

ARVIN COMMUNITY SERVICES DISTRICT

Kern County, California

CONTRACT DOCUMENTS

HAVEN DRIVE STREET IMPROVEMENTS WATER LINE RELOCATION PROJECT

BID SET

APRIL 2025



DEE JASPAR & ASSOCIATES, INC.
CONSULTING CIVIL ENGINEERS

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ARVIN COMMUNITY SERVICES DISTRICT
HAVEN DRIVE STREET IMPROVEMENTS
WATER LINE RELOCATION PROJECT

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ARVIN COMMUNITY SERVICES DISTRICT

**HAVEN DRIVE STREET IMPROVEMENTS
WATER LINE RELOCATION PROJECT**

APRIL 2025

**ARVIN COMMUNITY SERVICES DISTRICT
HAVEN DRIVE STREET IMPROVