of test sample which break into three or more pieces during testing shall be discarded. The remaining sample shall be washed on a 4.75 mm (#4) sieve and all particles retained shall be oven dried.
- d. The loss in weight shall be determined by subtracting from the original weight of the test sample the final weight of all particles retained on the 4.75 mm (#4) sieve. Divide the loss in weight by the original weight and multiply by 100 to determine the percent loss.
- e. Report the following:
 - (1) The percent loss.
 - (2) The number of pieces affected, classified as to number disintegrating, splitting, crumbling, cracking, flaking, etc.

211-12 WET AND DRY LOSS. Wet and dry loss shall be determined as follows:

A sample of rock shall be crushed, screened, oven dried, and 1,000 g (2.2 lbs.) to 1,500 g (3.3 lbs.) of the 19 mm (3/4 inch) to 9.5 mm (3/8 inch) fraction shall be taken for the test.

The crushed and graded sample shall be submerged in tap water for 8 hours at room temperature, after which the sample shall be drained and oven dried at 78°C (140°F). When dry, the sample shall be cooled to room temperature. This completes one cycle.

After 10 cycles, the percent loss shall be computed as follows:

$$\% \text{ Loss} = \frac{100 \times \text{Weight of Material Passing 4.75 mm (No. 4) Sieve}}{\text{Total Weight of Sample}}$$

211-13 SOLUBILITY. Approximately 0.5 kg (one pound), air dried samples shall be immersed in local tap water and in Pacific Ocean water (or a 3.5% sodium chloride solution) for 8 hours each at 78°C (140°F). After immersion, the samples shall be washed with tap water, air dried and reweighed.

211-14 Permeability Test. Permeability tests for granular soils shall be performed in accordance with ASTM D2434, using samples compacted to the specified field density.

PART 3 CONSTRUCTION METHODS

SECTION 301 - TREATED SOILS, SUBGRADE PREPARATION AND PLACEMENT OF BASE MATERIALS

301-1 SUBGRADE PREPARATION

301-1.3 Relative Compaction

301-1.3.1 Firm, Hard and Unyielding. The term "firm, hard and unyielding" as used in 301-1.3 shall mean that when the heaviest construction and hauling equipment used on the Work drives over the subgrade, no permanent deformation shall occur either before or during pavement construction.

301-1.4 Subgrade Tolerances. Subgrade for pavement, sidewalk, curb and gutter, driveways, or other roadway structures shall not vary more than 15 mm (0.05 feet) from the specified grade and cross section. Subgrade for subbase or base material shall not vary more than 15 mm (0.05 feet) from the specified grade and cross section.

Variations within the above specified tolerances shall be compensating so that the average grade and cross section specified are met.

301-2 UNTREATED BASE

301-2.3 Compacting

301-2.3.1 Tolerances. The tolerance requirement in 301-2.3 is modified from 6 mm (0.02 foot) to 15 mm (0.05 foot).

SECTION 302 - ROADWAY SURFACING

302-5 ASPHALT CONCRETE PAVEMENT

302-5.1 General

302-5.1.1 Asphalt Concrete Berms. Asphalt concrete berms shall be constructed of Class III-D-PG70-10 asphalt concrete by mechanical means to conform to the details and location as shown on the Plans.

A tack coat, as provided in 302-5.4, shall be applied to the existing or new pavement preceding the placement of the asphalt concrete berms.

302-5.4 Tack Coat

302-5.4.1 Fog Seal. When specified, a fog seal consisting of material meeting the requirements of 203-3 shall be applied to the surfaces of all completed asphalt concrete at the rate of 0.36 liter per square meter (0.08 gallon per square yard) of the combined emulsion or such lesser rate ordered by the Engineer. Surface to be sealed shall be free from dust, dirt, and other foreign material. Surface shall be sealed within 7 Days after paving.

302-5.9 Measurement and Payment

302-5.9.1 Measurement and Payment for Asphalt Berm. Asphalt concrete berms will be paid for at the Contract Unit Price per linear meter (feet) of berm in place. No separate measurement or payment will be made for asphalt, aggregate, or tack coat.

302-5.9.2 Measurement and Payment for Fog Seal, Tack Coat, and Prime Coat. Measurement and payment for the specified material shall be by the tonne (ton) in place. Emulsions shall be measured after the specified dilution has been made.

SECTION 303 - CONCRETE AND MASONRY CONSTRUCTION

303-5 CONCRETE CURBS, WALKS, GUTTERS, CROSS GUTTERS, ALLEY INTERSECTIONS, ACCESS RAMPS AND DRIVEWAYS

303-5.1 Requirements

303-5.1.4 Concrete Substitution. Class 280-C-14 (470-C-2000) may be used in lieu of Class 310-C-17 (520-C-2500) and Class 280-D-14 (470-D-2000) in lieu of Class 310-D-17 (520-D-2500) as specified in 201-1.1.2 for street surface improvements, excluding concrete pavement, when no class is specified on the Plans or in the Special Provisions.

SECTION 306 - UNDERGROUND CONDUIT CONSTRUCTION

306-1 OPEN TRENCH OPERATIONS

306-1.2 Installation of Pipe

306-1.2.1 Bedding

306-1.2.1.1 Bedding Material. When native material is allowed for backfill in the bedding zone, no rocks larger than 40 mm (1½") in maximum dimensions shall be included. Material containing ashes, cinders, and types of refuse or other deleterious material shall not be used as bedding.

306-1.2.1.2 Sewer Pipe Bedding. Bedding for sewer pipe from 100 mm (4") below the pipe to the spring line (horizontal diameter) of the pipe shall be free draining, granular material with a maximum size of 15 mm (1/2 inch), unless another bedding method is shown on the Plans.

Densification of the bedding material may be by the application of water or by mechanical means. Unless otherwise specified, all bedding material shall be densified to a relative density of 90%. Acceptability of densification in the bedding zone will be determined by visual inspection and probing to determine that no voids exist in the backfill material. In this paragraph, the word "voids" does not include intergranular voids in the soil structure.

306-1.2.1.3 Flexible Pipe Bedding. Bedding for flexible drainage and sewer pipe shall be granular material having a sand equivalent of at least 50. The bedding material shall be placed and compacted from 150 mm (six inches) below the pipe to the top of the bedding as defined in 306-1.2.1. A 1 m (three foot) long section of low permeability material (50% passing 75 µm (200) sieve) shall be installed and mechanically compacted in lieu of the above specified bedding material at intervals of 60 m (200 feet) or as otherwise indicated on the Plans.

306-9 DISINFECTION. All water mains and appurtenances shall be disinfected before being placed in service in accordance with AWWA C651 except as specified herein:

- a. The water mains shall be chlorinated so that a chlorine residual of not less than 20 ppm remains in the water after standing in the pipe for 24 hours.
- b. The Agency will perform sampling and testing of bacteriologic samples. Disinfection shall be repeated until two or more consecutive samples are negative for coliform organisms.

The pressure in the line being chlorinated shall be maintained at least 35 kPa (5 psi) lower than that existing in any Agency line to which it is connected.

306-10 WATERWORKS APPURTENANCES

306-10.1 Valves. Valves shall be located as shown on the drawings.

Each valve shall be operated prior to its installation to assure proper functioning. Valves shall be installed plumb and in alignment with the water main. Valves shall be anchored by metal ties to a concrete base. Line valves may be moved to the closest joint upon approval of the Engineer.

306-10.2 Valve Boxes. Each underground valve shall be provided with a valve box. The valve boxes shall be installed plumb and centered over the operating nut of the valve. Valve boxes shall be installed with concrete collars.

Where valve boxes are to be placed in asphaltic type pavement, they shall not be set to grade until after paving has been completed.

Where valve boxes are to be placed in concrete pavement, they shall be set to grade prior to paving operations.

306-10.3 Thrust Devices. A reaction or thrust device shall be provided on all dead ends, tees, elbows, and bends with more than 5 degrees deflection on pressure pipe lines.

Thrust devices shall be cast-in-place concrete, poured against undisturbed or compacted earth. Thrust devices shall be sized and constructed in accordance with the Plans.

Thrust devices and anchor blocks shall be constructed of Class 280-C-14 (420-C-2000) concrete. Thrust devices and anchor blocks shall be cured at least 7 Days where Type IP or II cement is used or at least 48 hours where Type III cement is used.

Metal tie-rods or clamps shall be of adequate strength to prevent movement of pipe. All metal shall be coated in accordance with AWWA C110.

306-10.4 Fire Hydrants. Fire Hydrants shall be installed as shown on the Plans.

All hydrants shall stand plumb and shall have their nozzles parallel with or at right angles to the curb, with the pumper nozzle facing the curb, except that hydrants having only two hose nozzles 90 degrees apart shall be set with each nozzle facing the curb at an angle of 45 degrees.

In uncurbed public road rights of way, fire hydrants shall be located as far as possible from the traveled way while providing a 1 m (3-foot) wide clear space between the fire hydrant and the right of way line. In curbed public road rights of way, fire hydrants shall be installed so that there is 300 mm (12 inches) clear between the face of curb and the fire hydrant.

306-10.5 Fire Hydrant Barricades. Fire hydrant barricades shall consist of 100 mm (4-inch) standard steel pipe, schedule 40, filled with concrete, and having a total length of 2 m (72 inches). They shall be embedded in concrete blocks 300 mm (12 inches) in diameter and 1000 mm (40 inches) deep below ground surface with the barricade pipe embedded to 100 mm (4 inches) above the bottom of the concrete so 1 m (36 inches) extends above ground surface. The steel pipe above ground shall be painted chrome yellow in accordance with AWWA C503.

Barricades shall be installed between the fire hydrant and vehicle traffic paths at locations indicated on the Plans or where required by the water purveyor or Fire Department. Barricades shall not be installed within public road rights of way.

Fire hydrant barricades shall not obstruct the hydrant outlets.

SECTION 310 - PAINTING

310-5 Painting Various Surfaces

310-5.6 Painting Traffic Striping, Pavement Markings, and Curb Markings.

310-5.6.8A Application of Paint - Two Coats All painted traffic striping and markings shall be applied in two coats. The price named in any Bid item for painting traffic striping and markings shall include all costs for both applications, including any delays entailed for the required drying time between applications. If bleeding, curling or discoloration occurs following application of the second coat, unsatisfactory areas shall be given an additional coat, or coats, of paint. No additional payment will be made for work necessary to correct bleeding, curling or discoloration.

PART 4

SECTION 400 - ALTERNATE ROCK PRODUCTS, ASPHALT CONCRETE, PORTLAND CEMENT CONCRETE AND UNTREATED BASE MATERIAL

400-1 Rock Products

400-1.1 Requirements

400-1.1.1 General

Alternate rock material, Type S, as specified in Section 400 may be used on the Work.

400-3 Portland Cement Concrete

Suppliers of portland cement concrete shall file mix designs as required by 400-1.1.2

400-4 Asphalt Concrete

Suppliers of asphaltic cement concrete shall file mix designs as required by 400-1.1.2



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME:	
	PHONE (A/C, No, Ext):	FAX (A/C, No):
INSURED	E-MAIL ADDRESS:	
	INSURER(S) AFFORDING COVERAGE	
	NAIC #	
	INSURER A:	
	INSURER B:	
	INSURER C:	
INSURER D:		
INSURER E:		
INSURER F:		

COVERAGES

CERTIFICATE NUMBER:

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
	GENERAL LIABILITY						EACH OCCURRENCE \$ See VCSS 7-4.2
	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY						DAMAGE TO RENTED PREMISES (Ea occurrence) \$
	<input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR						MED EXP (Any one person) \$
							PERSONAL & ADV INJURY \$
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE \$ See VCSS 7-4.2
	<input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PROJECT <input type="checkbox"/> LOC						PRODUCTS - COMP/OP AGG \$
							\$
	AUTOMOBILE LIABILITY						COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000
	<input checked="" type="checkbox"/> ANY AUTO						BODILY INJURY (Per person) \$
	<input type="checkbox"/> ALL OWNED AUTOS						BODILY INJURY (Per accident) \$ 1,000,000
	<input type="checkbox"/> HIRED AUTOS						PROPERTY DAMAGE (Per accident) \$ 1,000,000
							\$
	UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR						EACH OCCURRENCE \$
	EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE						AGGREGATE \$
	DED <input type="checkbox"/> RETENTION \$						\$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY						WC STATUTORY LIMITS OTHER
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICE/MEMBER EXCLUDED? (Mandatory in NH)						E L EACH ACCIDENT \$
	If yes, describe under DESCRIPTION OF OPERATIONS below						E L DISEASE - EA EMPLOYEE \$
							E L DISEASE - POLICY LIMIT \$

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

(Agency) - (Project Name) (Project Specification number)

The Agency and the County of Ventura, including its boards, all special Districts governed by the Board of Supervisors, agencies, departments, officers, consultants, employees, agents and volunteers, is named as Additional Insured as respects work done by Contractor under the terms of the contract on General Liability and Auto Liability Policies. Waiver of Subrogation is applicable to the Agency and the County of Ventura, its boards, districts, agencies, departments, officers, employees, agents and volunteers for Work Comp and General Liability. Endorsements required for referenced contract will be issued by the Insurance Company.

CERTIFICATE HOLDER

CANCELLATION

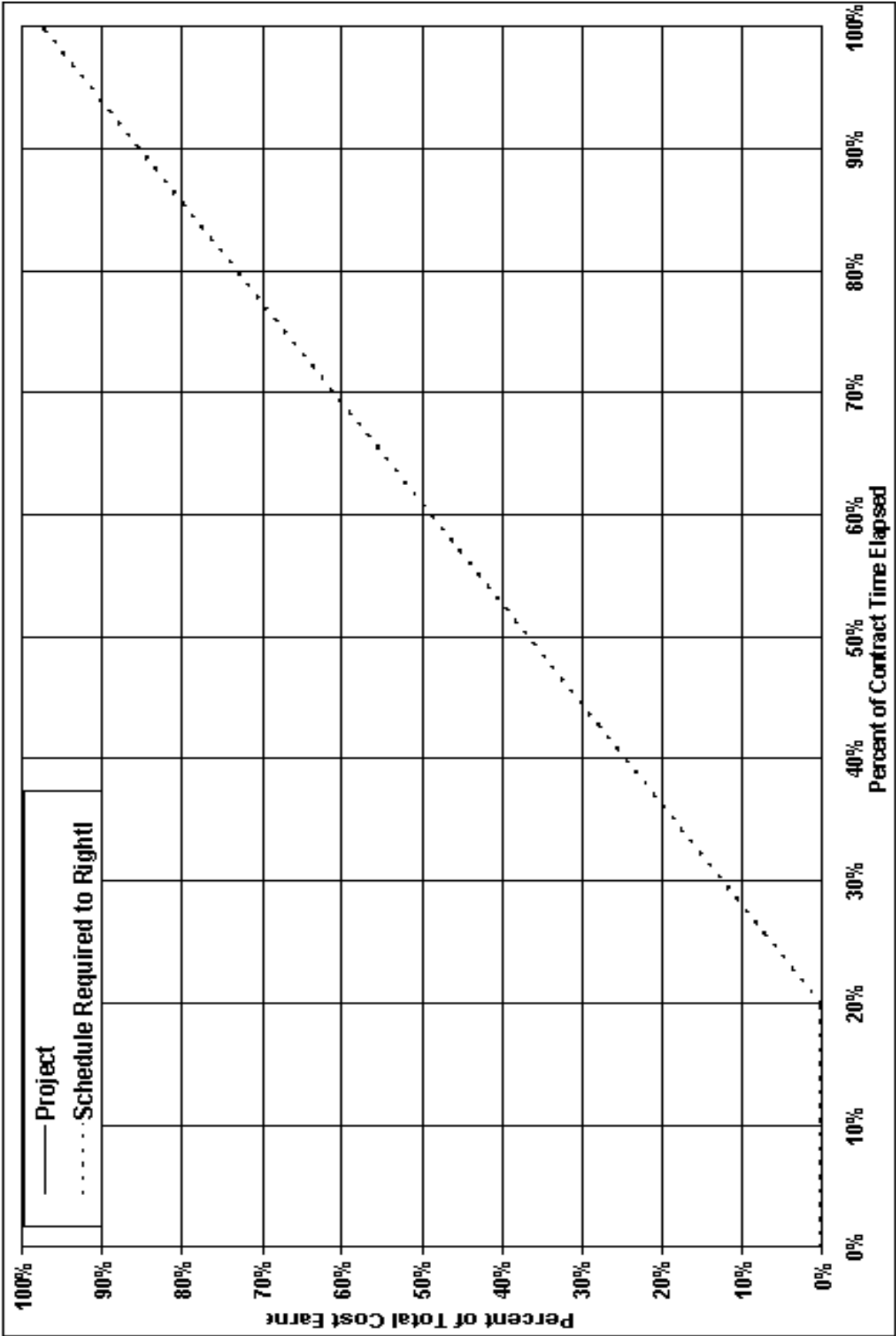
County of Ventura Public Works Agency L-1670 800 S. Victoria Avenue Ventura, CA 93009-1670	<p>SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.</p> <p>AUTHORIZED REPRESENTATIVE</p>
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[illegible]

Spec. No.

Project Name



[illegible]

EACH HORIZONTAL INTERVAL EQUALS 1 WORKING DAYS OF CONTRACT TIME

Submitted Dilbert and Company Construction

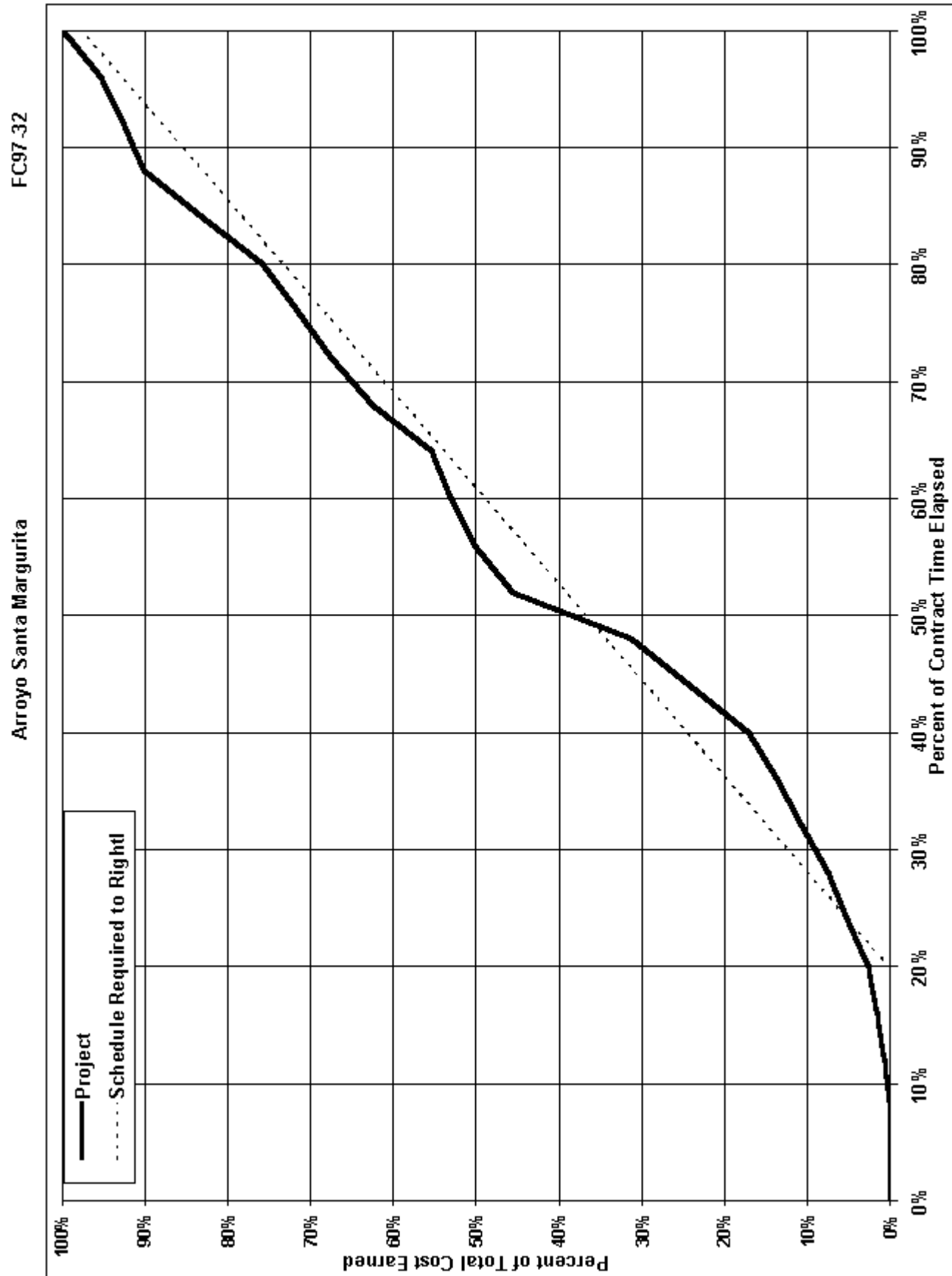
Contractor

5/22/97

Date _____

By *Tina Blair*

Title President



ESCROW AGREEMENT FOR
SECURITY DEPOSITS IN LIEU OF RETENTION

This Escrow Agreement is made and entered into by and between
("Agency") whose address is _____ and
("Contractor") whose address is _____ and
("Escrow Agent") whose address is _____.

For the consideration hereinafter set forth, the Agency, Contractor and Escrow Agent agree as follows:

- (1) Pursuant to Section 22300 of the Public Contract Code of the State of California, Contractor has the option to deposit securities with Escrow Agent as a substitute for retention earnings required to be withheld by Agency pursuant to the Construction Contract entered into between the Agency and Contractor for _____ in the amount of dated _____, (hereinafter referred to as the "Contract") which Contract is identified by Spec. No. _____ and Auditor Controller's Contract No. _____. Alternatively, on written request of the Contractor, the Agency shall make payments of the retention earnings directly to the Escrow Agent. When Contractor deposits the securities as a substitute for Contract earnings, the Escrow Agent shall notify the Agency within ten days of the deposit. The market value of the securities at the time of the substitution shall be at least equal to the cash amount then required to be withheld as retention under the terms of the Contract between the Agency and Contractor. Securities shall be held in the name of _____, and shall designate the Contractor as the beneficial owner.
- (2) The Agency shall make progress payments to the Contractor for those funds which otherwise would be withheld from progress payments pursuant to the Contract provisions, provided that the Escrow Agent holds securities in the form and amount specified above.
- (3) When the Agency makes payments of retentions earned directly to Escrow Agent, the Escrow Agent shall hold them for the benefit of the Contractor until such time as the escrow created under this contract is terminated. The Contractor may direct the investment of the payments into securities. All terms and conditions of this agreement and the rights and responsibilities of the parties shall be equally applicable and binding when the Agency pays the Escrow Agent directly.
- (4) Contractor shall be responsible for paying all fees for the expenses incurred by Escrow Agent in administering the escrow account. These expenses and payment terms shall be determined by the Agency, Contractor and Escrow Agent.
- (5) The interest earned on the securities or the money market accounts held in escrow and all interest earned on that interest shall be for the sole account of Contractor and shall be subject to withdrawal by Contractor at any time and from time to time without notice to the Agency.
- (6) Contractor shall have the right to withdraw all or any part of the principal in the Escrow Account only by written notice to Escrow Agent accompanied by written authorization from Agency to the Escrow Agent that Agency consents to the withdrawal of the amount sought to be withdrawn by Contractor.
- (7) The Agency shall have a right to draw upon the securities in the event of default by the Contractor. Upon seven days' written notice to the Escrow Agent from the Agency of the default, the Escrow Agent shall immediately convert the securities to cash and shall distribute the cash as instructed by the Agency.
- (8) Upon receipt of written notification from the Agency certifying that the Contract is final and complete, and that the Contractor has complied with all requirements and procedures applicable to the Contract, the Escrow Agent shall release to the Contractor all securities and interest on deposit less escrow fees and charges of the Escrow Account. The escrow shall be closed immediately upon disbursement of all moneys and securities on deposit and payments of fees and charges.
- (9) Escrow Agent shall rely on the written notifications from the Agency and the Contractor pursuant to Sections (1) to (8), inclusive, of this Agreement and the Agency and Contractor shall hold Escrow Agent harmless from Escrow Agent's release and disbursement of the securities and interest as set forth above.

(10) The names of the persons who are authorized to give written notice or to receive written notice on behalf of the Agency and on behalf of Contractor in connection with the foregoing, and exemplars of their respective signatures are as follows:

On behalf of Agency:

_____, Director,
Public Works Agency

_____, Director
Central Services Department

_____, Director
Engineering Services Department

Address for all of the above:
Public Works Agency
800 South Victoria Avenue
Ventura, CA 93009

SAMPLE FORM
Form used for escrow will have names and
signatures of persons authorized in accordance
with paragraph 10.

On behalf of Contractor:

Title

Name

Signature

Street Address

City & State

Zip Code

On behalf of Escrow Agent:

Title

Name

Signature

Street Address

City & State

Zip Code

At the time the Escrow Account is opened, the Agency and Contractor shall deliver to the Escrow Agent a fully executed counterpart of this Agreement.

IN WITNESS WHEREOF, the parties have executed this Agreement by their proper officers on the date first set forth above.

Agency:
(Agency name)

Title

Name

Signature

Contractor:
(Contractor company name)

Title

Name

Signature

EXHIBIT "A"
ESCROW INSTRUCTIONS

The parties to this escrow are _____ ("Agency") and _____ ("Contractor") and _____ ("Escrow Agent"). Agency and Contractor have entered into a contract for the construction of _____ which contract is identified by Spec. No. _____ and Auditor-Controller's Contract No. _____ and was entered into by and between Agency and Contractor ("Construction Contract"). Pursuant to Public Contract Code Section 22300, Contractor may substitute certain securities for an equivalent amount of money required to be withheld from progress payments by Agency to Contractor pursuant to the Construction Contract.

The Escrow Agent is hereby instructed as follows:

1. Contractor may deliver to Escrow Agent:
 - (a) Securities of the types specified in Sections 22300 of the Public Contract Code and Section 16430 of the Government Code.
 - (b) Such other documents as are necessary to enable Escrow Agent to convert such securities into cash.
2. Upon receipt of such securities and other documents, Escrow Agent shall notify Agency within ten days of the deposit, and shall examine them to determine whether they are in a form sufficient to effect conversion of the securities into cash. Escrow Agent shall thereupon send written notice of its determination to Agency.
3. Escrow Agent shall hold such securities as trustee for Agency. The right of Agency to such securities is superior to any other lien or claim of lien; provided, however, that Contractor shall be entitled to any interest earned by such securities prior to their conversion to cash pursuant to section 5 hereof, and further provided that such interest may be withdrawn by Contractor at any time and from time to time without notice to Agency.

Securities may be substituted by Contractor, but any securities substituted for securities previously deposited shall not reduce the current cash value of securities held below that last reported to Agency by Escrow Agent.
4. Escrow Agent shall determine the current cash value of such securities held by it as of the close of business on the first business day following the _____ day of each month and, in addition, on any other days which the Agency may from time to time specify in a written notice to Escrow Agent. Current cash value shall be determined as follows:
 - (a) For securities traded over-the-counter or on a stock exchange:
 - (1) Determine either the current bid price for the securities as of the close of business or the face value of the securities, whichever is less.
 - (2) Subtract the cost of sale (broker commission).
 - (3) Subtract all unpaid escrow fees and costs associated therewith.
 - (b) For certificates of deposit:
 - (1) Determine the face amount.
 - (2) Subtract the potential interest penalty for immediate conversion.
 - (3) Subtract all unpaid escrow fees and costs associated therewith.
 - (c) Determine the value of other securities by procedures calculated to determine net realizable value. Promptly upon making each such determination, Escrow Agent shall notify Agency of the securities held and current cash value of such securities.

5. At any time or times that Agency believes it has a right to do so under the provisions of the Construction Contract, Agency may, without the consent of Contractor, deliver to Escrow Agent a written demand that Escrow Agent convert to cash all or any part of such securities. Upon seven days' written notice from Agency of such demand, Escrow Agent shall convert to cash all or part of such securities as demanded and shall distribute the cash as instructed by the Agency.
6. When the Construction Contract has been satisfactorily completed on the part of Contractor and any stop notices filed against the Construction Contract have been released, Agency shall give written notice to Escrow Agent that such securities may be returned to Contractor. Upon receipt of such written notice and payment of all escrow fees and costs, the Escrow Agent shall deliver to Contractor all money, interest, securities and other documents remaining in escrow and the escrow shall terminate.
7. Contractor, and not Agency, shall be liable to Escrow Agent for all of Escrow Agent's fees and costs associated with this escrow.
8. The Director of the Ventura County Public Works Agency, a Department Director of said Agency, or other person authorized in writing by such Director or Department Director is authorized to give written notice and to make written demands on behalf of Agency pursuant to sections 4, 5 and 6 hereof.
9. All written notices and demands pursuant to the escrow agreement and these Instructions shall be addressed as follows:
 - (a) To Agency:

Director, Ventura County Public Works Agency
800 South Victoria Avenue
Ventura, California 93009

(b) To Contractor:

(c) To Escrow Agent:

DATED: _____

By _____	By _____	By _____
Title _____	Title _____	Title _____

AGENCY

CONTRACTOR

ESCROW AGENT
Bank Charter: State ☐ Federal ☐
Escrow Agent's Address:

RELEASE ON CONTRACT

CONTRACT NAME: _____

SPEC. NO. _____, PROJECT NO. _____

WHEREAS, by the terms of the contract dated _____, 20____ entered into by

_____ and the undersigned CONTRACTOR,

undersigned CONTRACTOR agreed to perform certain work for the compensation specified in said contract; and

WHEREAS, the CONTRACTOR represents that said work is fully completed and that final payment is due to the CONTRACTOR under terms of said contract,

NOW, THEREFORE, in consideration of the promises and the payment by [AGENCY NAME] to the CONTRACTOR of the amount due under the contract, to wit, the sum of \$ _____ and the additional consideration of \$1.00, receipt of which is hereby acknowledged by the CONTRACTOR, the CONTRACTOR hereby releases and forever discharges _____ of and from all manner of debts, dues, demands, sum or sums of money, accounts, claims and causes of action, in law and in equity, under or by virtue of said contract except the claim against the Agency for the remainder, if any, of the amounts retained as provided in 9-3.2, any amounts retained as required by Stop Notices or Labor Code Provisions, and any unsettled claims or disputes as follows: (If none, leave blank)

Description of Claim or Dispute	Amount	Date of Claim	Date of Notice of Potential Claim
------------------------------------	--------	------------------	---

The CONTRACTOR certifies that each unsettled claim or dispute listed hereon has been processed in compliance with the requirements for making claims under the contract, including giving notice pursuant to the applicable provisions of the contract, and following the procedures for resolution of disputes or claims set forth in subsection 6-12 of the contract. Acceptance of this Release on Contract by the [Agency Name] shall not be deemed as a waiver or release of its right to contest either the substantive or procedural validity of any listed unsettled claims or disputes.

IN WITNESS WHEREOF, the hand and seal of the CONTRACTOR have been
hereunto set this ____ day of _____, 20____.

THIS FORM MUST BE ACCOMPANIED
by a proper acknowledgement form
(See Civil Code Section 1189)

Contractor

By

Title

**SURETY BONDS
PERFORMANCE BOND**

Whereas, the «Agency», hereinafter called "Agency", and «Contr», hereinafter called "principal", have entered into a contract dated «ContrDate» whereby principal agrees to complete certain designated work identified as project «ProjName» (Spec. No. «SpecNo»), and to perform other duties and obligations as described in said contract, which is incorporated herein by this reference and made a part hereof; and Whereas, principal is required under the terms of said contract to furnish a bond to guarantee principal's faithful performance of the work and all terms and conditions of the contract;

Now, therefore, we the principal and the undersigned, as corporate surety, are held and firmly bound unto Agency in the penal sum of «CostText» (\$«OrigCostFmtd») lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, successors, executors and administrators, jointly and severally, firmly by these presents.

The condition of this obligation is such that if the principal, its heirs, executors, administrators, successors or assigns, shall in all things stand to and abide by, and well and truly keep and perform the covenants, conditions, and provisions in the said contract and any alteration thereof made as therein provided, on principal's part, to be kept and performed at the time and in the manner therein specified, and in all respects according to their true intent and meaning, and shall indemnify and save harmless Agency, its officers, agents and employees, as therein stipulated, then this obligation shall become null and void; otherwise it shall be and remain in full force and effect.

The above obligation shall continue after Agency's acceptance of the work for the duration of the warranty period as specified in the contract during which time if principal fails to make full, complete, and satisfactory repair or replacement to the work and/or fails to protect Agency from loss or damage resulting from or caused by defective materials or faulty workmanship, the obligation of surety hereunder shall continue so long as any obligation of principal remains.

PAYMENT BOND

And, whereas, under the terms of said contract, principal is required before entering upon the performance of the work, to file a good and sufficient payment bond with the Agency to secure the claims to which reference is made in Title 3 (commencing with Section 9000) of Part 6 of Division 4 of the Civil Code of the State of California.

Now, therefore, said principal and the undersigned, as corporate surety, are held firmly bound unto the Agency and all contractors, subcontractors, laborers, material suppliers and other persons employed in the performance of the aforesaid contract and referred to in the aforesaid Civil Code in the like sum of «CostText» dollars (\$«OrigCostFmtd») for materials furnished or labor thereon of any kind, or for amounts due under the Unemployment Insurance Act with respect to such work or labor, or for any amounts required to be deducted, withheld and paid over to the Franchise Tax Board from the wages of employees of the contractor and the contractor's subcontractors, that said surety will pay the same in an amount not exceeding the amount hereinabove set forth, and also in case suit is brought upon this bond, will pay, in addition to the face amount thereof, costs and reasonable expenses and fees including reasonable attorney's fees incurred in successfully enforcing such obligation, to be awarded and fixed by the court, and to be taxed as costs and to be included in the judgment therein rendered.

It is hereby expressly stipulated and agreed that this bond shall inure to the benefit of any and all persons, companies and corporations entitled to file claims under Title 3 (commencing with Section 9000) of Part 6 of Division 4 of the Civil Code, so as to give a right of action to them or their assigns in any suit brought upon this bond.

Should this condition of this bond be fully performed, then this obligation shall become null and void; otherwise, it shall be and remain in full force and effect.

GENERAL TERMS

The surety hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of said contract or the plans and specifications accompanying the same shall in any manner affect its obligations on these bonds, and it does hereby waive notice of any such change, extension, alteration or addition.

Nothing herein shall limit the Agency's rights or surety's obligations under the contract or applicable law, including, without limitation, California Code of Civil Procedure section 337.15.

In witness whereof, this instrument has been duly executed by the principal and surety above named

on _____, 20____.

«Contr»
Name of Principal

By _____

Title _____

Name of Surety

By _____

Attorney-in-Fact

Address _____

City _____ State _____ Zip _____

INDICATE COMPLETE ADDRESS OF SURETY TO WHICH
CORRESPONDENCE CONCERNING THIS BOND SHOULD BE
DIRECTED.

Telephone No. _____

SAMPLE BOND FORM

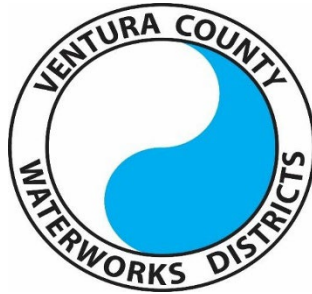
Agency will prepare the Bond in this format and transmit it to the Contractor along with the Contract and the Notice of Award letter.

Surety shall fill in the Bond No., date identification and signature of surety in places provided.

Contractor shall sign and indicate title in place provided.

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Ventura County Waterworks District No. 1

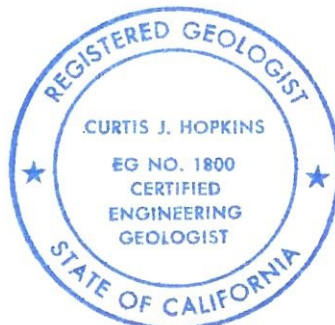


Well No. 97 Replacement Project No. 31806

November 2022

TECHNICAL SPECIFICATIONS

Prepared By



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**TECHNICAL SPECIFICATIONS
FOR THE
VENTURA COUNTY WATERWORKS DISTRICT NO. 1
WELL NO. 97 REPLACEMENT**

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SECTION 01000

GENERAL REQUIREMENTS

01000-1 WORK DESCRIPTION

The Contractor shall furnish all materials, equipment, tools, and labor for the execution of:

The Well No. 97 Replacement Project.

In accordance with the Plans and Specifications the work consists of constructing, developing, and testing a potable water supply well designated as Well No. 99 that will be drilled by using either the conventional direct circulation or reverse circulation rotary drilling method as specified herein. The design production capacity of the well is 1,500 gallons per minute (gpm) with a minimum specific capacity of 20 gallons per minute per foot of drawdown (gpm/ft). Also included in the work for these Plans and Specifications is the destruction of County of Ventura Waterworks District No. 1 (District) Well No. 97 (State Well Number [SWN] 3N20W-35R01S).

All work shall conform to these Technical Specifications, Ventura County Standard Specifications (VCSS), American Water Works Association Standard A100, Department of Water Resources' Bulletin 74-81, *Water Well Standards: State of California* and Supplement Bulletin 74-90, *California Well Standards*, and Standard Specifications for Public Works Construction, 2018 Edition ("Greenbook"). These standards shall prevail as the minimum requirements for the construction of Well No. 99 except as otherwise specifically stated in these Technical Specifications.

01000-2 SUMMARY OF WORK

The work for this well construction project includes the furnishing of all materials, labor, equipment, fuel, tools, transportation, disposal, and services for drilling, construction, development, testing, and sterilization of a production well as described in these specifications. The general work required for construction of the well includes:

- A. Destroy District Well No. 97 (SWN – 03N/20W-35R01);
- B. Mobilize the drill rig and the requisite fluid processing equipment specified for drilling the well bore;
- C. Drill a pilot borehole for the well to a depth of approximately 1,450 feet and provide lithologic cuttings of the formation materials at 10-foot intervals;
- D. Conduct electric geophysical survey of the pilot bore using spontaneous potential (sp), and multiple resistivity sondes;
- E. Ream to a depth of approximately 760 feet a minimum 28-inch-diameter borehole, and ream to a total depth of approximately 1,400 feet a minimum 26-inch-diameter borehole and at the option of the District, caliper the reamed hole;

- F. Install approximately 720 feet of 18-inch-diameter low carbon steel casing, approximately 130 feet of 16-inch-diameter stainless steel casing (0.375-inch wall), 90 feet of 16-inch-diameter stainless steel casing (0.25-inch wall) and 460 feet of 16-inch-diameter stainless steel wire wrap screen;
- G. Install approximately 753 feet of 4-inch-diameter stainless steel permanent sounding tube and a stainless-steel entrance chute;
- H. Install approximately 802 feet of 3.5 inch-outside-diameter stainless steel permanent gravel feed tube;
- I. Install a select gradation of gravel pack in the annular space of the well from the bottom of the well up to an approximate depth of 740 feet. Construct a cement sanitary seal from the top of the gravel pack seal to ground surface;
- J. Conduct a well plumbness and alignment survey on the well;
- K. Mechanically develop the well by swabbing and airlift pumping;
- L. Hydraulically develop the well with the pump and surge method;
- M. Conduct production testing of the well using a line shaft turbine pump assembly with a capacity ranging from 500 to 2,000 gpm and a constant discharge of 1,500 gpm;
- N. Conduct video surveys of the completed well casing and screen sections and of the 4-inch sounding tube;
- O. Secure well with a locking cover;
- P. Clean up, restore well site and replace fencing in kind.

All work shall be conducted in accordance with these Technical Specifications.

01000-3 OTHER REQUIRED WORK

Other work to be done by the Contractor shall include signing and returning the well permit(s) obtained by the District along with all supporting documentation required by the Ventura County Watershed Protection District Groundwater Section (County), collecting geologic samples as directed by the Engineering Geologist; keeping a time-drilling log; proper cleaning and restoration of the drilling site upon completion of work; and doing all things necessary for drilling and completion of the work called for under these Specifications. The time-drilling logs will be made available by the Contractor for review by the Engineering Geologist on a daily or work-shift basis.

The District has designated a location for discharge of water produced during final well development and production testing. The clear water discharge point is located on the well site. The Contractor shall be responsible for installing piping, valves, and other equipment necessary to convey groundwater to the point of discharge.

It will be the Contractor's responsibility to confine all drill cuttings and fluids within the designated work area. It will be the Contractor's responsibility to contain and remove drilling fluids and cuttings from the project area during and/or upon completion of work. If

the Contractor is unable to contain the volumes of drill cuttings and fluids within the designated temporary containment area, it will be the Contractor's responsibility to transport the materials to a permanent approved disposal site, at the Contractor's expense.

01000-4 PROJECT LOCATION

The project is located in 9210 Stockton Road, an unincorporated area west of the City of Moorpark in Ventura County, California. The project location is shown on Plate 1 – Project Location Map and Plate 2 – Well Site Map. The map shows the proposed replacement Well No. 99 and existing Well No. 97 locations and the immediate areas in the vicinity of the project site. The area immediately surrounding the new well location is of rural agricultural land use.

01000-5 LOCAL HYDROGEOLOGY

The well project is located in the northcentral portion of the East Las Posas Groundwater Basin. The underlying geology is comprised predominantly of loose to moderately cemented coarse-grained sand, gravel, and cobble layers interbedded with layers of silt and stiff or sticky clay. A copy of the geophysical survey of a well located in the vicinity is included in Attachment A – SWN 3N/20W-35R02-R04 Electric Log. The Contractor is advised of these potential widely variable and possibly problematic subsurface conditions and shall propose the use of drilling equipment and methods that will achieve rapid penetration rates and at all times maintain borehole stability. Borehole stability is the responsibility of the Contractor. Borehole stability shall be accomplished using materials and methods that will not cause formation damage that could potentially decrease the production of the well. It is anticipated that the sandstone layers below a depth of approximately 700 feet below ground surface will be moderate to highly cemented and may require the use of hardened drill bits to maintain penetration.

Groundwater conditions in the area have been affected by years of production and return flows from overlying land uses. Little data are available about the piezometric surface of groundwater contained in the shallowest perched/semi-perched aquifer zone(s) in the vicinity of the project site. While the static water level in the target production zone is anticipated to be at an approximate depth of 425 feet or greater below ground surface (bgs), shallower perched, semi-perched, or confined aquifer zones are anticipated to contain groundwater with a piezometric surface above the regional groundwater level and perhaps near ground surface. Pressure differentials of this type can be problematic during fluid rotary drilling if drilling fluid conditions are not properly maintained and if the fluid level in the borehole is not maintained at or above ground surface. The Contractor is advised of these potential widely variable and possibly challenging subsurface conditions and shall propose the use of drilling equipment and methods that will achieve rapid penetration rates and maintain borehole stability at all times.

01000-6 PRE-BID MEETING

Prospective bidders are required to attend an onsite, **MANDATORY PRE-BIDDING CONFERENCE** to be held on the date, time, and location as listed on the first page of the Proposal. The meeting will be held for the purpose of answering any questions concerning

the project. None of the information transmitted at this meeting is to be construed to in any way modify the Plans and Specifications. Any modifications will be posted as an addendum.

01000-7 PRE-CONSTRUCTION MEETING

Before mobilization or any onsite work, the Contractor shall attend a pre-construction meeting scheduled by the District at the Ventura County Waterworks District Office. The meeting shall be attended by the Contractor's project superintendent, foremen, subcontractors, suppliers, and representatives from other agencies appropriate to the agenda. At the pre-construction meeting, the District's project manager and the District's onsite representative (Engineering Geologist) shall review the Contractor's submitted description of the drilling method, fluid processing system and equipment, and drilling fluid additive that are proposed for use.

01000-8 WORKING HOURS

- A. Weekdays (Mon. thru Fri.): 7:00 a.m. – 5:00 p.m. No work making significant noise, as determined by the District inspector, shall commence and no equipment shall be started prior to 7:30 a.m.
- B. No work on weekends (Sat. & Sun.) and Holidays, without prior request in writing to the District's Engineer, 48 hours in advance of the work.
- C. As the sole exception to items A and B above, the Contractor shall conduct drilling operations around-the-clock (24 hours per day) from commencement of pilot hole drilling through placement of the final sanitary seal, mechanical well development, and subsequent 24-hour production test. Contractor shall coordinate abnormal hours with District at least 1 week in advance.

01000-9 COORDINATION

The Contractor shall coordinate with the District at least 48 hours in advance for assistance by District Operations to operate valves or related equipment within the existing District system.

The Contractor shall notify the District and the appropriate local, state, and federal agencies in advance of the commencement and completion of each contract operation including well seal inspection, as required by the well construction permit. Prior to performing a well discharge operation, the Contractor shall provide District with a minimum 2 working day advance notification. The Contractor shall record the commencement and completion of each contract operation.

01000-10 INSPECTION

The Contractor shall provide proper facilities for access and permit the inspection of any part of the project site by the District, its agents and other regulatory agency representatives. The Contractor shall provide an area onsite that is easily accessible and approximately 20 feet by 20 feet for use by the onsite geologist to establish a station for examining drill cuttings, preparing a lithological log, and testing drilling mud properties.

The Contractor shall be responsible for ensuring work complies with every requirement of the Contract Documents. Nonconforming work shall be corrected or replaced by the Contractor at no additional expense to the District. The District will be the sole judge as to the acceptability of materials, articles, and work necessary for project execution, and will at all times have the right to reject these items for noncompliance.

The District's inspections and tests are for the sole benefit of the District and shall not:

- A. Relieve the Contractor of responsibility for providing adequate control measures;
- B. Relieve the Contractor of responsibility for damage to or loss of the material before acceptance;
- C. Constitute or imply acceptance;
- D. Affect the continuing rights of the District after acceptance of the completed work.

When requested by the District, Contractor shall furnish such information as may be reasonably required regarding the character of materials and the progress of their procurement, including copies of invoices, bills of lading, and shipping lists on all articles required for execution of the project.

01000-11 SUBMITTALS

- A. To be considered for award of project, prospective bidders must provide the following submittals alongside their bid packages:
 - 1. A description of all bit types, bit sizes, drilling fluid system and drilling fluid additives to be used, in accordance with 01003-2.
 - 2. The name and qualifications of the Mud Engineer that the Contractor intends to use, in accordance with Section 01003-2.
 - 3. Mechanical drift indicator specifications, in accordance with Section 01003-3.
 - 4. Well screen manufacturer's specifications, in accordance with Section 01007-2.
 - 5. A description and manufacturer's sieve analysis of gravel packing material proposed for use, in accordance with Section 01008-2.
- B. Prior to Agency issuing the NTP, the following submittals shall be approved by the District:
 - 1. Storm Water Pollution Control Plan (SWPCP)
 - 2. Construction schedule

3. Integrated Waste Management Division (IWMD) Form B
- C. Upon receiving Notification of Award, the Contractor is advised to consider the submittals required for long-lead time materials. The following submittals are critical to the project schedule and shall be submitted to the District within fourteen (14) calendar days after issuance of the NTP:
1. Low Carbon Steel Blank Casing
 2. Low Carbon Steel Casing Reducer
 3. Dissimilar Metal Adaptor
 4. Stainless Steel Blank Casings
 5. Stainless Steel Well Screen
- D. The Contractor shall submit shop drawings in accordance with Section 2-5.3 of the VCSS, except as herein noted. The Contractor shall review, stamp with his approval, and submit for review by the District shop drawings for all material and equipment to be incorporated into the work. Shop drawings shall be submitted with promptness and in orderly sequence so as to cause no delay in the prosecution of the work.
- E. Shop drawings are drawings, diagrams, illustrations, schedules, performance charts, brochures and other data which are prepared by the Contractor or any Subcontractor, Manufacturer, Supplier or Distributor, and which illustrate some portion of the work.
- F. Per Section 2-5.3 of the VCSS, no materials shall be furnished, nor work commenced, before the herein required submittals have been reviewed and accepted by the District. The District will review and return submittals within 20 working days. Neither review nor acceptance of submittals by the District shall relieve the Contractor from complete and total responsibility for correctness of submittals and their compliance to Contract Documents.
- G. All records shall be available to the District at all times on the job site, and copies of all records shall be submitted to the District and its Engineering Geologist within 14 days of project completion unless otherwise requested during project performance. The records to be submitted by the Contractor shall include:
1. Work Site Safety Plan
 2. Copies of the Well Permits
 3. Backflow prevention assembly to be installed at water connection location for the duration of the project
 4. Copies of the completed State of California Well Completion Reports (Driller's Log)
 5. Type/size of proposed drilling rig, mud system, mud type, name of qualified Mud Engineer

6. Type and model number of proposed pilot bore drift indicator tool
7. All geophysical logs; 5 copies of each on paper, one electronic copy in Adobe Portable Document Format (PDF)
8. Caliper survey log of borehole reams; 5 copies of each on paper, one electronic copy in Adobe Portable Document Format (PDF)
9. Planned uses of any cement additives (retardants, etc.)
10. Cement delivery tickets for the sanitary seal materials around the conductor and well casings
11. Steel certifications for all blank casing and accessory tubing and the manufacturer's screen design submittal for all screen sections
12. Sieve analyses and delivery tickets for the gravel pack
13. The mechanical development (airlifting and swabbing) records, which will include total volumes and water quality field measurements of discharge fluids
14. Pumping development sheets including Rossum sand measurement records
15. Step drawdown and constant rate discharge test records showing static and pumping water levels, pumping rates, drawdown, and specific capacities
16. Downhole video survey – 2 USB drives
17. Well plumbness and alignment survey measurements

01000-12 STORM WATER POLLUTION CONTROL PLAN

Contractor shall prepare a Storm Water Pollution Control Plan in accordance with VCSS 7-8.6. Requirements can be found at the Ventura County Stormwater Quality Management Program web site www.vcstormwater.org under programs/ construction.

Contractor shall pay all fees associated with SWPCP and for compliance. Contractor shall comply with Plan conditions and shall pay any fines imposed on District for conditions related to this project. Contractor shall retain a copy of the approved SWPCP on site until final acceptance of project.

01000-13 CONSTRUCTION SCHEDULE

In addition to the initial Construction Schedule prior to the Notice To Proceed, Contract Bonds, and Certificate of Insurance, a revised schedule shall be submitted monthly prior to each progress payment closure date (VCSS 6-1).

01000-14 SECURE WORK AREAS

It is the responsibility of the Contractor to maintain safe and secure work areas at all times. Safe work areas will include the use of barricades, guards, lights, signs, and any other

devices necessary to protect the public. The Contractor shall be responsible for maintaining the integrity of the work area throughout the entire well construction and destruction process.

01000-15 SERVICES PROVIDED BY THE DISTRICT

The District will provide the final well design details to the Contractor within 5 working days of receiving the geophysical log of the pilot borehole. The design shall include well casing and screen intervals, screen slot size, centralizer locations and gravel pack size.

The District will provide the Contractor with construction water at no expense from a pipeline located within approximately 300 feet of the well site through concession of a hydrant meter. The Contractor shall coordinate the acquisition of said meter with the District and bear full responsibility and liability for the meter once it is set. Contractor shall provide and install a USC-approved reduced pressure backflow prevention assembly at the water connection location per District standards. It will be the responsibility of the Contractor to provide all necessary connections, valving, pipe support stands, and conveyance lines to obtain the water necessary for the drilling operations. Contractor shall provide the District with submittals for the proposed backflow prevention assembly, and any associated appurtenances, for review and approval.

01000-16 EQUIPMENT AND MATERIALS STORAGE

The Contractor shall maintain a secure storage site for all equipment and materials. All deliveries of materials to the job site shall be planned and executed so that traffic is not obstructed or interfered in any fashion.

01000-17 NUISANCE WATER

The Contractor shall implement best management practices and/or best available technologies to anticipate and control nuisance water. It is anticipated that nuisance water, such as rainfall, groundwater, or surface runoff may occur within the construction site and/or on adjacent project access roads during the period of construction under this contract. The Contractor, by submitting his bid, will be held to have investigated the risks arising from such waters, and to have made his bid in accordance therewith. The Contractor shall at all times protect the work from damage by such waters and shall take all due measures to prevent delays in progress caused by such waters.

The Contractor is advised of the condition that shallow groundwater may rise near ground surface during the time of drilling and shall only propose to utilize drilling methods and well construction techniques that will maintain a stable borehole environment under these conditions. Borehole stability is the sole responsibility of the Contractor.

01000-18 PERMITS, EASEMENTS AND LICENSES

Some of the work to be performed under these Specifications may require temporary access to private property for construction purposes. For this reason, the District has applied for and obtained a temporary construction easement (Plate 2), which may be used by the Contractor if so required. This area, however, must be vacated by June 30, 2023, or 12 weeks from its initial occupation, whichever comes first. Prior to vacating said

easement, Contractor shall be fully responsible for ensuring entire temporary work area is left in a clean and orderly state, as was first encountered prior to entering.

The District has also applied for and obtained the Water Well Permit from Fox Canyon Groundwater Management Agency (Attachment D), an agency responsible for groundwater management. Following award of the project, the District and the identified awarded driller will file the Well Permit Application with the Ventura County Watershed Protection District Groundwater Section, the County department responsible for providing minimum well construction guidelines and requirements.

Groundwater Section's Well Permit covers the new replacement well in addition to destruction of the existing well. Preliminary well destruction requirements from the County are included in Attachment C – Preliminary Well Destruction Requirements for Well No. 97 (SWN 03N/20W-35R01). The Contractor shall identify and obtain any additional permits which may be necessary as required by Local, County, or State Ordinances for performing work. Contractor is expected to cooperate and required to comply with all necessary permit requirements.

01000-19 WEEKLY PROGRESS MEETINGS

A weekly progress meeting shall be conducted at an agreed time and day by the District and contractor. The contractor shall provide the District with a two-week "Look Ahead" Schedule and minutes from the previous meeting one day prior to the weekly meetings.

01000-20 DESIGNATED PERSON OF CONTACT

Contractor shall designate a project superintendent on the job at all times, with the authority to receive direction from the inspector. Should multiple crews be utilized, a foreman shall be assigned per crew with the authority to receive direction and provide information requested by the inspector.

01000-21 CONSTRUCTION SITE MAINTENANCE

- A. In accordance with Section 7-8 of the VCSS, the Contractor shall provide the means to maintain a construction site free from dust and excessive noise. The Contractor is required to control dust during the entire Contract period, including holidays and weekends.
- B. Throughout all phases of construction, including suspension of work, and until project acceptance, the Contractor shall keep the work site clean and free from rubbish, debris, and graffiti (including the Contractor's equipment). The Contractor shall also abate dust nuisance by cleaning, sweeping, and sprinkling with water, or other means as necessary.
- C. Throughout all phases of construction, including suspension of work, and until project acceptance, the Contractor shall keep the private access road, the fencing, and the entry gate leading to the project site functional and protected from potential damage. Access for this road shall be maintained clear at all times. Upon project completion, the access road, fencing and gate must be left in equal or improved condition as before the start of work.

- D. The Contractor shall furnish and operate a self-loading motor sweeper with spray nozzles as necessary to keep paved areas of Stockton Road acceptable and clean wherever construction, including restoration, is incomplete. Materials and equipment shall be removed from the site as soon as they are no longer necessary.
- E. Well site preparation, temporary sanitation facilities, fencing, power, and security, as per subsection 01000-14 SECURE WORK AREAS, shall be the responsibility of the Contractor.

01000-22 AIR QUALITY

During construction, the Contractor shall implement an Emissions Reduction and Fugitive Dust Control Program. The program shall include:

- Equipment will be shut off when not in use in order to minimize equipment idling time.
- Engines will be maintained in good working condition and in proper tune as per manufacturers' specifications.
- The area disturbed by clearing, grading, earth moving, or excavation operations shall be minimized to the extent feasible.
- Water or other dust suppressant shall be used as necessary on exposed or disturbed soils to minimize dust generation.
- All earth material transported to or from the project site shall be properly covered to prevent excessive amounts of dust.

01000-23 NOISE CONTROL

Noise related impacts caused by drilling and construction activities specified in this document shall be mitigated by the Contractor using multiple methods including installation of a sound wall, insulating specific pieces of equipment, and/or the use of highly effective sound reducing exhaust mufflers as required. It is the Contractor's responsibility to comply with the Ventura County Noise Ordinance at all times during the well construction project. A copy of the noise ordinance is included as Attachment B.

01000-24 RECORD DRAWINGS

- A. The Contractor shall maintain at the jobsite one set of full size contract drawings marked with red lines to show any deviations which have been made from the contract documents including buried or concealed construction and utility features which are revealed during the course of construction. Said record drawings shall be supplemented by any detailed sketches as necessary or directed to indicate fully the work as actually constructed.
- B. Record drawings shall be accessible to the District at all times during the construction period and shall be delivered to the District upon completion and prior to acceptance of the work.
- C. Field Estimates for Progress payments may not be processed if the record drawings are not kept current. Request for final payment shall not be approved until

completed, legible record drawings showing all variations between the "work as constructed" and as originally shown on the contract documents has been delivered to the District.

01000-25 DIMENSIONS AND VERIFICATIONS

- A. The dimensions shown were established by formal survey methods. The locations of existing facilities are assumed to be complete. No warranty is made, expressed or implied, as to the accuracy of these dimensions, and it is the Contractor's responsibility to verify all dimensions before construction in accordance with these Specifications.
- B. Prior to ordering any materials or beginning any construction, the Contractor shall expose the existing system at the intended points of connection with new facilities, and shall verify the location, elevation and types and sizes of materials and fittings required to make the connection. The Contractor shall verify the exact location of any obstructions prior to construction in order that revised grades or alignment may be established if required. When existing conditions are encountered which, in the opinion of the District, require temporary suspension of work for design modifications or for other determinations, the Contractor shall move to other areas of work until such determinations are made. No additional compensation to the Contractor shall be made, except that an appropriate time extension for completion may be allowed when it affects the overall construction schedule.

01000-26 PROCORE PROJECT MANAGEMENT SOFTWARE

The District maintains a Procore Project Management software account that is available for this project. Contractor can use Procore to conduct its submittals, request for information, contract change order request, daily inspection reports, and construction correspondences. District shall provide the software licenses for the duration of the project construction. Additionally, the software includes free utilization training that is available to the Contractor.

For this project, the District is willing to consider alternative methods for conducting the activities detailed in this subsection. If so desired, Contractor shall be responsible for proposing alternative methods to District for approval.

01000-27 FINAL ACCEPTANCE

After all work is completed, the Contractor shall request a final inspection to satisfy contract obligation in accordance with VCSS Section 6-8.

01000-28 SUBMISSION OF CERTIFIED PAYROLLS RECORDS

The County of Ventura has implemented, and maintains, a labor compliance software service program called "LCP Tracker". Contractors and subcontractors shall keep accurate payroll records in accordance with Labor Code Section 1776 and shall furnish weekly

certified payrolls for their workers and shall input their certified payroll records electronically using LCP Tracker within 7 days following the end of the preceding week.

This requirement is in addition to the State of California requirement to upload payrolls into the State DIR electronic system. However, LCP Tracker has the functionality to upload the submitted payrolls directly to the State DIR electronic system. Contractor shall be responsible for all costs related to complying with LCP Tracker requirements.

01000-29 MAINTENANCE OF RECORDS

For at least three years following the contractor and each subcontractor shall maintain all time cards, cancelled checks, cash receipts, trust fund forms, books, documents, schedules, forms, reports, receipts or other evidences which reflect job assignments, work schedules by days and hours, and the disbursement by way of cash, check, or in whatever form or manner, of funds to a person(s) by job classification and/or skill in connection with the work. Contractor shall provide such records to the LCP officer upon request.

01000-30 SUPERVISION AND SUPERINTENDENCE

Contractor shall keep on the project site at all times throughout duration of project a competent project superintendent, or designated person of contact as per subsection 01000-20 DESIGNATED PERSON OF CONTACT, who shall not be replaced without written notice to the District, except under extraordinary circumstances. The superintendent will be the Contractor's representative and shall be acting on behalf of the Contractor. All communications to the superintendent shall be as binding as if given to the Contractor. Lack of supervision shall be grounds for a Stop Work Notice issued by the District.

01000-31 MEASUREMENT AND PAYMENT

Payment for compliance with the conditions of this section shall be considered as included in the various work items shown on the Bid Form. Measurement and payment for the various sections of these Technical Specifications shall be made in accordance with Sections 9-1, 9-2, and 9-3 of the VCSS, and shall be considered as included in the corresponding work items shown on the Bid Form.

Additional work items the Contractor believes are required for the work but are not included in the Bid Form shall be considered as included in the various items of work and no additional payment shall therefore be made.

The District reserves the right to terminate the contract for default per Section 6-4 of the VCSS. Furthermore, the Board of Supervisors may terminate the Contract at its own discretion per Section 6-5 of the VCSS. In both these exceptional cases, payment to the Contractor shall be made according to Sections 6-4.5 and 6-5 of the VCSS, respectively.

END OF SECTION

SECTION 01001

MOBILIZATION/DEMOBILIZATION (BID ITEM NO. 1)

01001-1 SCOPE

Mobilization/Demobilization shall include the purchase of insurance, labor and material bond; performance bond; transportation of personnel, equipment, and operating supplies to and from the sites; establishment of offices, buildings, portable sanitary facilities, temporary construction water and other necessary facilities at the site, and equipment, and other preparatory work at the site (clearing and grubbing) and all mobilization for work required by the Contractor.

The Contractor shall provide one complete direct circulation or reverse circulation mud rotary drilling unit; all tools, accessories, power, fuel, materials, supplies, lighting, water, and other equipment; and experienced personnel necessary to conduct efficient drilling operations in the manner specified. The drilling unit shall be in good condition and have a minimum (lifting) capacity of 200,000 pounds for the mast and subbase (for the well). The Contractor shall also provide a vertical line-shaft turbine pump capable of pumping a minimum of 2,500 gpm against 650 feet of total dynamic head (TDH) and designed to allow backspin during hydraulic well development. The Contractor shall also provide all equipment and personnel to maintain and restore the site as required. The Contractor shall provide mud tank(s) to accommodate a volume that is greater than twice the volume of the total reamed borehole. Drilling fluid processing equipment is required for construction and shall at a minimum consist of a shale shaker, desanding and desilting cones, a mud shear apparatus, and agitating equipment for proper mixing and agitation of drilling fluid additives. The use of mud pits or settling tanks for mud conditioning will not be allowed.

01001-2 MEASUREMENT AND PAYMENT

Payment for Bid Item No. 1 shall be made according to Section 9-3.4.2 of the VCSS.

Payment will not be made under this item for the purchase of items or costs of materials having a residual value, the purchase costs of materials to be incorporated in the project, or the purchase costs of operating supplies.

Payment for Mobilization/Demobilization will constitute full compensation for all labor, fuel, permits, materials, equipment, and all other items necessary and incidental to completion of the work, removal and replacement of interfering fences, gates and other obstructions.

END OF SECTION

SECTION 01002

CONDUCTOR CASING (BID ITEM NO. 2)

01002-1 SCOPE

This item shall consist of drilling and installing a 32-inch-diameter (minimum) conductor (surface) casing to a minimum depth of 50 feet bgs to stabilize the well site for well construction and allow work to progress without interruption.

01002-2 CONSTRUCTION MATERIALS

The 32-inch-diameter (minimum) conductor/surface casing shall be ASTM Designation A-53 Grade B or A-139 Grade B steel plate, having a minimum wall thickness of 3/8-inch and being a minimum of 50 feet in length. The conductor sanitary seal shall consist of a 10.5-sack-cement sand slurry cement mixture or a 6-sack-cement pea gravel mix as permitted by the District and as approved by the Engineering Geologist.

01002-3 CONSTRUCTION METHODS

The Contractor shall drill a borehole with a minimum diameter that is 4 inches greater than the outside diameter of the conductor casing. The Contractor shall drill a minimum 36-inch-diameter borehole and furnish and install a 32-inch-diameter (minimum) conductor casing to a depth of 50 feet bgs. The drilling method for the conductor casing is optional; however, the casing shall be sufficiently plumb and straight to allow completion of the well as specified in the following sections of this contract and not interfere with the installation of any of the well materials.

The conductor sanitary seal shall be considered as a portion of the well's entire sanitary seal. Placement shall be conducted in accordance with County permit requirements and be pumped in place using the positive displacement method with a pneumatic grout pump and construction tremie pipe set 2 feet off the bottom of the sealing zone.

01002-4 MEASUREMENT AND PAYMENT

Payment for conductor hole drilling, casing installation, and cement grout seal will be made on a lump sum basis at the unit price bid for Bid Item No. 2. Such payment will be considered full compensation for furnishing all labor, materials, tools, and equipment necessary and incidental to complete the conductor casing installation.

END OF SECTION

SECTION 01003

PILOT BORE DRILLING (BID ITEM NO. 3)

01003-1 SCOPE

This item shall consist of drilling a pilot bore from the base of the conductor casing to a depth of 1,450 feet as shown on Plate 3 - Preliminary Well Design Drawing, or to the final depth determined by the Engineering Geologist. The Contractor shall use the approved drilling method and fluid parameters specified herein.

01003-2 CONSTRUCTION MATERIALS

The Contractor shall provide a description of all bit types, bit sizes, drilling fluid system and drilling fluid additives to be used concurrently with the submittal of its bid package. The submittal must include information regarding the types of fluid to be used, intended drilling fluid weights, viscosities, sand and solids contents, water loss control, and the name of the drilling products supplier. Failure to provide this information may render the bid to be considered unresponsive. The name and qualifications of the Mud Engineer that the Contractor intends to use must also be submitted with the bid.

In order to comply with the drilling fluid properties specified herein, it is the responsibility of the Contractor to have all equipment and drilling fluid additives onsite at all times during drilling and reaming procedures.

The Contractor shall possess and utilize the calibrated equipment necessary to measure the drilling fluid properties, including: weight, viscosity, sand content, and water loss/filter cake thickness. Drilling shall not commence until the Contractor demonstrates to the Engineering Geologist that the devices used for testing of drilling fluid properties are operable and calibrated.

The drilling fluid shall possess such characteristics as are required to adequately maintain the integrity of the borehole wall, prevent caving 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 gravel pack and during development of the well.

Only fresh water with high grade commercial chemical products in common usage for water well drilling shall be used in drilling fluid make up. The drilling fluid shall be a commercial quality high grade bentonite clay system with a polymer supplement such as; Quick Gel, Hydrogel, Aquagel, Drispac, or an equal approved by the Engineering Geologist, to control water loss and maintain the mud properties specified. Drilling fluid with a mixture of unprocessed clay (bentonite), Super Ga Quich or other biodegradable material will not be permitted. The Engineering Geologist's approval of all drilling fluids prior to any drilling operations is required. The use of a non-bentonite clay drilling fluid such as Poly-Bore will not be permitted for this project.

All drilling fluids shall be mixed fresh onsite. The reuse or recycling of old drilling fluids will not be allowed. The Contractor shall make every effort to ensure that mud conditions will create a wall cake that can be removed from the production zones during the development of the well and prevent swelling of clay layers during construction. The drilling fluid to be utilized should possess properties necessary to inhibit this possibility. To maximize well performance, it is crucial that proper drilling fluid maintenance restrict water loss (mud invasion) from the borehole into the aquifer zones and minimize formation damage.

Proper control of the drilling fluid during both the pilot hole and reaming operations must be maintained to the specified parameters. The fluid system shall be sufficient to maintain the fluid properties listed below at all times. If the specified drilling fluid properties are exceeded, the Engineering Geologist may suspend further drilling operations until adjustments are made to allow for the system and fluids to meet specifications. Borehole stability at all times, including periods when drilling is suspended due to failure to meet drilling fluid specifications, is the sole responsibility of the Contractor. If proper control of the drilling fluid is not maintained to the satisfaction of the District and the Engineering Geologist, the Contractor may be required, at the Contractor's expense, to retain or employ an experienced, qualified Mud Engineer on the job during all operations to supervise and maintain drilling fluid properties that comply with the conditions specified.

Drilling mud processing equipment is required for this construction project and shall at a minimum consist of a 3,000-gallon mud tank with fluid circulation nozzles/jets to maintain fluid movement and prevent settlement of solids, a shale shaker, desanding and desilting cones, and a mud shear apparatus for proper mixing of drilling fluid additives. Mud pits or settling tanks for mud treatment will not be allowed. The mud system shall be capable of handling a minimum of 500 gpm and designed to remove all but the finest of drill cuttings (suspended clays) from the drilling fluid. The fluid processing system shall be installed in the circulation system between the point of discharge from the borehole and the point of recirculation into the well bore. This equipment must keep the sand concentration in the drilling fluid below one percent at all times. All fluid additives shall be hydrated and properly mixed prior to entry into the drill hole. The drilling rig must at all times be provided with the following fully operational and calibrated drilling fluid measuring devices:

- A. Drilling fluid weight scale;
- B. Drilling fluid viscosity funnel (Marsh Funnel);
- C. Drilling fluid sand content cone and screen;
- D. Drilling fluid mud press for water loss and filter cake.

The Contractor shall measure and record the properties of the fluid entering the borehole every two (2) hours during all drilling activities. The drilling fluid shall have the following properties in accordance with API Code RP-13B (or recent modification) "Recommended Standard Procedure for Testing Drilling Fluids":

- **Weight**, a maximum of 72 pounds per cubic foot (9.6 pounds per gallon).

- **Viscosity**, using a Marsh Funnel a maximum of 50 seconds and a minimum of 32 seconds.
- **Sand Content**, of mud entering the borehole, a maximum of 1.0 percent by volume during all aspects of drilling.
- **Water loss**, a maximum of 15 cubic centimeters (cc) at 30 minutes under 100 psi, with a wall cake thickness no greater than 1/16-inch during all aspects of drilling.

If drilling fluid properties exceed the specified parameters, the Engineering Geologist may request immediate suspension of drill hole advancement and the drilling fluid shall be reconditioned and brought into compliance with the specified properties. If reconditioning cannot be achieved, the drilling fluid shall be disposed and replaced with a new mixture that complies with the specified fluid parameters prior to commencement of drill hole advancement. A record shall be maintained showing any variation in the addition and amount of approved chemical products or water required during drilling. The depths at which such changes are required shall be shown in the daily reports. The driller shall record the depths of excess mud loss or loss of circulation in the well bore. At no time during the well drilling or construction process shall fluid loss prevention material (i.e., Hole Plug, Magma Fiber, N-Seal, etc.) be introduced into the borehole.

The Contractor must keep records that provide the following information:

- A log of drilling bit types and the depths at which bit changes are made.
- A depth tally of the drill string.
- A log of drilling fluid tests and additives used.
- A log of the cuttings, providing the depths and descriptions of the earth materials encountered. The Contractor shall collect cutting samples at 10- foot intervals during the pilot bore drilling. Samples shall be placed in quart sized zip-lock® plastic bags (or larger) and the sample depth interval clearly labeled with a permanent marker.

All measurements for depth shall be referenced to existing ground surface at the well site.

The Contractor shall be responsible for obtaining a water meter and backflow prevention device for drilling and construction of the well from the District water system at the location designated by the District. It will be the Contractor's responsibility to provide all piping, valves, storage tanks and all appurtenances necessary for transporting the water to the site from the designated supply source. Water will be supplied by the District at no charge to the Contractor.

01003-3 CONSTRUCTION METHODS

A pilot bore having a diameter between 12 to 17 inches shall be drilled for the well pilot hole at the selected site to the depth specified by the Engineering Geologist. The pilot hole shall be drilled from the base of the conductor casing to the final specified depth using the direct or reverse circulation mud rotary drilling process. The wall of the drill hole shall be

held in place at all times with a circulating fluid which shall be washed out during the gravel pack placement process and subsequent well development. The work shall be performed with equipment which is adequate to perform all phases of well construction. If, in the opinion of the Engineering Geologist, the Contractor's equipment is not capable of satisfactorily performing the work provided for in these specifications, the Contractor, at his own expense, shall substitute equipment satisfactory to the Engineering Geologist and the District. The Contractor shall take the appropriate measures necessary to protect the pilot bore from caving and not plug the aquifers that will yield groundwater to the completed well.

It will be the Contractor's responsibility to provide and maintain a temporary containment area for drill cuttings and provide temporary storage tanks (Baker/Adler Tanks) to contain drilling fluids. It will be the Contractor's responsibility to remove and properly dispose of all cuttings and fluids produced during the project. It will be the Contractor's responsibility to maintain the area designated for cuttings and fluid storage. All cuttings and drilling fluids produced during the project which cannot be contained in the designated areas must be transported from the drill site and properly disposed of at the Contractor's expense.

In order to ensure that drilling of the pilot bore for the well meets alignment specifications, the Contractor shall furnish and deploy a self-checking mechanical drift indicator to measure hole deflection. The fully operational and adequately designed tool shall be onsite prior to commencement of pilot hole drilling operations. The mechanical drift indicator shall be an Eastman Mechanical Drift Indicator available from the Eastman Oil Well Survey Company, or approved equal. A 3-degree unit shall be used with the indicator. Drift indications shall be taken at 100-foot intervals immediately after each 100-foot-increment of pilot bore is drilled. The first drift survey shall be conducted at a depth 100 feet bgs and the last drift survey shall be conducted at a depth of 1,100 feet bgs. The drift from vertical shall not be more than 0.25 of 1 degree. Excess deviation shall be corrected by the Contractor at his own expense prior to proceeding with hole advancement. The Contractor shall submit the Drift Indicator specifications to the District with its bid.

At 10-foot intervals, or as directed by the Engineering Geologist, the Contractor shall take a large (one percent) representative sample of drill cuttings from the interval and shall label and preserve each sample in a re-sealable plastic bag (i.e., zip-lock®) 1-quart size or larger supplied by the Contractor. All containers shall be labeled to indicate the depth interval of the collected sample. The samples shall be properly stored by the Contractor in a manner as to prevent breakage or loss until inspected by the Engineering Geologist and final use for well construction design is complete.

The driller shall prepare a record of construction activities of each shift for the Engineering Geologist. In addition, a time drilling log of the hole shall be kept by the driller and will consist of recording the time (in minutes) required to drill each 10-foot interval of the hole.

Upon completion of the pilot bore, geophysical logging of the hole shall be conducted for the purpose of providing information for the final design of the well. Determination of the final depth of the pilot borehole shall be made after completion of the geophysical logging.

01003-4 MEASUREMENT AND PAYMENT

Payment for pilot bore drilling will be made on a linear foot basis from the bottom of the conductor casing to the depth specified by the Engineering Geologist at the unit price bid for Bid Item No. 3. Such payment will be considered full compensation for furnishing all labor, materials, tools and equipment necessary and incidental to complete the pilot bore from the bottom of the conductor casing to the final depth of the pilot hole as specified by the Engineering Geologist.

END OF SECTION

SECTION 01004

GEOPHYSICAL LOGGING (BID ITEM NO. 4)

01004-1 SCOPE

This item shall consist of performing professional geophysical logs, consisting of spontaneous potential (sp), 16-inch and 64-inch normal resistivity, and 6-foot lateral resistivity surveys.

01004-2 CONSTRUCTION METHODS

The Contractor shall furnish services for geophysical logs in the pilot hole. Logging shall be performed by a professional logging company and provide survey quality consistent with industry standards. Borehole geophysical logs, consisting of spontaneous potential (sp), 16-inch and 64-inch normal resistivity, and 6-foot lateral resistivity surveys, shall be made by the Contractor as directed by the Engineering Geologist. A guard or single point resistivity survey may be substituted for the 6-foot lateral resistivity survey. If reverse rotary drilling is being used for well drilling, the electric log shall be accompanied by a caliper survey of the borehole to allow interpretation of borehole diameter effects on the electrical resistivity signature of the geophysical survey. The caliper shall be considered as part of the geophysical electric log suite for reverse rotary drilling.

During drilling of the well, the driller shall maintain proper mud consistency to prevent caving of loose sand and gravel and swelling of clay zones to ensure the hole is open to the bottom for geophysical logging. If the logging probe fails to descend to the desired depth, the Contractor, at its own expense, shall condition the hole and 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. Standby time for the drill rig to allow geophysical survey completion shall be included in the cost of this work task.

Upon completion of downhole data collection, five (5) final quality copies of the electrical survey (and caliper survey for reverse rotary) shall be submitted to the Engineering Geologist along with an electronic copy of the data (LAS File). The Contractor shall also provide the geophysical log in PDF format.

01004-3 MEASUREMENT AND PAYMENT

Geophysical logging of the pilot bore shall be paid on a lump sum basis for the unit price bid for Bid Item No. 4. Payment shall be considered full compensation for all labor, tools, equipment and insurance for doing all the work necessary and incidental to completion of the task, including but not limited to drill rig standby time and a caliper survey if using reverse rotary drilling. Payment shall be made at the unit price bid for additional logging requested by the Engineering Geologist.

END OF SECTION

SECTION 01005

REAMING PILOT BORE (BID ITEM NO. 5)

01005-1 SCOPE

This item shall consist of reaming of the pilot bore as specified herein and as shown on Plate 3, to the final depth approved by the Engineering Geologist. The final borehole ream depth will be determined at the same time the final well design is provided. The Engineering Geologist will provide final well design details to the Contractor within 4 business days of receiving the geophysical log of the pilot borehole.

01005-2 CONSTRUCTION METHODS

After successful completion of the geophysical logging, the pilot bore shall be reamed with a minimum 28-inch-diameter bit to a depth of 760 feet and a minimum 26-inch-diameter bit from 760 feet to a final depth of 1,400 feet or as determined by the Engineering Geologist. The final ream diameter shall be of requisite size for the use of equipment typically employed by the Contractor to construct a well of the specified size and depth and shall be the sole responsibility of the Contractor to ensure successful completion. Should the Contractor elect to ream a larger diameter hole, the conductor casing diameter shall be appropriately sized to allow the final ream diameter(s) and the cost of Bid Item No. 2 shall include this consideration. The maximum borehole ream diameter for the well screen section(s) shall not be greater than 28 inches. The drilling fluid properties during the pilot bore ream shall be maintained in compliance with all conditions as specified in Section 16.

01005-3 MEASUREMENT AND PAYMENT

Payment for reaming the pilot hole for the well to the specified diameter shall be made on a linear foot basis from the bottom of the conductor to the base of the well casing assemblage (or as otherwise specified) for the unit price bid for Bid Item No. 5. Payment shall be considered full compensation for furnishing all labor, materials, tools, and equipment necessary and incidental to completion of the work. The unit price bid for Bid Item No. 5 shall be considered inclusive of all costs to drill a larger diameter hole if elected by the Contractor.

END OF SECTION

SECTION 01006

CALIPER SURVEY (BID ITEM NO. 6)

01006-1 SCOPE

This item shall consist of furnishing professional logging services for the caliper survey of the reamed borehole diameter.

01006-2 CONSTRUCTION MATERIALS

The Contractor shall furnish services for a caliper log in the borehole. The caliper tool shall have the ability to measure borehole diameters up to 48 inches. The Contractor is advised that many of the available caliper tools rated for this diameter do not perform adequately. It will be the Contractor's responsibility to deliver a usable caliper log. A record copy of the caliper survey shall be delivered to the Engineering Geologist upon completion of the log. Upon completion of the caliper log, five (5) final quality copies of the caliper survey shall be provided to the Engineering Geologist along with an electronic copy of the data in LAS and PDF formats.

01006-3 MEASUREMENT AND PAYMENT

Caliper surveying of the reamed borehole for the well shall be paid on a lump sum basis for the unit price bid for Bid Item No. 6. Payment shall be considered full compensation for all labor, tools, equipment, insurance, and conducting all work necessary and incidental to completion of the task including rig standby time.

END OF SECTION

SECTION 01007

WELL CASING AND SCREENS (BID ITEM NOS. 7 THROUGH 15, AND 30)

01007-1 SCOPE

This item shall consist of providing and installing well casing, screen and end cap, sounding tube and entrance port as specified herein and shown on Plate 3 for the well.

01007-2 CONSTRUCTION MATERIALS

1. 18-Inch Nominal Diameter Low Carbon Steel Casing: The 18-inch nominal diameter casing shall be low carbon steel manufactured in accordance with ASTM Standard A-139 Grade B or A-53 Grade B specifications and have a minimum wall thickness of 0.375-inch. The final wall thickness used shall be adequate to protect against collapse during construction and subsequent production of the well. The well casing sections will be fitted with collars for ease of installation and sound construction. The collars shall have inspection holes to allow inspection to ensure that the casing sections are butted together.
2. 18-Inch to 16-Inch Low Carbon Steel Reducer: The well casing reducer shall be low carbon steel manufactured in accordance with ASTM Standard A-139 Grade B or A-53 Grade B having a minimum wall thickness of 3/8-inch (0.375 inches). The final wall thickness used shall be adequate to protect against collapse during construction and subsequent production of the well. The well reducer will be fitted with a collar for ease of installation and sound construction.
3. 16-Inch Nominal Diameter Dielectric Coupling: A dielectric coupling will be used to join the low carbon and stainless steel casing materials in order to compensate for the corrosion potential that can be caused by the connection of 2 different metal types. The design shall be as shown on Plate 4 – Dielectric Coupling or as otherwise approved by the Engineering Geologist.
4. 16-Inch Nominal Diameter Stainless Steel Casing: The 16-inch nominal diameter casing shall be stainless steel Type 304L manufactured in accordance with ASTM Standard A-312 or A-778 specifications and have a minimum wall thickness of 0.375 inches for the first 130 feet and 0.25 inches for the remaining 90 feet. The final wall thickness used shall be adequate to protect against collapse during construction and subsequent production of the well. The well casing sections shall be fitted with collars for ease of installation and sound construction.
5. 16-Inch Nominal Diameter Stainless Steel Screen With End Cap: The 16-inch nominal diameter well screen shall be stainless steel Type 304L continuous wire wrap screen of the type manufactured by Roscoe Moss Company, Johnson Screens, or approved equal, with a 0.060-inch slot between the surface wires. The wire wrap shall have a minimum height (altitude) of 0.375 inches and a minimum width of 0.183 inches. The screen shall have a minimum of 68 vertical rods and the rods shall have a minimum diameter of

0.250 inches that provides a minimum cross sectional area of 3.33 square inches. The well screen design shall provide a minimum collapse strength of 300 pounds per square inch (psi) and a minimum safe hanging weight of 35,030 pounds. Screen sections shall be manufactured complete with stainless steel weld rings having a minimum 0.375-inch wall thickness attached at each end and a stainless steel collar for lifting and connection of each joint. The bottom of the screen section shall be fitted with a rounded end cap manufactured of stainless steel Type 304L. The Contractor shall submit the well screen manufacturer's specifications to the District with its bid.

6. 4-Inch I.D. Stainless Steel Camera/Sounding Pipe: The camera/sounding pipe shall be 4-inch I.D. Schedule 40 stainless steel Type 304L. The sounding tube sections will be fitted with collars for ease of installation and sound construction.
7. Stainless Steel Entrance Chute: The camera/sounding tube shall enter the casing through a minimum 6-foot-long by 4-inch-wide by 4-inch-deep camera/sounding chute. The camera/sounding chute shall be stainless steel Type 304L and shall be attached to the outside surface of the 16-inch-diameter casing and flush with the inside surface of the well casing. The entrance chute shall be of sufficient construction to prevent deformation or collapse during well construction and routine operation. The chute shall be equipped with a 45 degree taper on the bottom.
8. Gravel Feed Tube: The gravel feed tube shall be a minimum of 3.5-inch-outside-diameter schedule 40 stainless steel type 304L.
9. Centralizers: The well casing and screen centralizers shall be installed throughout the well assemblage at approximately 60-foot intervals and be made of the same material as the well casing and screen sections they are attached to. The final well centralizer schedule shall be provided with the final well design.

01007-3 CONSTRUCTION METHODS

At the completion of reaming the pilot bore, the Contractor shall install the well screen and casing at intervals determined by the Engineering Geologist. The proposed well design with the estimated well casing and screen lengths shown on Plate 3 is approximate only.

The final design of the well will be determined after the geophysical logging of the pilot borehole is completed. The following description is of the proposed well design: the Contractor shall ream with a minimum 26-inch-diameter and maximum 28-inch-diameter bit (in the screened zones) to the depths determined by the Engineering Geologist. After reaming operations and hole fluid conditioning, the Contractor shall install the lengths and intervals of each casing type and well screen section as determined by the Engineering Geologist.

Prior to well casing and screen installation, a temporary open-end construction tremie pipe and permanent gravel feed tube shall be installed in the borehole. The construction tremie shall consist of 2 7/8-inch upset tubing with beveled collars or approved equal. The construction tremie shall be set to within 20 feet of the final casing depth. The permanent gravel feed tube shall be set to a depth of approximately 50 feet from the top of the well screen (the depths shown on Plate 3 are preliminary only). The top of the gravel feed tube

shall be fitted with a threaded fitting and subsequently injected with fluid to demonstrate there is no obstruction and the pipe is clear. The top of the gravel feed tube will then be capped/sealed with a threaded plug.

The 18-inch and 16-inch-diameter casing and screen assemblage shall be plumb and shall be centered in the hole. All field joints shall be properly lap-welded during installation with a minimum of two passes per circumference. The casing/screen inspection holes in the collars shall be filled with the inspection hole coupons and completely welded closed. The bottom of the well screen section shall be fitted with a stainless steel tapered or rounded end cap.

Three centralizers with 120° spacing, attached directly to the casing and screen joints by welding at approximately 60-foot intervals (or as specified in the final design) shall be provided in order to center and hold the casing in the proper position until the gravel pack envelope and cement sanitary seal are in place. The centralizers shall be made of the same material as the well casing and screen sections they are attached to. Centralizers shall be placed from the base of the well up to a depth of 100 feet bgs or as approved by the Engineering Geologist, and it is estimated that 18 sets of centralizers will be required.

The 4-inch diameter sounding tube/camera tube shall be secured to the well casing with metal straps that are made of the same material as the well casing sections they are attached to. And be welded at a minimum 60-foot interval or closer as necessary to safely support the weight of the 4-inch tube and ensure a successful installation. Note that the sounding tube has to transition from the 16-inch-diameter up to the 18-inch-diameter casing. It will be the Contractor's responsibility to insure a gradual bend in the tube and that the 4-inch sounding tube has no sharp bends or kinks that would prevent downhole logging tools from passing. To insure passage of logging tools, at the time of well construction a dummy tool sized 2.5 by 5 feet long shall be used to insure tool passage through the sounding tube. The dummy run shall be conducted once the sounding tube is extended and attached above the well casing reducer. Upon landing the well casing materials, fluid shall be circulated through the gravel feed tube to demonstrate that it is not plugged.

The casing shall be suspended in tension from the surface by means of an appropriate hanger or clamp. Buoyancy or floatation of the casing shall not be allowed. The bottom of the casing shall be at a sufficient distance above the bottom of the reamed hole to ensure that the well casing assemblage is not supported from the bottom of the hole.

All field-welding shall be performed in accordance with American Welding Society Standards. All casing material shall be new. If any of the casings should collapse prior to well completion, they shall be withdrawn and replaced at the Contractor's expense. All field welds shall be allowed a minimum of 5 minutes to cool after welding is completed prior to submerging in the drilling fluid.

If, for any reason, the casing assembly cannot be landed in the correct position or at a depth acceptable to the District and the Engineering Geologist, the Contractor shall construct another well at a location specified by the District and complete the replacement well in accordance with these Specifications at no additional cost to the District. The abandoned hole shall be sealed in accordance with the standards contained in the County well ordinance.

All work required to be repeated and all additional materials, labor and equipment required, shall be furnished at the expense of the Contractor and no claim for additional compensation shall be made or allowed, except as specifically provided herein.

The Contractor is advised that well casing collapse strength is typically calculated based on a standard factor of ellipticity (0.01). Should shipping and handling compromise the integrity of the casing shape, it is the Contractor's responsibility to inspect and replace pipe that will not provide the manufacturer's published collapse strengths. Submittal of a bid indicates the Contractor has reviewed the specified materials and concurs that the design is competent for successful well construction and operation.

01007-4 MEASUREMENT AND PAYMENT

1. 18-Inch Nominal Diameter Low Carbon Steel Casing: The 18-inch-diameter low carbon steel 0.375-inch wall thickness casing will be paid for on a per linear foot basis in place at the unit price bid for Bid Item No. 7. Payment shall be considered full compensation for furnishing all labor, materials, tools, fuel, and equipment necessary and incidental to completion of the work.
2. 18-Inch to 16-Inch Low Carbon Steel Reducer: The low carbon steel 0.375-inch wall thickness well casing reducer will be paid for on a lump sum basis in place at the unit price bid for Bid Item No. 8. Payment shall be considered full compensation for furnishing all labor, materials, tools, and equipment necessary and incidental to completion of the work.
3. 16-Inch Nominal Diameter Dielectric Coupling: The dielectric coupling will be paid for on a lump sum basis in place at the unit price bid for Bid Item No. 9. Payment shall be considered full compensation for furnishing all labor, materials, tools, and equipment necessary and incidental to completion of the work.
4. 16-Inch Nominal Diameter Stainless Steel Casing: The 16-inch-diameter stainless steel 0.375-inch wall thickness casing will be paid for on a per linear foot basis in place at the unit price bid for Bid Item No. 10. The 16-inch-diameter stainless steel 0.25-inch wall thickness casing will be paid for on a per linear foot basis in place at the unit price bid for Bid Item No. 30. Payment shall be considered full compensation for furnishing all labor, materials, tools, and equipment necessary and incidental to completion of the work.
5. 16-Inch Nominal Diameter Stainless Steel Screen With End Cap: The 16-inch nominal diameter stainless steel wire wrap screen will be paid for on a per linear foot basis in place at the unit price bid for Bid Item No. 11. Payment shall be considered full compensation for furnishing all labor, end cap and other materials, tools, and equipment necessary and incidental to completion of the work.
6. Stainless Steel Entrance Chute: The stainless steel sounding tube/camera entrance chute will be paid for on a lump sum basis in place at the unit price bid for Bid Item No. 12. Payment shall be considered full compensation for furnishing all labor, materials, tools, and equipment necessary and incidental to completion of the work.

7. 4-Inch I.D. Stainless Steel Camera/Sounding Pipe: The 4-inch-diameter stainless steel schedule 40 sounding tube will be paid for on a per linear foot basis in place at the unit price bid for Bid Item No. 13. Payment shall be considered full compensation for furnishing all labor, materials, tools, fuel, and equipment necessary and incidental to completion of the work.
8. Gravel Feed Tube: The minimum 3.5-inch-outside-diameter stainless steel schedule 40 gravel feed tube will be paid for on a per linear foot basis in place at the unit price bid for Bid Item No. 14. Payment shall be considered full compensation for furnishing all labor, materials, tools, fuel, and equipment necessary and incidental to completion of the work.
9. Centralizers: Payment for furnishing and installing the stainless steel centralizers shall be made at the unit price bid for Bid Item No. 15 for each set of centralizers. Payment shall be considered full compensation for furnishing all labor, materials, tools, and equipment necessary and incidental to completion of the work to install each centralizer set.

END OF SECTION

SECTION 01008

GRAVEL PACK (BID ITEM NO. 16)

01008-1 SCOPE

This item shall consist of providing and installing a select gradation of a continuous fine gravel/coarse-grained sand, with a gradation as specified by the Engineering Geologist, adjacent to the screen intervals in the annulus of the well.

01008-2 WELL CONSTRUCTION MATERIALS

All gravel/coarse-grained sand used for the filter envelope shall be hard, water-worn and washed clean of silt, fine sand, organic materials and foreign matter (crushed gravel will not be accepted). It shall be well rounded, spherical, graded, with a silica content equal to or greater than 99%. The gravel pack material shall be of the type manufactured by Cemex Lapis Lustre, SRI, or approved equal, and conform to the following gradation. The Engineering Geologist will determine the actual gravel pack size and gradation after the completion of the pilot hole.

The gravel pack material shall have an acid solubility of less than 1 percent in a 15 percent hydrochloric acid (HCL) solution and have a uniformity coefficient less than or equal to 2.5.

<u>Percentages Passing Screen Numbers</u>				
(6 X 12)				
<u>No. 4</u>	<u>No. 6</u>	<u>No. 8</u>	<u>No. 12</u>	<u>No. 16</u>
100%	70-100%	30-55%	1-8%	0-1%

A description and manufacturer's sieve analysis of gravel packing material proposed for use shall be provided with the Contractor's bid package. A sample of the material to be delivered to the site must be submitted for approval to the Engineering Geologist prior to shipping to the site. The Engineering Geologist may elect to have a certified testing laboratory perform a sieve analysis to verify conformance with an approved sample. Failure to meet gradation of the approved sample may be grounds for rejection. Transportation and storage of gravel will be conducted using super sacks. Bulk delivery will not be allowed.

01008-3 WELL CONSTRUCTION METHODS

Prior to placement of the gravel pack in the well, the drilling fluid shall be thinned with clean water in sufficient quantity to allow descent and settlement of gravel filter material. The Contractor shall also submit his written estimate of the volume of gravel to be placed. If a significant difference exists between the estimated and the final volume of gravel added, the discrepancy may be grounds for rejection of the well by the District.

Gravel, as specified, shall be installed in the annular space between the reamed hole and the well screen through a construction tremie pipe. The use of clean water and a gravel pump will be required. During placement of gravel in the annulus, displaced fluids pumped from the well casing shall be contained onsite. During gravel placement it is also required to periodically flow clean water down through the permanent gravel tube to demonstrate it is clear and open. During gravel pack placement disinfection shall be conducted in accordance with AWWA Standards C654-13 using sodium hypochlorite.

The gravel pack shall be placed by pumping through a construction gravel-feed line (tremie) extending to within 20 feet of the bottom of the well casing-borehole annulus. The construction tremie shall be gradually withdrawn as the gravel is placed. After the gravel is in place, swabbing with tubing and a 12-inch-diameter packer assembly on a wireline or an appropriately sized 12-inch-diameter (or larger) bailer shall be conducted opposite the selected screen sections until the gravel is consolidated. As the gravel settles, more shall be added. The gravel shall be sounded and topped off at the designated final design depth in preparation for placement of the final sanitary seal. The addition of chlorine during gravel pack operations is not required. If the Contractor elects to use chlorine it shall be a sodium hypochlorite solution.

01008-4 MEASUREMENT AND PAYMENT

Payment for furnishing and installing the gravel pack shall be made on a linear foot basis in place from the bottom of the well casing and screen assemblage to the bottom of the sanitary seal depth (as provided on the final well design) at the unit price bid for Bid Item No. 16. Payment shall be considered full compensation for furnishing all labor, materials, tools, and equipment necessary and incidental to completion of the work.

END OF SECTION

SECTION 01009

SANITARY SEAL (BID ITEM NO. 17)

01009-1 SCOPE

This item shall consist of providing and installing a cement grout sanitary seal in the well annulus from a depth of 740 feet up to ground surface.

01009-2 WELL CONSTRUCTION MATERIALS

All cement grout used for the seal around the well casing shall be a ten and one half (10.5)-sack-cement sand-slurry grout mixture. Cement used for sealing mixtures shall meet the requirements ASTM C150 "Standard Specification for Portland Cement," Type III or Type IV. Materials used as additives for Portland cement mixtures in the field shall conform to ASTM C494 "Standard Specification for Chemical Admixtures for Concrete". The Contractor may not use alternate concrete mixtures even if allowed by the well construction permit. Prior to any drilling operations, the District and the Engineering Geologist will approve the concrete seal mixture. No additives are anticipated to be necessary for this project and shall not be used without a prior written request for approval by the District or Engineering Geologist.

01009-3 CONSTRUCTION METHODS

Cement grouting shall seal the annular space between the borehole (and conductor casing) and the well casing, from the top of the gravel pack up to ground surface. Sealing material shall be placed, in a minimum of two pours from the bottom of the interval to be sealed to the top of the well casing or as otherwise determined to be necessary by the Contractor to prevent well casing collapse. The well's final sanitary seal and placement shall be conducted in accordance with County permit requirements and be pumped in place using the positive displacement method with a pneumatic grout pump and construction tremie pipe set 2 feet off the bottom of the sealing zone. The tremie pipe shall be gradually extracted as the seal material fills the annular space, however, the end of the pipe shall remain submerged in cement seal material throughout the installation of each pour. Allowance of sufficient cement cure-time between pours to prevent casing collapse shall be the responsibility of the Contractor.

01009-4 MEASUREMENT AND PAYMENT

Payment for cement grout will be made on a linear foot basis in place at the unit price bid for Bid Item No. 17. Payment shall include full compensation for furnishing all labor, materials, tools, and equipment necessary and incidental to complete the installation in place.

END OF SECTION

SECTION 01010

WELL ALIGNMENT TESTING (BID ITEM NO. 18)

01010-1 SCOPE

This item shall consist of testing to determine the plumbness and alignment of the well.

01010-2 CONSTRUCTION METHODS

Tests to determine the plumbness and alignment of the 18-inch-diameter casing shall be made by the Contractor after the well has been completed and before its acceptance.

The completed well shall be sufficiently plumb and straight so that there will be no interference with installation, alignment, operation, or future removal of the permanent well pump equipment.

A dummy, 40 feet long, will be lowered into the casing to test the plumbness and alignment of the well. The dummy shall consist of a rigid spindle of 4-inch-diameter extra heavy pipe with three rings (having an outside diameter 1/2-inch less than the inside diameter of the 18-inch-diameter casing) rigidly fixed to the pipe so that they cannot move longitudinally along the pipe. The rings shall consist of suitable material, which will not harm the interior of the casing while being lowered or raised.

Should the dummy fail to move freely throughout the entire casing interval in which pump equipment will be installed, or should the well vary from the vertical in excess of 6 inches per 100 feet of depth, insufficient plumbness or alignment may be grounds for rejection of the well. The dummy shall be suspended on a fixed pulley in the crown of the rig and measurements shall be made on the way into the well and on the way out of the well on 20-foot intervals. Records of deflection readings and all other pertinent information shall be kept and made part of the permanent well log and record. The depth of the alignment test will be provided by the Engineering Geologist based on the final well design and is anticipated to be approximately 670 feet bgs to the top of the dummy.

01010-3 MEASUREMENT AND PAYMENT

Payment for testing to determine the plumbness and alignment of the well shall be made on a lump sum basis at the unit price bid for Bid Item No. 18. Payment shall be considered full compensation for furnishing all labor, materials, tools, and equipment necessary and incidental to completion of the work.

END OF SECTION

SECTION 01011

MECHANICAL WELL DEVELOPMENT (BID ITEMS NOS. 19 AND 20)

01011-1 SCOPE

This item shall consist of swabbing and airlift pumping with a dual swab assembly to remove drilling fluids and develop the gravel pack and aquifer to maximize the yield and efficiency of the well.

01011-2 DRILLING FLUID PURGE

Within a 48-hour-period after well construction is complete (final sanitary seal is placed), the heavy drilling fluids in the well shall be purged to prepare the well for development. The drilling fluid purge process shall consist of installing an open-ended airlift pipe with a minimum 5-inch-diameter to the bottom of the well and conducting airlift pumping to remove heavy drilling fluids and solids (fill material) to prepare the well for development. During initial airlift pumping, 5,000 gallons of fresh water shall be added to the top of the well casing at a rate approximately equal to or less than the rate of airlift pumping. Subsequently, the 4-inch-diameter sounding tube and gravel feed tube shall be purged with 500 gallons of fresh water each.

The initial drilling fluid purge airlift operation shall be conducted until a minimum of 15,000 gallons of fluid have been removed off the bottom of the well. Prior to removal of the airlift piping, the pipe shall be slowly lowered to touch the bottom of the well and remove all sediment. As the airlift pipe is being removed from the well, at the depth of approximately 850 feet (top of well screen) 25-gallons of a 12.5 percent sodium hypochlorite (chlorine) shall be added in the top of the airlift pipe and chased with approximately 850 gallons of fresh water to push it out of the airlift pipe. Subsequently, the remainder of the airlift pipe shall be removed and mechanical well development shall commence. Drilling fluids removed shall be disposed by the Contractor offsite.

The gravel feed tube shall be water-jetted clean by installing a minimum 1.5-inch-diameter pipe to the depth of the gravel fill tube and fresh water shall be jetted at a minimum rate of 50 gpm to purge the tube of heavy drill mud and fines. Jetting shall be conducted until the return water is clear and it is demonstrated that the tube is open to the design depth and allows for downward flow.

01011-3 WELL MECHANICAL DEVELOPMENT METHOD

A. SWAB AND BAIL

The mechanical development process shall begin by surging the well screen with a swab tool and bailing the solids from the well. A solid or valved surge block or large diameter bailer (12-inch-diameter) shall be used to swab the well screen interval(s) in the well by moving the assembly up through the well screen with a minimum line speed of 3 feet per second. Bailing shall be alternately conducted to remove fines washed in through the well

screen during swab/surge development and remove residual drilling fluid loosened by the process. This procedure is anticipated to require active swabbing of each 20 foot section of well screen for a minimum 1-hour-period. Based on the proposed design (460 feet of well screen), a total of 23 hours of active mechanical well development is anticipated. Active development means the swab or bailer is actively being moved up and down inside the well at a minimum rate of 3 feet per second. This procedure will be conducted using a wireline to facilitate an efficient operation. Active swabbing using a cable tool rig with a rocker arm assembly and a swab plate is preferred. If the drill rig does not have a sand line long enough or a winch strong enough to conduct these operations, a pump rig shall be mobilized and utilized to accomplish the active swabbing procedure. Upon completion of the active swabbing activities, the well shall be bailed back to bottom using a large diameter suction bailer to remove the fill in the bottom of the well. Alternatively, the Contractor may elect to conduct an open ended airlift to remove the fill.

B. SWAB AND AIRLIFT

At the completion of swab and bail activities, the well will be actively airlifted to evacuate debris loosened by the swab and bail development. The Contractor shall utilize a dual rubber swab assembly with swab plates sized at 1/2 inch less than the inside diameter of the well screen, and with a maximum 1-foot spacing between the swab plates. The swab assembly design is shown on Plate 5 – Dual Swab Assembly Drawing – Side View, and Plate 6 – Dual Swab Assembly Drawing – Top View. Initially, airlifting will proceed from the top of the screen to the bottom and be actively conducted for a 20-minute-period per 20-foot section of well screen and is anticipated to require a total of approximately 460 minutes (approximately 7.6 hours) of active airlifting to remove the bulk of the residual drilling mud in the gravel pack and formation materials. It is anticipated that this first phase of airlifting on the way down will produce a minimum of approximately 46,000 gallons of turbid fluid that will not qualify for discharge under the District discharge requirements and will require proper offsite legal disposal.

Subsequently, airlifting will proceed from the bottom of the screen to the top and is anticipated to require a total of approximately 1 hour of active airlifting per 20-foot section of screen; 23 hours total active airlifting for the proposed design with 460 feet of well screen. The Contractor shall utilize a dual rubber swab assembly with swab plates as outlined above (see Plates 5 and 6). All turbid fluids produced during mechanical well development shall be placed in tanks and contained onsite for subsequent disposal.

The airlift design shall be a minimum 1.25-inch air injection pipe inside a 5-inch-inside-diameter eductor pipe. The 1.25-inch airline shall initially be set to a depth of 780 feet and shall be sufficient to produce a flow of approximately 100 gpm or greater. The airlift shall be conducted using an air compressor capable of generating a minimum of 200 psi and a minimum of 740 cubic feet per minute. Upon completion of development of the well screen, the well shall be bailed with a suction bailer or airlifted with an open-ended pipe to clean all sand and silt fill from the well to its total construction depth.

The Engineering Geologist must approve the use of any chemicals. Mud dispersing agents and other chemicals applicable to standard procedures for breakdown and removal of drilling fluids may be used where applicable and as required.

Active development means the dual swab assembly is actively being moved up and down the well while the airlift is actively pumping to waste at a minimum discharge rate of approximately 100 gpm. All fluids that do not comply with the District's discharge conditions shall be containerized onsite and hauled off by the Contractor for legal disposal. Discharge fluids that have a turbidity below 150 nephelometric turbidity units (NTUs), total residual chlorine below 0.1 mg/l, and a pH comparable to the local groundwater supply of between 6.5 and 7.5 can be released to the point of discharge (see Plate 2) with no treatment needed. Blending of the well discharge water with system water for dilution to meet discharge requirements is not permitted. Prior to initial discharge, the Contractor shall provide field test results to the District for its review and approval. The Contractor shall provide a readily accessible sample port valve on the airlift discharge pipe for use by the Engineering Geologist during airlift operations.

01011-4 MEASUREMENT AND PAYMENT

Payment for active well mechanical development will be made on an hourly basis in accordance with the hourly rate bid for Bid Item Nos. 19 and 20. Such payment shall be considered as full compensation for furnishing all labor, materials, tools, and equipment necessary and incidental to completion of this task.

END OF SECTION

SECTION 01012

DEVELOPMENT AND TEST PUMP INSTALLATION (BID ITEM NO. 21)

01012-1 SCOPE

Following the initial mechanical development, the Contractor shall install a cleaned and sterilized line shaft turbine test pump assembly to a depth of 680 feet (top of bowls) with a diesel or gasoline powered engine(s). The pump bowl assembly shall be capable of producing on the order of 2,500 gpm with up to 650 feet of total dynamic head. The engine shall be equipped with suitable throttling devices to control discharges between 500 and 2,500 gpm and have suitable horsepower (perhaps up to 700 hp) to achieve the specified flow rates and discharge heads that are anticipated. The test pump shall be designed appropriately to allow pump and surge development and not be equipped with a foot valve or ratchetting mechanism which would prevent backspin and interfere with back-surfing operations. After pump test operations are complete, the pump and power plant assembly shall be removed and all fill material shall be removed from the bottom of the well using an open-ended airlift or suction bailer. This item may also include installation and removal of approximately 100 feet of a minimum 12-inch-diameter discharge piping with Victaulic fittings, airline, flow meter, sample port, and appropriate air-vac and control valves to facilitate completion of hydraulic well development and testing. The temporary discharge system shall be designed to dispose of up to 2,500 gpm.

01012-2 WELL TEST PUMPING INSTALLATION METHOD

The Contractor shall furnish, install, and remove the necessary measuring instruments, discharge pipeline, and pumping equipment capable of pumping to the required point of discharge(s) a maximum of 2,500 gpm, with up to 650 feet of total dynamic head. The Contractor's equipment shall have satisfactory throttling devices, so that the discharge may be reduced to 500 gpm. Pumping unit shall be complete with an ample power source, controls, and appurtenances and shall be capable of being operated without interruption for a period of 72 hours.

For water level measurements, the Contractor shall install a ¼-inch-diameter airline or a 1-inch-diameter or larger PVC sounding tube during test pump installation to sound water levels in the well during development and testing. If an airline is utilized, it shall be equipped with an air gauge that has an operational range no greater than 150 psi.

Piping, valves, meter, sampling port, sand tester port, and airline/sounding tube shall be properly installed to insure successful operation of each apparatus. The permanent sounding tube shall be made readily accessible for use by the Engineering Geologist with a minimum 3 foot vertical clearance directly over the tube. The District shall utilize the permanent well sounding tube throughout well development and testing for the installation of a pressure transducer. Pump discharge shall be measured with a totalizing flow meter having an instantaneous readout in gallons per minute or cubic feet per minute or as approved by the Engineering Geologist prior to initiation of hydraulic well development.

01012-3 MEASUREMENT AND PAYMENT

Payment for installation and removal of the development and test pump assembly will be made on a lump sum basis in accordance with the unit price bid for Bid Item No. 21. Such payment shall be considered as full compensation for furnishing all labor, materials, tools, fuel, and equipment necessary and incidental to completion of this task.

END OF SECTION

SECTION 01013

HYDRAULIC WELL DEVELOPMENT (BID ITEM NO. 22)

01013-1 SCOPE

This item shall consist of intermittent pump and surge (rawhide) well development to maximize well efficiency and production.

01013-2 HYDRAULIC DEVELOPMENT METHOD

At the completion of mechanical development activities, intermittent pumping shall be used for well development, which shall be at an initial rate of up to 500 gpm and continued until the water is clear. The pump shall be stopped and the water in the column allowed to surge back through the bowls with free backspin and out into the well screen. The pump shall then be started and stopped several times; and then pumped at 500 gpm until the water is clear. The procedure shall be repeated and increased in approximately 100 gpm increments up to a maximum of 2,500 gpm or as directed by the Engineering Geologist. Pump discharge shall be measured with a flow meter that provides instantaneous rate and totalizing meter readings.

Development records shall be maintained to document each surge cycle showing production rate, pumping level, drawdown, sand production, number of surges and all other pertinent information concerning well development. Development shall continue until the following conditions have been met.

1. There shall be no settlement of the gravel pack.
2. The specific capacity (gpm/ft) shall have reached a constant value over a period of at least 6 continuous hours, or as approved by the Engineering Geologist.
3. Sand content is acceptable and described as low.

The equipment for sand testing shall be the Rossum Centrifugal Sand Sampler (see Journal of the American Water Works Association, Volume 46, No. 2, February 1954). The Engineering Geologist upon notification by the Contractor, shall conduct the test after completion of hydraulic well development.

Sand content shall not exceed 10 parts per million (ppm) after the start of pumping, from a 30-minute off condition. Sand content shall average less than 2 ppm during a continuous 4-hour pumping period which will begin 30 minutes after the start of pumping from a 30-minute off condition. The sand content shall be determined by averaging the results of 5 samples collected at the following time during the final pumping test: (1) 15 minutes after start of the test; (2) after 1/4th of the total planned test time has elapsed; (3) after 1/2 of the time has elapsed; (4) after 3/4th of the time has elapsed; and (5) near the end of the pumping test. The pumping rate during sand content testing shall be 2,000 gpm. At the option of the

Engineering Geologist, the sand content testing may be conducted during the constant discharge test.

If the sand content exceeds 2 ppm, the Contractor may be requested to conduct the necessary redevelopment work and pumping of the well until the sand content is less than 2 ppm. It is anticipated that this phase of development will require 32 hours of active pumping and surging development activities and for bid purposes, a total of 32 hours of active pump and surge development shall be assumed. Active pump and surge development means the pump assembly is actively being operated to discharge fluids from the well or back surge fluids into the well.

All turbid fluids produced during well development shall be contained onsite before being properly disposed by the Contractor. Fluid disposal is the responsibility of the Contractor. No turbid fluids produced during well development shall be allowed to enter any watershed areas.

01013-3 MEASUREMENT AND PAYMENT

Payment for hydraulic well development using the pumping and surging well development procedure will be made on an hourly basis per the rate bid for Bid Item No. 22. Such payment shall be considered as full compensation for furnishing all labor, materials, tools, and equipment necessary and incidental to completion of this task.

END OF SECTION

SECTION 01014

WELL PRODUCTION TESTING (BID ITEM NO. 23)

01014-1 SCOPE

This item shall consist of testing the well to determine the final well performance, measure site-specific aquifer parameters, and provide data to assess the optimum rate and level of pumping during permanent operation.

01014-2 TEST PREPARATION

After the well has been completely developed in accordance with these specifications, the Contractor shall notify the Engineering Geologist of the well test schedule and make the necessary arrangements (fuel and manpower, etc.) for conducting the final production testing. Production testing shall consist of a variable rate step-drawdown test and a constant rate discharge test.

01014-3 STEP-DRAWDOWN TEST

Prior to starting the pump, water level measurements shall be made at least hourly, for a minimum of eight hours by the Engineering Geologist. The well shall be "step" tested at rates beginning at approximately 1,000 gpm and increased by increments of 500 gpm until a rate of 2,500 gpm is attained. The complete test is estimated to require four (4) 2- hour steps and 8 hours total pumping time, not including recovery time. The Contractor shall operate the pump and change the discharge as directed by the Engineering Geologist. Discharge of the pump shall be controlled by both gate valve and engine throttle. The discharge shall be controlled and maintained at approximately the desired discharge for each step with an accuracy of plus or minus 5 percent. The Engineering Geologist shall furnish and install a pressure transducer for the District's use. Well recovery time after the step test will be a minimum of 12 hours.

01014-4 CONSTANT DISCHARGE TEST

After water level recovery from the step test is complete, a constant rate test shall be conducted by pumping the well at the design rate of 1,500 gpm for a period of not less than 24 hours and until the pumping level remains constant for at least 4 hours, or until the Engineering Geologist terminates the test. A recovery period of not less than 24 hours shall follow the termination of the constant discharge test. At this time, the Engineering Geologist will collect residual drawdown data and the well will remain idle. All measurements during well recovery are to be made by the Engineering Geologist. The complete test is estimated to require approximately 24 hours of active pumping, and a subsequent 24-hour well recovery period. The constant discharge test will be initiated between Monday and Wednesday at 10:00 a.m. and terminated the following day at the same time. This will permit District staff time to collect water quality samples that adhere to sample holding times for laboratory testing.

01014-5 ABORTED TEST

Whenever continuous pumping at a uniform rate has been specified, failure of pump operation for a period of greater than one percent of the elapsed pumping time shall require suspension of the test until the water level in the pumped well has recovered to its original level. For the purposes of this section, recovery shall be considered "complete" after the well has been allowed to rest for a period of at least equal to the elapsed pumping time of the aborted test except that if any three successive water level measurements spaced at least 20 minutes apart show no further rise in the water level in the pumped well, the test may be resumed immediately. The Engineering Geologist shall be the sole judge as to whether this latter condition exists. The Contractor will not be paid for any retesting done if specified time or recovery requirements of the Engineering Geologist for the aborted test are not first met. These tests are invalid and will not be construed as a test or study.

01014-6 DISCHARGE WATER

Discharged water shall be conveyed from the pump to a location on the well site or as otherwise designated by the District. It is imperative to ensure that no damage by flooding or erosion is caused to natural drainage or the adjacent properties. The Contractor shall provide all piping, valves, settling tanks, fencing, delineators, and discharge line necessary for conveyance and discharge of the test fluids. It will be the Contractor's responsibility to make any necessary arrangements for the discharge of water. It will be the Contractor's responsibility to assist the District in obtaining representative water samples prior to the end of discharge during the 24-hour constant rate test.

01014-7 RECORDS

The Contractor shall keep accurate records of the pumping test and furnish copies of all records to the Engineering Geologist upon completion of the test. The records shall also be available to the Engineering Geologist or his representative for inspection at any time during the test. The records shall include physical data describing the construction features such as: the measuring point and its measured height above land surface; the methods used in measuring water levels, and pumping rates.

01014-8 MEASUREMENT AND PAYMENT

Payment for the step-drawdown test and the constant discharge test will be made at the hourly rate bid for Bid Item No. 23. The estimated bid quantity for well production testing assumes 32 hours. Such payment will be considered as full compensation for furnishing all labor, materials, tools, fuel and equipment necessary and incidental to completion of these tasks. No payment will be made for observation of the well recovery periods.

END OF SECTION

SECTION 01015

DISINFECTION OF THE WELL (BID ITEM NO. 24)

01015-1 SCOPE

This item shall consist of disinfecting the well against bacteria using sodium hypochlorite. Disinfection shall meet or exceed AWWA Standards C654-13 as described in the sections below.

01015-2 DISINFECTANT MATERIALS

Sodium hypochlorite approved by state or local regulatory agencies shall be used as the disinfectant. The disinfectant shall be delivered to the site of the work in original closed containers bearing the original label indicating the percentage of available chlorine. The disinfectant shall be recently purchased liquid sodium hypochlorite solution. Storage of liquid compounds shall not be exposed to the atmosphere or to direct sunlight. Substitutions or proposed equals of chemicals shall not be allowed or considered. Unless superseded by governmental regulation, the quantity of chlorine additives used for disinfection shall include:

Disinfectant Additives

50 gallons 12.5% sodium hypochlorite
15 gallons NuWell 410
22,000 gallons potable water

01015-3 DISINFECTION PREPARATION AND INSTALLATION METHOD

The Contractor shall provide for disinfection immediately following completion of the well construction, cleaning, and testing procedures. The Contractor shall carry out adequate cleaning procedures immediately preceding disinfection where evidence indicates that normal well construction and development work have not adequately cleaned the well. The Contractor is responsible for removing or mitigating the effects of all materials introduced into the well during drilling.

The disinfectant solution shall be mixed above ground in a clean, suitable poly-tank prior to placement into the well. The disinfectant solution is designed to have 300 ppm free chlorine and a pH below 7.0. The well disinfection solution shall be thoroughly mixed above ground in the tank and subsequently introduced into the wellhead using a hose. Approximately 500 gallons of disinfectant shall be placed into the sounding tube and the remainder pumped into the top of the well. All accessible portions of the well above the water level shall be maintained in a damp condition with water containing the concentration of 300 ppm or greater disinfecting agent for a period of not less than 20 minutes. The disinfecting agent of 300 ppm shall be surged into the well screen with the pump for a period of ½-hour and then left in the well. Upon completion of pump removal activities,

5,000 gallons of potable water shall be added into the top of the well casing to displace the solution in the upper blank casing and force it out into the well screen section.

01015-4 MEASUREMENT AND PAYMENT

Payment for disinfection of the well will be made on a lump sum basis at the unit price bid for Bid Item No. 24. Such payment shall be considered full compensation for furnishing all labor, materials, tools and equipment and doing all the work to complete this task.

END OF SECTION

SECTION 01016

VIDEO SURVEY (BID ITEM NO. 25)

01016-1 SCOPE

This item shall consist of performing a color downhole video surveys of the completed well and the 4-inch-diameter sounding tube and recording in DVD format.

01016-2 CONSTRUCTION METHODS

The Contractor shall furnish all services and equipment for video surveying the completed well casing and screen assemblage and the 4-inch-diameter sounding tube. The downhole video surveys shall be recorded in real color with camera equipment that has side scan capabilities. The video surveys shall be coordinated so the Engineering Geologist can witness the video surveys.

Upon completion of downhole video surveys, two (2) final quality copies of each video survey shall be provided to the Engineering Geologist in USB format along with a copy of the video operator's reports in hard copy and electronic pdf format.

01016-3 MEASUREMENT AND PAYMENT

Payment for construction of the video logs will be made on a lump sum basis at the unit price bid for Bid Item No. 25. Such payment shall be considered full compensation for furnishing all labor, materials, tools and equipment and doing all the work to complete this task.

END OF SECTION

SECTION 01017

WELLHEAD PREPARATION

(BID ITEM NO. 26)

01017-1 SCOPE

This item shall consist of preparing the wellhead for future construction of a concrete pad at the wellhead for use as a pump pedestal and includes arrangement of all the appurtenances indicated in Plate 7 – Preliminary Wellhead Construction Drawing. Work will be conducted and result in construction that complies with all applicable California Department of Public Health and District construction standards. The sounding tube shall be gradually bent so that the final distance between the center of the casing and the inside edge of the tube shall be sufficient to allow the use of a standard 42-inch-diameter pump base set upon the pump pedestal constructed at a height of 18 inches above the ground surface and allow installation of standard well logging tools.

01017-2 CONSTRUCTION MATERIALS

The Contractor shall provide all labor, material and equipment necessary for modifying the well sounding tube and preparing the wellhead for construction of a concrete pad at the top of the conductor (surface) casing. The excavation adjacent the wellhead that is necessary to perform the tube placement/modification work shall be filled with a 2-sack- cement sand slurry mixture.

01017-3 WELLHEAD CONSTRUCTION METHOD

The 18-inch-diameter well casing shall be cut off or extended to a height of 18 inches above the ground surface and the 4-inch-diameter sounding tube shall be gradually bent sweeping away from the 18-inch-diameter well casing so that the sweeping angle will allow downhole logging tools 3-inch-diameter by 4-foot long, 2.5-inch-diameter by 5-foot long, and 2-inch-diameter by 6-foot long to easily pass. Successful completion of this work is anticipated to require the sounding tube to be suspended alongside or attached to the conductor casing during well sanitary seal placement. Subsequent excavation along the outside of the conductor casing and removal of the conductor casing material and concrete seal material will be required to a depth that is adequate to create the gradual bend required (perhaps 6 to 8 feet bgs).

The excavation adjacent the well shall be filled with a 2-sack-cement sand slurry mixture or equivalent as approved by the Engineering Geologist. The inside edge of the 4-inch-diameter sounding tube shall be spaced a minimum distance of 12 inches from the outside of the 18-inch-diameter well casing at 1 foot above the existing ground surface. The 4-inch-diameter sounding tube shall extend 2 feet above ground surface and be completed with a threaded end cap. A 2-inch-diameter carbon steel access tube shall also be welded to the 18-inch casing at a 30 degree angle (off vertical) to serve as a casing vent. The tube shall also have a minimum of 13 inches between the inside edge of the tube and well casing at a height of 18 inches above ground surface.

01017-4 MEASUREMENT AND PAYMENT

Payment for wellhead modification in preparation for the pump pedestal construction will be made on a lump sum basis at the unit price bid for Bid Item No. 26. Such payment shall be considered full compensation for furnishing all labor, materials, tools and equipment and doing all the work to complete this task.

END OF SECTION

SECTION 01018

WELL NO. 97 DESTRUCTION (BID ITEM NO. 27)

01018-1 SCOPE

This item shall consist of backfilling the well with an inert coarse sand or fine gravel material, and placement of a 10.5-sack sand or neat cement seal in accordance with the depth intervals indicated below for the destruction of Well No. 97. A drawing of the well construction is provided on Plate 8 – Well No. 97 Construction Record Drawing and preliminary well destruction requirements are included in Attachment C – Preliminary Well Destruction Requirements for Well No. 97 (SWN 03N/20W-35R01). In 2017, a video survey showed the well had backfilled to a depth of approximately 913 feet bgs. Prior to conducting any downhole work the Contractor shall obtain a well destruction permit from the Ventura County Watershed Protection District.

01018-2 CONSTRUCTION METHODS

The Contractor shall furnish all services and equipment necessary to perform the work to destroy the well. Prior to installing any fill material into the well, the well shall be sounded to determine the total depth to ensure that preliminary fill volume estimates are correct.

01018-3 GRAVEL FILL MATERIALS AND METHOD

Upon completion of old pump equipment removal, the lower portion of the well between the depths of 650 feet and the total depth (913 feet) shall be filled with an inert coarse sand/fine gravel back fill material. The coarse sand shall be placed using a minimum 2-inch-diameter tremie tube and a pneumatic or centrifugal pump. Placement shall begin with the tremie pipe suspended within 60 feet of the bottom of the well. As placement proceeds and tremie pipe sections are removed, the top of the gravel shall be sounded to allow calculation of the fill volume placed and the well volume filled. Transportation and storage of clean inert pea gravel fill material will be conducted in a manner to prevent contamination that could adversely affect the aquifer and the new well.

01018-4 CEMENT SEAL MATERIALS AND METHOD

All cement grout used for the well seal shall be a 10.5-sack sand cement grout mixture or a neat cement. Cement used for sealing mixtures shall meet the requirements ASTM C150 “Standard Specification for Portland Cement,” Type III or Type IV. Materials used as additives for Portland cement mixtures in the field shall conform to ASTM C494 “Standard Specification for Chemical Admixtures for Concrete”.

Cement grouting shall seal the well casing from the top of the gravel fill material (650 feet) up to 5-feet below ground surface. Sealing material shall be installed in a single pour from the bottom of the interval to be sealed to the top. The well’s cement grout seal placement shall be conducted in accordance with these specifications and the County permit requirements and be pumped in place using the positive displacement method with a

pneumatic grout pump and construction tremie pipe set 2 feet off the bottom of the sealing zone. The tremie pipe shall be gradually extracted as the seal material fills the well, however, the end of the pipe shall remain submerged in cement seal material throughout the installation. After cement seal placement, the well casing(s) shall be removed to a depth of 5 feet bgs and the work area backfilled with clean fill or native materials. The contractor shall notify the County and coordinate the work so that a County Inspector is present during well seal placement.

01018-5 MEASUREMENT AND PAYMENT

Payment for well destruction will be made on a lump sum basis at the unit price bid for Bid Item No. 27. Such payment shall be considered full compensation for furnishing all labor, materials, tools and equipment and doing all the work to complete this task.

END OF SECTION

SECTION 01019

MUD AND CUTTINGS DISPOSAL AND SITE CLEAN-UP (BID ITEM NO. 28)

01019-1 SCOPE

This item shall consist of maintaining the well site in a professional manner during drilling, construction, and testing and restoring the site grade to pre-drilling conditions after work is completed. Site maintenance shall prevent cuttings and drilling fluids from leaving the well construction work area throughout the well construction process. It will be the Contractor's responsibility to remove and properly dispose of all drill cuttings and fluids during and at the completion of the well construction project.

01019-2 CLEAN-UP METHOD

The Contractor shall keep the premises free from accumulations of waste materials, rubbish and other debris resulting from the work, and at completion of the work, it shall remove all waste materials, rubbish and debris from and about the well site along with all tools, construction equipment, fuel tanks, machinery, and surplus materials. The Contractor shall leave the site clean and ready for use by the District. The Contractor shall restore the grade in all temporary work areas to their original condition. Drill cuttings and mud are to be removed from the site and properly disposed of by the Contractor unless directed otherwise by the District. The Contractor is responsible for any damages to properties adjacent to the wells caused by drilling, construction, well testing or well destruction activities associated with the work described herein.

01019-3 MEASUREMENT AND PAYMENT

Payment for well site clean-up and mud and cuttings disposal shall be made on a lump sum basis in accordance with the unit price bid for Bid Item No. 28 after final inspection and approval by the District. Final approval shall be made by the District of all work completed by the Contractor.

END OF SECTION

SECTION 01020

FENCING

(BID ITEM NO. 29)

01020-1 SCOPE

This item shall consist of the replacement in kind of the section of chain link fence along the perimeter of the project site which must be removed for the execution of any other items contained in these Technical Specifications. Fencing replacement shall be rationalized and in compliance with the "Greenbook" Standard Specifications for Public Works Construction, 2021 Edition (Greenbook), unless otherwise noted in these Technical Specifications.

01020-2 CONSTRUCTION MATERIALS

Unless otherwise noted in these Technical Specifications, materials for this item shall be in compliance with the entirety of section 206-6 of the Greenbook, subsection 206-6.1 of which is transcribed below:

General. All materials and fittings shall be new and all ferrous materials shall be coated in accordance with 201-3. Class 1A steel pipe shall additionally be coated in accordance with 210-4. When specified, Class 1 or Class 1A materials shall additionally be clad coated with PVC in accordance with 210-5. The base material for the manufacture of steel pipe used for posts, braces, top rails, and gate frames shall conform to the requirements of ASTM F1083, Schedule 40, for Class 1 or ASTM A569 for Class 1A. Class 1A steel shall have a minimum yield strength of 50,000 pounds per square inch (345 MPa). All unit weights shall be subject to the standard mill tolerance of plus or minus 5 percent.

Posts shall be fitted with caps designed to fit securely over the posts and carry a top rail where specified. Posts shall have a total length of not less than the depth of the concrete footing, as specified herein, plus the length required above ground. Where no top rail is required, pipe posts shall be fitted with suitable caps. Caps will not be required for "C" or "H" section posts.

Top rails shall be furnished in random lengths of approximately 20 feet (6m) where required.

Barbed wire shall be installed on the fence only when specifically required by the Plans or Special Provisions (Technical Specifications). When required, it shall be installed on extension arms of a type specified under 206-6.6.

The existing 8-foot-tall barbed wire chain link fence shall be replaced in kind as needed. Chain link fabric to be replaced in kind shall be galvanized 9 gage with 2-inch mesh (refer to section 206-6.3.1 of Greenbook). Posts to be replaced in kind shall be galvanized round steel Schedule 40 pipe. Barbed wire to be replaced in kind shall conform to section 206-6.7 of Greenbook. There shall be galvanized top rails forming a continuous rail along top of

the chain link fabric, 7-gage galvanized tension wire along the bottom of fence fabric, and galvanized tension bars at each end post and each gate. Fence posts, barbed wire arms, gates, and all other fittings, tie wires and clips required by Greenbook construction standards section 304-3.2 shall be replaced in kind and in compliance with Greenbook section 206-6 unless otherwise noted in these Technical Specifications.

01020-3 CONSTRUCTION METHOD

Construction of substitution fencing shall be in compliance with the entirety of section 304-3 of the Greenbook.

01020-4 MEASUREMENT AND PAYMENT

Payment for new substitution fencing shall be made in in compliance with section 304-3.4 of the Greenbook, which states:

Chain link fence will be measured parallel to the ground slope along the line of the completed fence, deducting the widths of gates and openings.

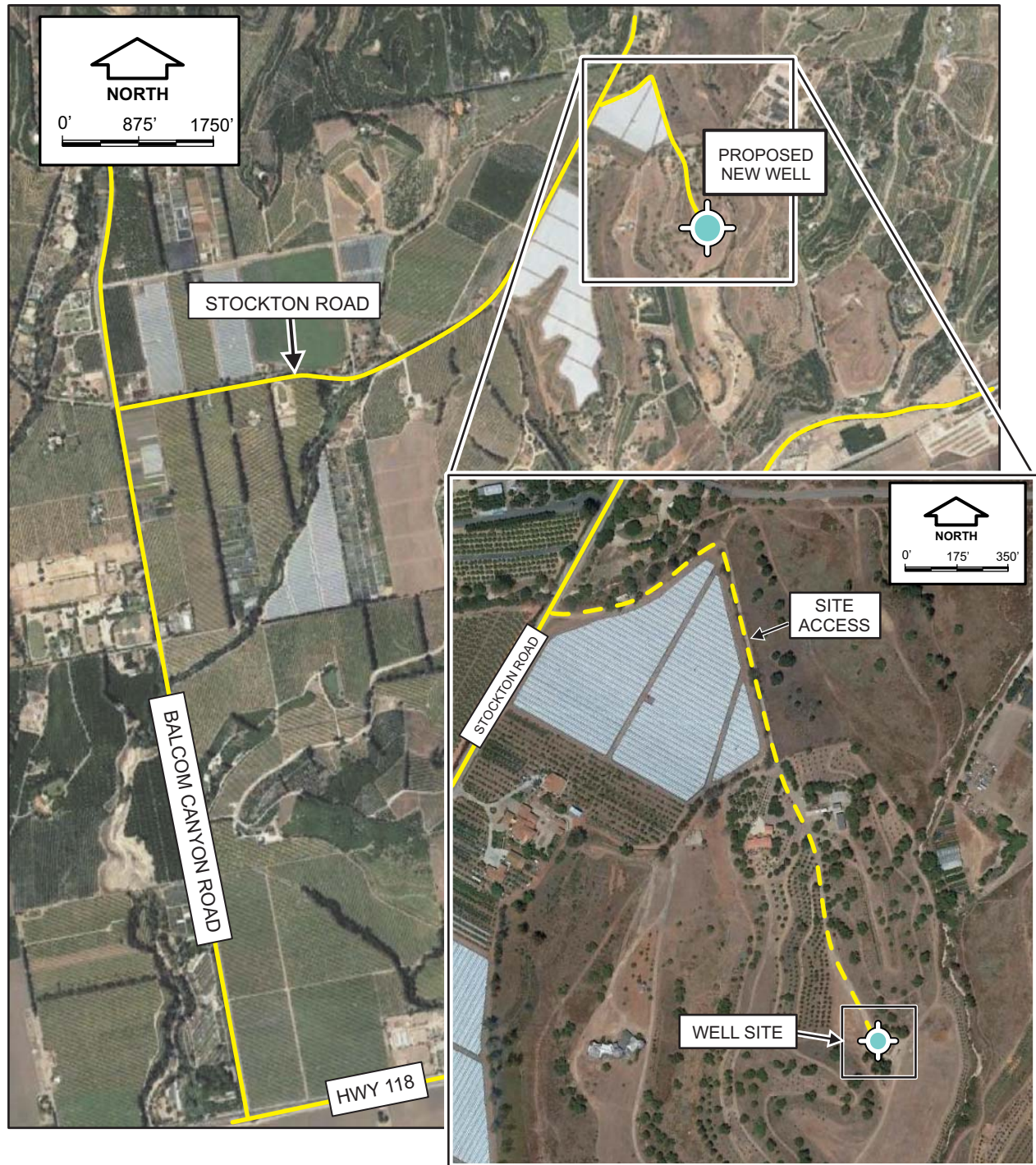
Gates will be paid for at Contract Unit Price for each size of gate required by the Plans, which price shall include full compensation for furnishing the gates together with all necessary fittings and hardware, and doing all the work involved in installing the gate complete in place. If double gates are required, each double gate will be paid for at the Contract Unit Price and such unit price shall include furnishing and installing both leaves.

Full compensation for clearing the line of the fence and disposing of the resulting material, excavating high points in the existing ground between posts, excavating and furnishing and placing concrete footings, connecting new fences to structures and existing fence as shown on Plans and any other related work shall be considered as included in the Contract Unit Price per linear foot (m) of fence and no additional compensation will be made therefore.

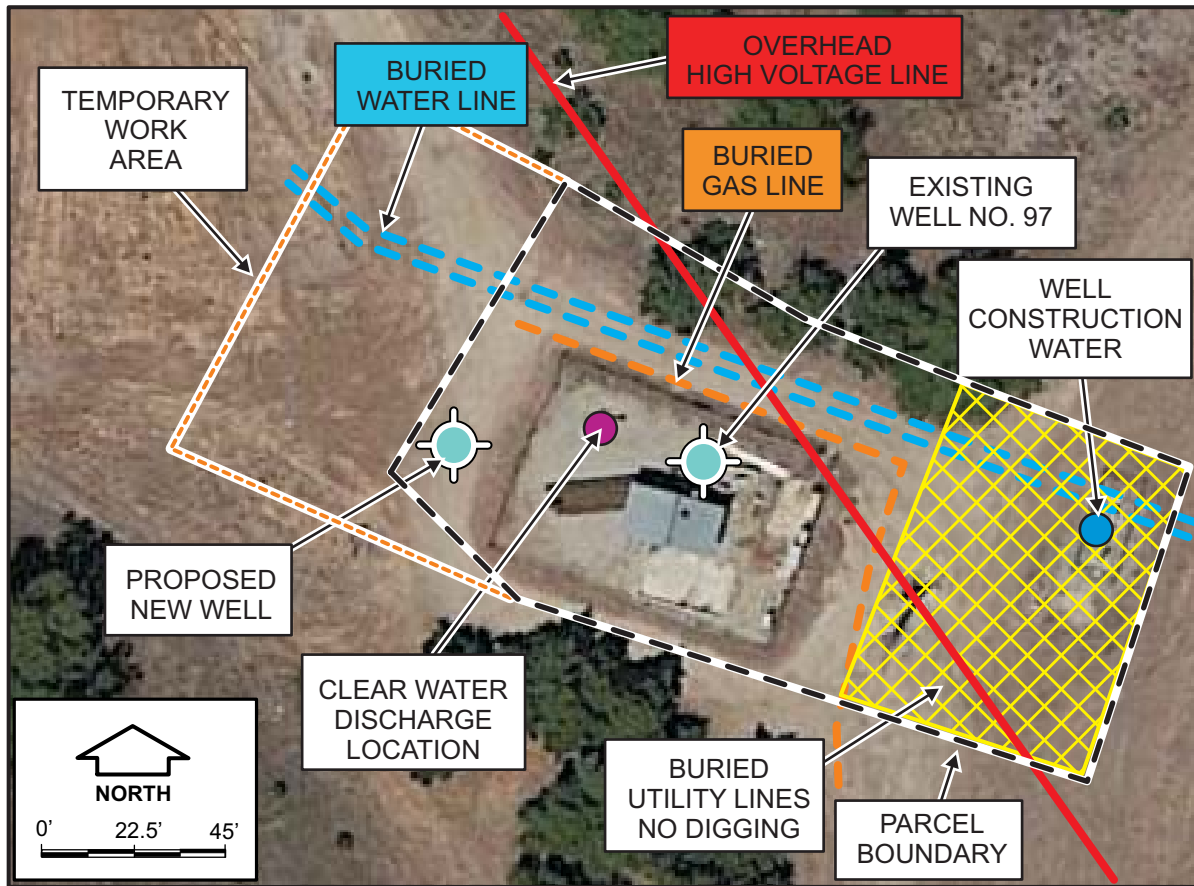
END OF SECTION

PLATES

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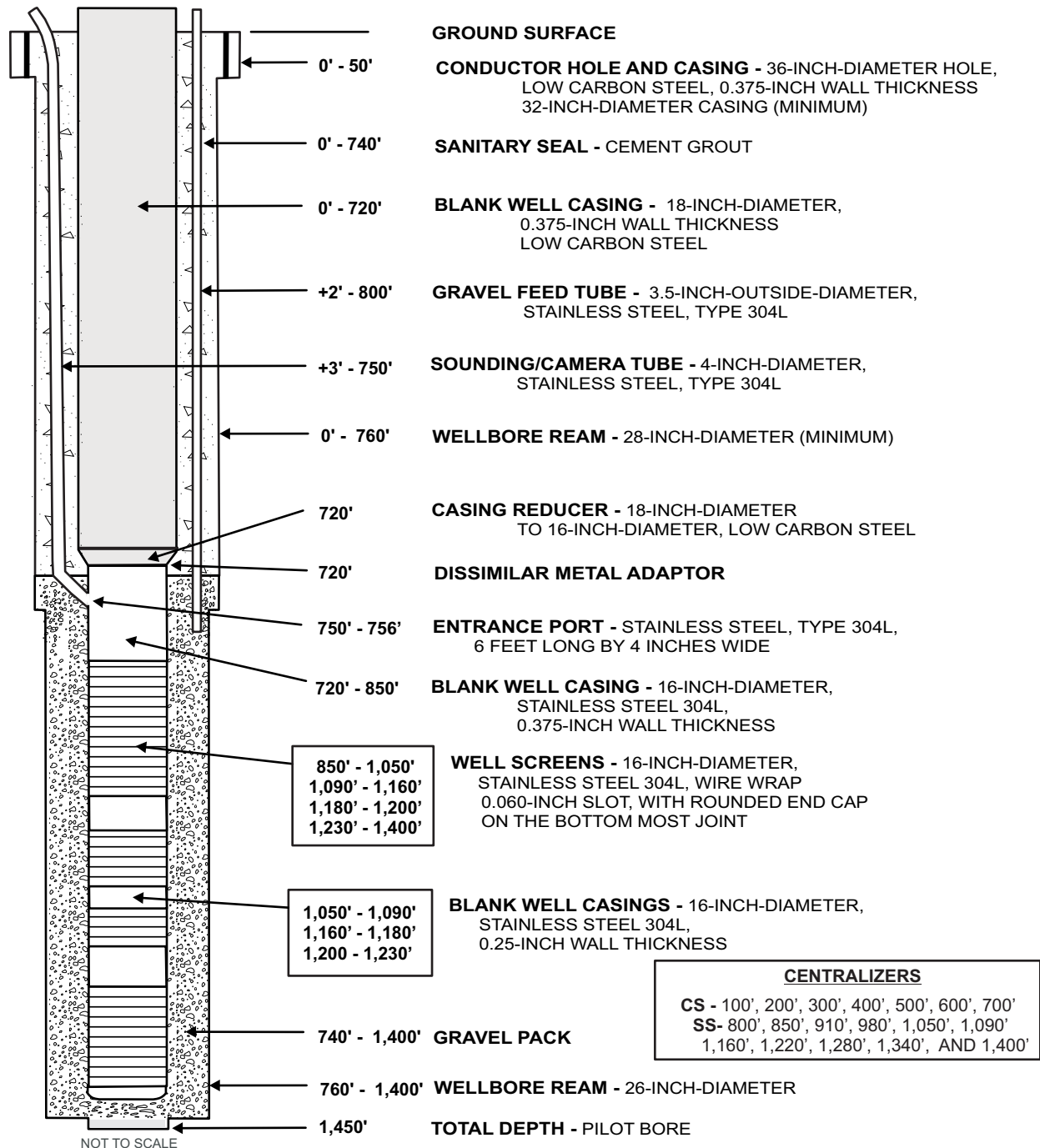
PROJECT LOCATION MAP
Re-Drill and Improvement of Well 97 Project
Ventura County Waterworks District No. 1
Moorpark, California



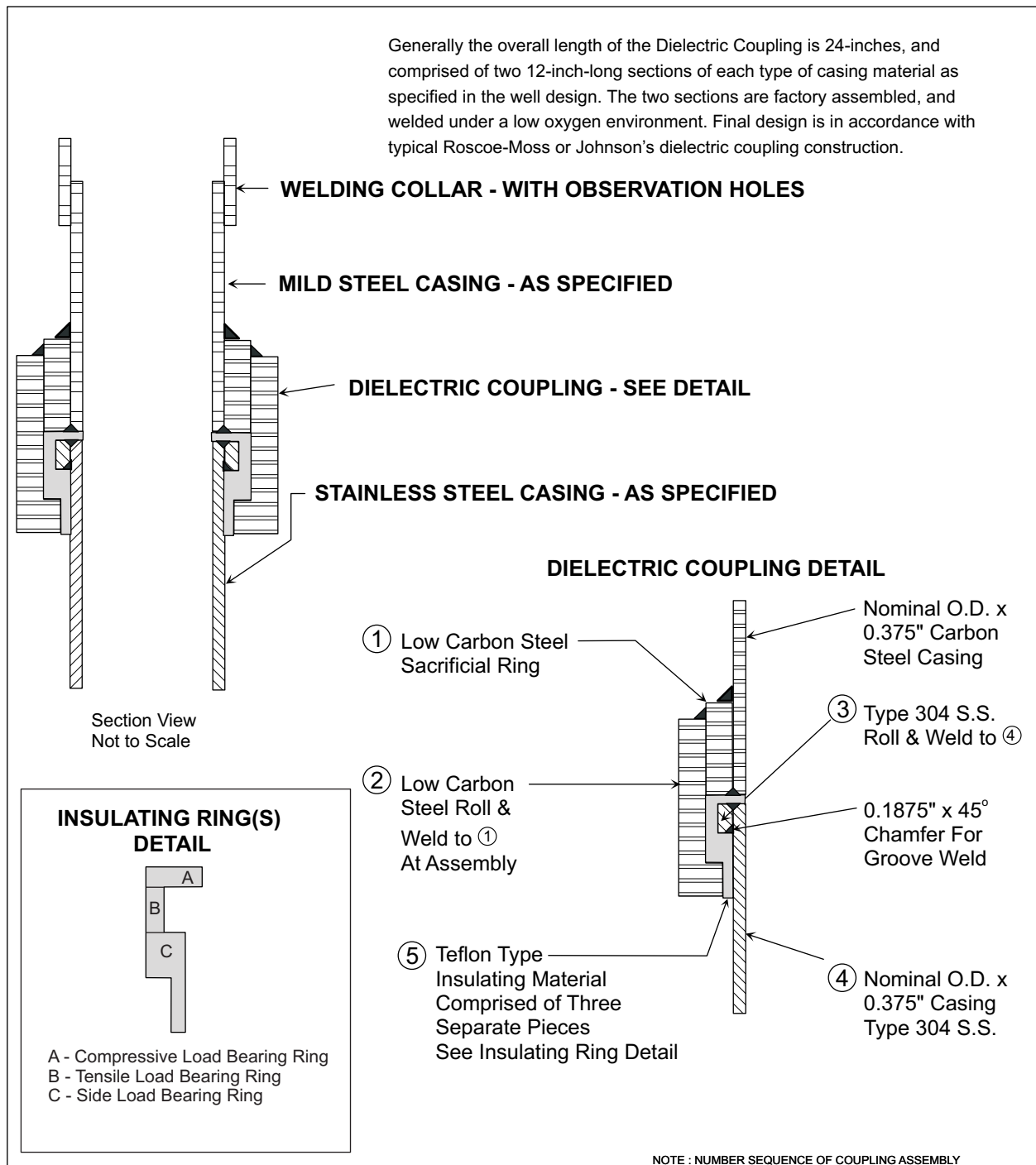
NOTE:

UTILITY LINES LOCATIONS ARE APPROXIMATE ONLY

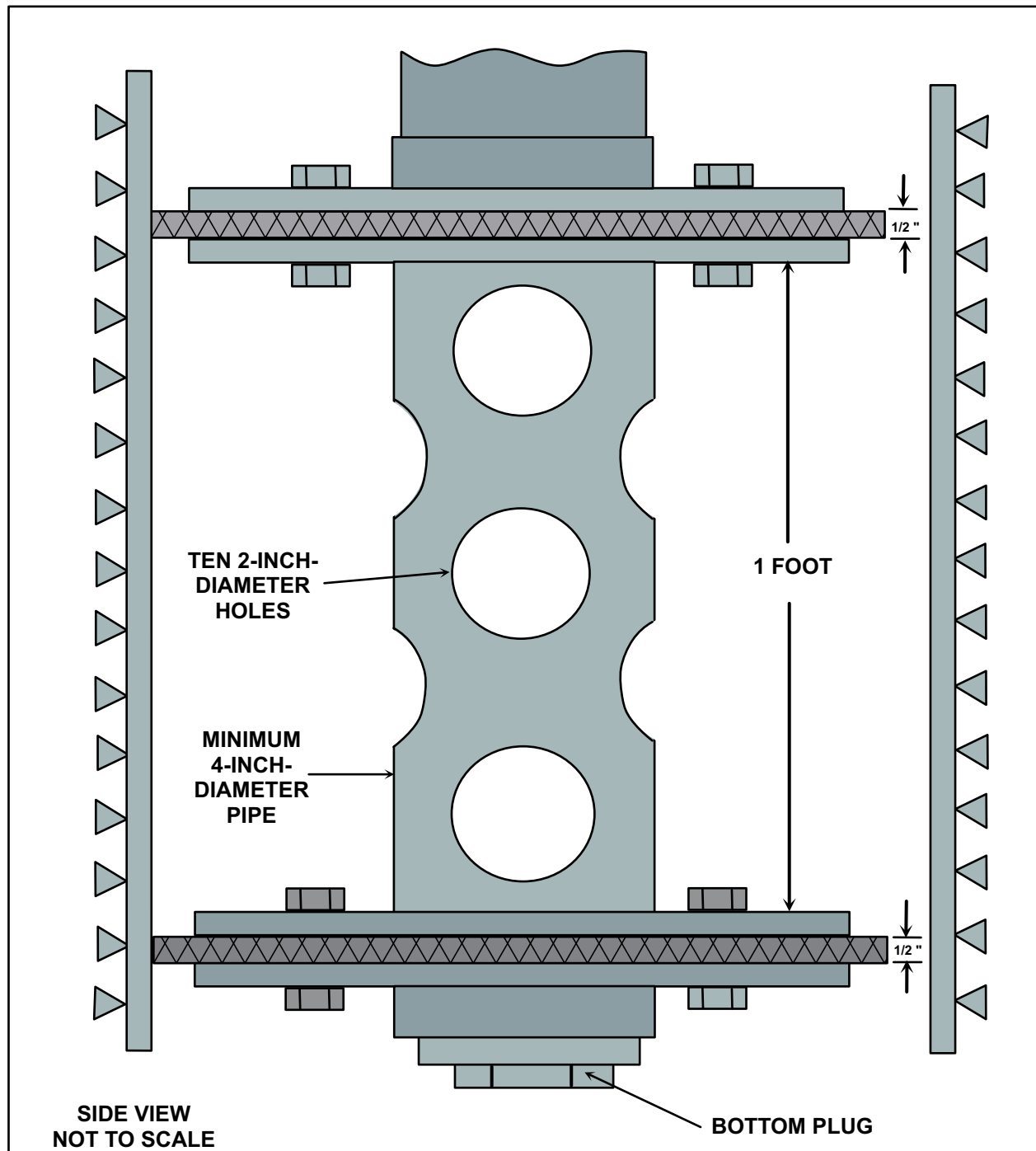
WELL SITE MAP
Re-Drill and Improvement of Well 97 Project
Ventura County Waterworks District No. 1
Moorpark, California



PRELIMINARY WELL DESIGN DRAWING
Re-Drill and Improvement of Well 97 Project
Ventura County Waterworks District No. 1
Moorpark, California

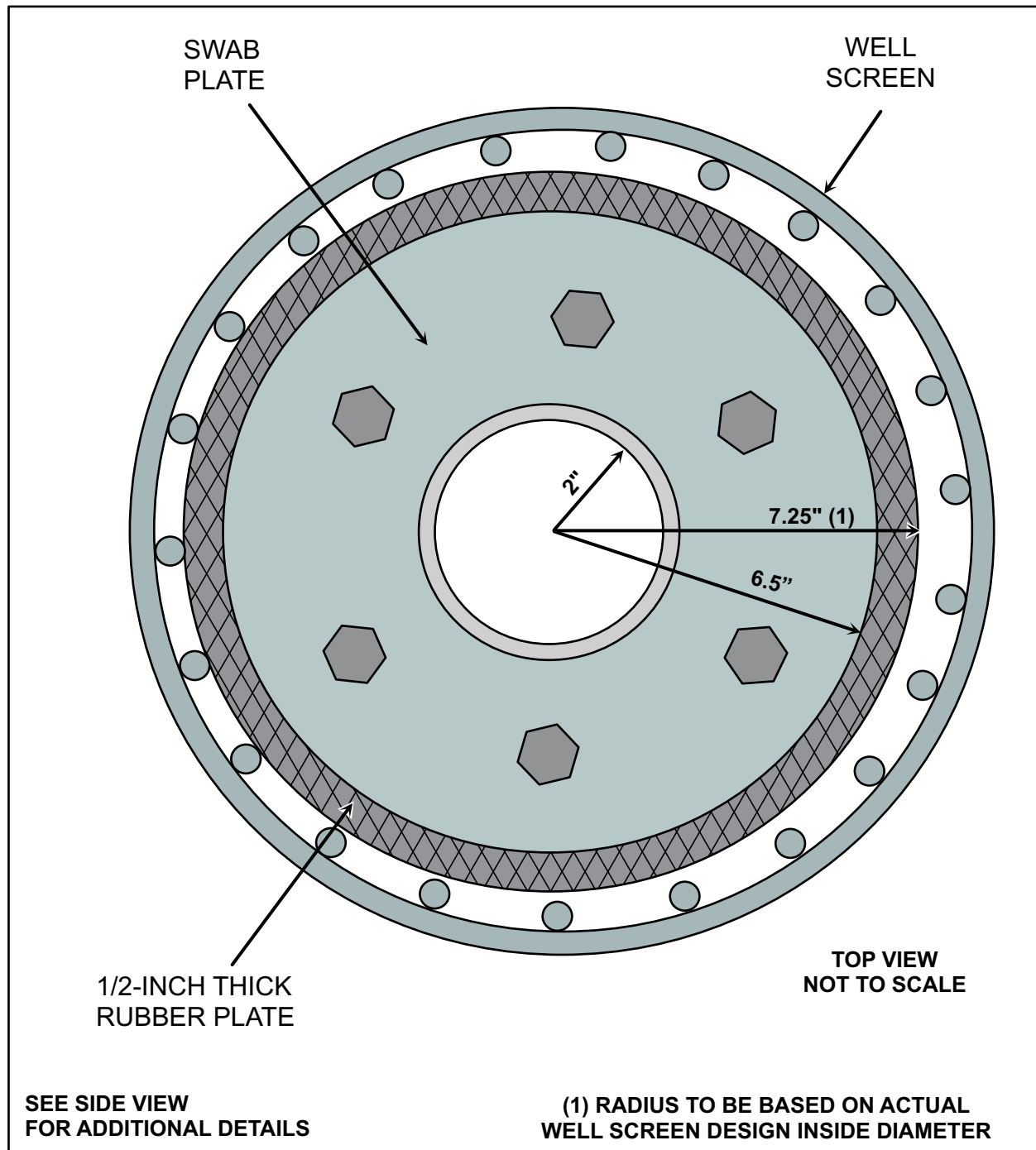


DIELECTRIC COUPLING
Re-Drill and Improvement of Well 97 Project
Ventura County Waterworks District No. 1
Moorpark, California

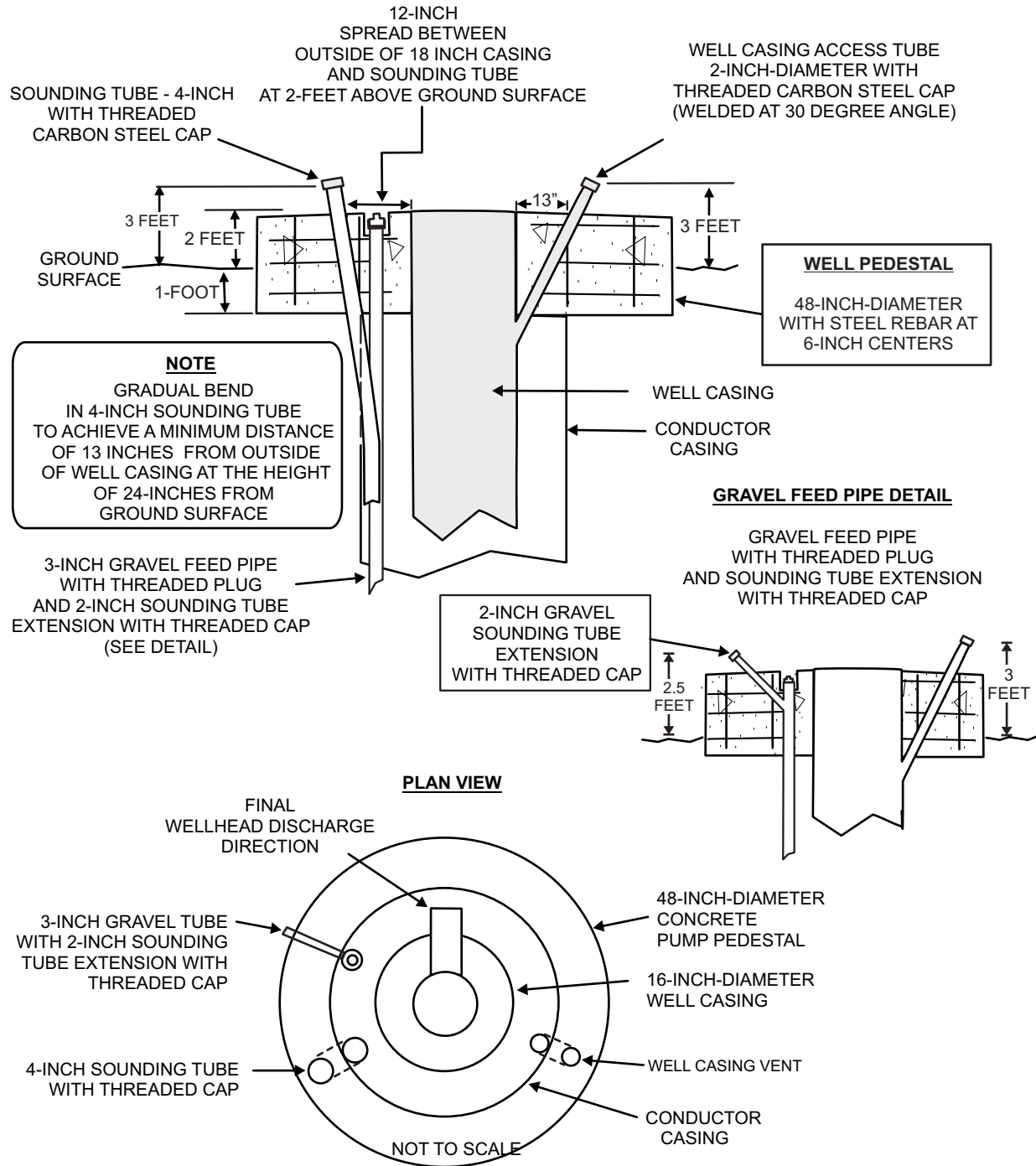


SEE TOP VIEW FOR PLATE DIAMETERS

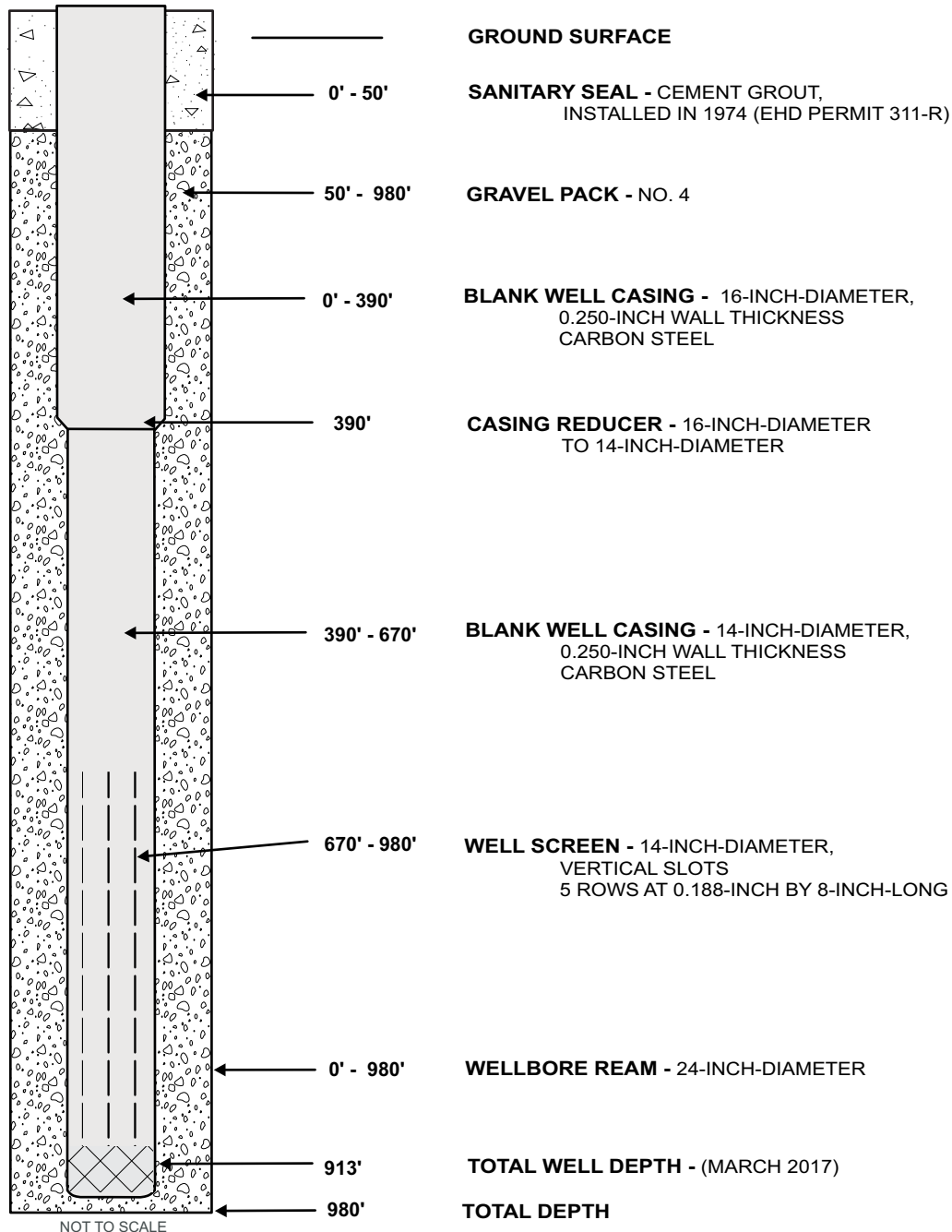
DUAL SWAB ASSEMBLY DRAWING - SIDE VIEW
Re-Drill and Improvement of Well 97 Project
Ventura County Waterworks District No. 1
Moorpark, California



DUAL SWAB ASSEMBLY DRAWING - TOP VIEW
Re-Drill and Improvement of Well 97 Project
Ventura County Waterworks District No. 1
Moorpark, California



PRELIMINARY WELLHEAD CONSTRUCTION DRAWING
Re-Drill and Improvement of Well 97 Project
Ventura County Waterworks District No. 1
Moorpark, California



WELL NO. 97 CONSTRUCTION RECORD DRAWING
Re-Drill and Improvement of Well 97 Project
Ventura County Waterworks District No. 1
Moorpark, California

ATTACHMENT A
SWN 3N/20W-35R02-R04
ELECTRIC LOG

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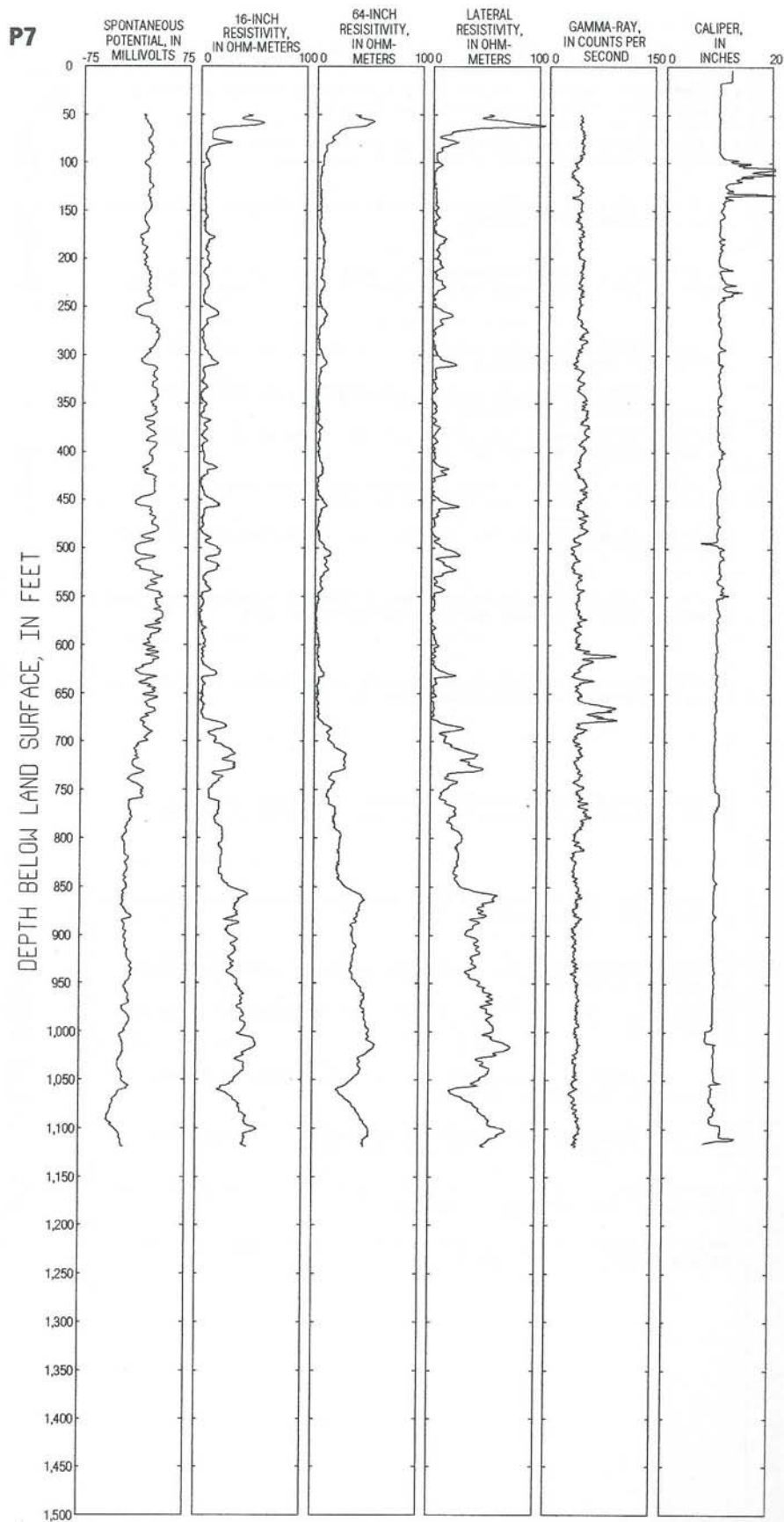


FIGURE 22. Geophysical logs, stratigraphic column, and well-construction diagram for multiple-well monitoring site P7 (3N/20W-35R2, 3, 4).

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ATTACHMENT B
VENTURA COUNTY NOISE ORDINANCE

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ORDINANCE NO. 4124

AN ORDINANCE OF THE BOARD OF SUPERVISORS
OF THE COUNTY OF VENTURA REGARDING LOUD
AND RAUCOUS NIGHTTIME NOISE IN RESIDENTIAL ZONES

The Board of Supervisors of the County of Ventura ordains as follows:

Section 1. Article 11 is hereby added to Chapter 2, Division 6 of the Ventura County Ordinance Code as follows:

ARTICLE 11

LOUD OR RAUCOUS NIGHTTIME NOISE IN RESIDENTIAL ZONES

Sec. 6299-1 - Loud or Raucous Noise Prohibition

No person shall create within any residential zone of the County of Ventura any loud or raucous noise which is audible to the human ear during the hours of 9 p.m. to 7 a.m. of the following day, at a distance of 50 feet from the property line of the noise source or 50 feet from any such noise source if the noise source is in a public right-of-way.

Sec. 6299-2 - Definitions

For purposes of this Article, the following definitions shall apply:

- a. "Person" means any individual, association, firm, organization, partnership, corporation or other entity, but does not include any government entity or public utility.
- b. "Residential Zone" means any areas within the unincorporated portion of Ventura County that are zoned:
 1. Single-Family Residential (R-1)
 2. Two-Family Residential (R-2)

3. Residential Planned Development (R-P-D)
4. Single Family Estate (R-O)
5. Rural Exclusive (R-E)
6. Coastal Single-Family Residential (C-R-1)
7. Coastal Two-Family Residential (C-R-2)
8. Coastal Residential Planned Development (C-R-P-D), or
9. Coastal Rural Exclusive (C-R-E),

as provided in Chapter 1 and Chapter 1.1 of Division 8 of this Code.

- c. "Loud or raucous noise" means sounds from: 1) the use or operation of any radio, musical instrument, phonograph, television receiver, video cassette recorder, or any machine or device for the production, reproduction or amplification of the human voice or any other sound or 2) the use or operation of any lawn mower, backpack blower, blower, lawn edger, riding tractor or other mechanical or electrical device or hand tool.

Sec. 6299-3 - Penalty

It is unlawful for any person in the unincorporated areas of Ventura County to do any of the acts prohibited by this Article. Any person who violates any of the provisions of this Article shall be guilty of a misdemeanor/infraction and, upon conviction thereof, shall be punished in accordance with Section 13-2 of the Ventura County Ordinance Code.

Sec. 6299-4 - Severability

If any provision or clause of the Article or the application thereof to any person or circumstance is held to be unconstitutional or otherwise invalid by a final judgment of

any court of competent jurisdiction, such invalidity shall not effect any other provisions, clauses or application, and to this end, the provisions and clauses of this Article are declared to be severable.

PASSED AND ADOPTED this 10th day of December, 1996, by the following vote:

AYES: SUPERVISORS

Lacey, Kildee, Mi Kels,
Flynn and Schillo.

NOES:

None.

ABSENT:

None.

Frank Schillo

CHAIR, BOARD OF SUPERVISORS

ATTEST:

RICHARD D. DEAN, County Clerk,
County of Ventura, State of
California, and ex officio Clerk of
the Board of Supervisors thereof.

By

Roberta Rodriguez
Deputy Clerk



Threshold*	$L_{eq}(1hr)$	L_{max}^{**}
Daytime	55 dBA	75 dBA
Evening	50 dBA	70 dBA
Nighttime	45 dBA	65 dBA

*The daytime threshold covers 7:00 a.m. to 7:00 p.m. Monday through Friday, and from 9:00 a.m. to 7:00 p.m. on weekends and holidays. The evening threshold covers 7:00 p.m. to 10:00 p.m. on all days. The nighttime threshold covers 10:00 p.m. to 7:00 a.m. Monday through Friday, and from 10:00 p.m. to 9:00 a.m. on weekends and holidays.

**The L_{max} threshold represents a limit that cannot be exceeded more than 8 times per hour during daytime, 6 times per hour during evening, and 4 times per hour during nighttime. Unless the noise source is highly impulsive (e.g., pile driving, blasting, etc.), a project that meets the $L_{eq}(1hr)$ threshold will usually meet the L_{max} threshold as well. Therefore, for this NIA, compliance with the $L_{eq}(1hr)$ threshold also implies compliance with the L_{max} threshold.

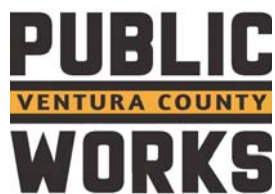
(4) Noise generators, proposed to be located near any noise sensitive use, shall incorporate noise control measures so that ongoing outdoor noise levels received by the noise sensitive receptor, measured at the exterior wall of the building, does not exceed any of the following standards:

- $L_{eq}1H$ of 55 dB(A) or ambient noise level plus 3dB(A), whichever is greater, during any hour from 6:00 a.m. to 7:00 p.m.
- $L_{eq}1H$ of 50 dB(A) or ambient noise level plus 3dB(A), whichever is greater, during any hour from 7:00 p.m. to 10:00 p.m.
- $L_{eq}1H$ of 45 dB(A) or ambient noise level plus 3dB(A), whichever is greater, during any hour from 10:00 p.m. to 6:00 a.m.

Source: Ventura County General Plan – Goals, Policies & Programs Section, XXXX

ATTACHMENT C
PRELIMINARY WELL DESTRUCTION
REQUIREMENTS FOR WELL NO. 97
SWN 03N/20W-35R01

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COUNTY OF VENTURA
PUBLIC WORKS AGENCY
MEMORANDUM

DATE: 10/01/2020
TO: Hopkins Groundwater Consultants, Inc.
E-Mail: lhengehold.hgc@earthlink.net
FROM: Barbara Council
SUBJECT: ABANDONED WELL, APN 503-0-030-075

Dear Louie,

SWN 03N20W35R01S is located on above property. Destruction of this well requires a well permit application and payment of \$1,100.00 permit fee. Preliminary destruction conditions are summarized below.

- 1) The well shall be back-filled with clean sand or gravel to a depth of 50 ft; or debris shall be removed to a depth of 50 ft.
- 2) There is no well log but it appears that an annular seal was placed under Permit 0311. No perforation of casing is required.
- 3) Neat cement sealing material shall be placed from a depth of 50 feet to within 5 ft. of ground surface by means of a grout pipe placed to within 2 feet of base of sealing zone.
- 4) After sealing, casing shall be removed at a depth of 5 feet below ground surface and the work area backfilled with clean fill or native material.

As noted, these are preliminary destruction conditions. The permit, when issued, will list complete and confirmed conditions. All work must be done by a licensed well contractor registered to work in Ventura County. A county inspector must be present during perforation and placement of sealing material. **This supercedes any previous preliminary conditions.**

If you have any questions, please feel free to contact me.

Regards,

Barbara Council

Ph: (805) 654-2024

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ATTACHMENT D
Fox Canyon Groundwater Management Agency
Permit and Conditions

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FOX CANYON GROUNDWATER MANAGEMENT AGENCY

A STATE OF CALIFORNIA WATER AGENCY

800 S. Victoria Avenue, Ventura, CA. 93009-1610

Phone (805) 645-1372 or 654-2014 Fax 654-3350

Websites: <http://fcgma.org> or <https://fcgmaonline.org>

WATER WELL PERMIT APPLICATION

(NO-FEE REQUIRED)

GENERAL INFORMATION

Fox Canyon Groundwater Management Agency (FCGMA) Ordinance Code requires that before drilling a new water well within the boundaries of the FCGMA, a completed water well permit application must be submitted. **THIS IS A NO-FEE PERMIT**. In addition, a ***FEE-BASED*** Ventura County Watershed Protection District Water Well Permit must be approved and secured ***prior*** to any construction.

All groundwater extraction facilities within the boundaries of the Agency shall be registered with the Agency. All new extraction facilities constructed within the Agency Boundary shall obtain a no-fee permit from the Agency prior to the issuance of a Well Permit by the Ventura County Watershed Protection District. No extraction facility may be operated or otherwise utilized so as to extract groundwater within the boundaries of the Agency, or in the Expansion Area unless that facility is registered with the Agency, metered and permitted, if required and all extractions reported to the Agency as required.

Copies of the current FCGMA Ordinance Code and other pertinent information regarding the FCGMA can be obtained by calling (805) 645-1372 or (805) 654-2014 or by visiting our website at <http://fcgma.org>.

INSTRUCTIONS

(Fill in the requested information and provide an Assessor's Parcel Map as described under Item D.)

A. OWNERSHIP

Owner's Name: Ventura County Waterworks District No. 1

Operator's Name (if different from Owner): _____

Mailing Address: 6767 Spring Rd, Moorpark, CA, 93020

District Main Line:

Phone No(s): 805-378-3000 FAX No: NA Cell No. NA

B. TYPE OF USE

If use of water is for irrigation, check box 1 and describe proposed crops and acreage. If water is for municipal, industrial or domestic uses, check box 2 and describe number of people served, etc.

1. ☐ **Irrigation**

List types of crops and corresponding acreage that will be irrigated:

Crop Type

Acreage

_____	_____
_____	_____
_____	_____

Describe irrigation system: list size and approximate length of pipelines and type of irrigation system, i.e., sprinkler, drip, furrow, etc.:

2. ☒ **Municipal, Industrial or Domestic**

List number of people and/or number of housing units served. If industrial use is proposed, describe type of industrial use: _____

New well will provide potable water to approximately 1,000 service connections. _____

Describe water system: list size and length of pipelines, size of storage tanks, etc.: _____

New well will flow into 10" water main. New well will provide potable water to District through its 744 Pressure Zone distribution network and its 0.42 MG Grimes Reservoir. _____

C. PROPOSED EXTRACTION

Show calculations for anticipated annual pumping in acre-feet per year (AF/yr): _____

Theoretical Max Well Rate (GPD) x (1 AF/yr / 893 GPD) x 33% (~ 1/3) Uptime = 2,160,000 / 893 x 33% = 800 AF/yr _____

D. LOCATION OF PROPOSED USE

On a County Assessor's Parcel Map accurately plot and outline the location(s) of proposed groundwater use. Show location of proposed water well. Give dimensions of area(s) to be irrigated. Indicate crop type for each area. For M & I or other uses, show location of water distribution system, type of water use and location of structures to be served. Attach the Assessor's Parcel Map to this application. *(No permit applications will be approved without an adequate attached parcel map.)* _____

Attached map of water distribution system with the location of new well marked. New well will provide potable water for domestic, agricultural, and fire flow purposes. Copy of Assessor's Parcel Map is attached. _____

E. APPLICANT'S SIGNATURE AND DATE

Sign, date and submit this application to the Fox Canyon Groundwater Management Agency, c/o Watershed Protection District, Water and Environmental Resources Division, Groundwater Section, 800 South Victoria Avenue, L #1610, Ventura, CA 93009-1610.

Applicant's Signature: _____

Date 1/21/2022

DISPOSITION OF FCGMA APPLICATION

(For office use only)

- ☐ Approved
☒ Approved with conditions
☐ Denied

State Well No. _____

GMA Permit No. 0296

County Permit No. _____

Conditions/Reason for Denial: Conditions are listed in the March 22, 2022 letter transmitting approval. _____

By: _____

Date 3/22/22

This application is a permit when signed by the FCGMA Executive Officer or his/her designated appointee. _____

Date 3/22/22

Jeff Pratt, P.E., FCGMA Executive Officer

FOX CANYON GROUNDWATER MANAGEMENT AGENCY

A State of California Water Agency



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EXECUTIVE OFFICER

Jeff Pratt, P.E.

March 22, 2022

Ventura County Waterworks District No. 1
Attn: Mr. Homer Arredondo
6767 Spring Road
Moorpark, CA 93020

Subject: Conditional Approval Of Well Permit Application For APN 503-0-030-075, FCGMA
Account: WWD-1; FCGMA Permit No. 0296

Dear Mr. Arredondo:

Based on the submitted application and supporting documentation, Ventura County Waterworks District No. 1 (VCWWD-1) proposes to replace existing State Well Number (SWN) 03N20W35R01S with an initial allocation of 446.981-AFY with a new well. The proposed replacement well will be located on the same parcel as the existing well, identified as Assessor's Parcel Number (APN) 503-0-030-075. Both wells are in the central portion of the Las Posas Valley Basin (LPVB), East Las Posas Management Area (ELPMA). The proposed well will serve in the same capacity as the existing well which has provided groundwater supply for municipal use.

Records indicate that the closest existing active well is approximately 1,620 feet northeast of the proposed well location. The Agency did not review the application for potential well interference.

We have conditionally approved your well permit application as described below. Conditions of well permit approval are:

1. Groundwater extractions from the well must be reported under the same existing well group as the well being replaced.
2. The well identified as SWN 03N20W35R01S must be destroyed under Ventura County permit within 1 year of the completion of drilling activities for the new well.
3. The groundwater well must be registered with the FCGMA within 30 days of completion of drilling activities.
4. Operation of the well must comply with the FCGMA Ordinance Code including as may be amended.
5. No groundwater is to be exported outside of the FCGMA boundary.
6. Groundwater extractions from the extraction facility shall be measured with a calibrated flowmeter and reported monthly via advanced metering infrastructure (AMI).
7. The well shall be constructed with a sounding tube having a minimum diameter of 1.5 inches.
8. Allocation systems are subject to change. The current groundwater extraction allocation is granted under the *Ordinance to Establish an Extraction Allocation System for the Las Posas Valley Groundwater Basin*. The initial allocation for Ventura County Waterworks District No. 1 is 2,512.074-AFY. Exceeding allocation will result in imposition of surcharges.
9. The applicant should file a Transfer of Allocation with the FCGMA from the well to be destroyed to the new replacement well.

March 22, 2022

Page 2 of 2

If you have any questions, please call me at (805) 654-2954.

Sincerely,

A handwritten signature in blue ink, appearing to read "James Maxwell".

James Maxwell, PG, CEG
Groundwater Specialist

Attachments: (1) Groundwater Extraction Facility Registration Form
 (2) Flowmeter Update Form

Cc: Jeff Pratt, Executive Officer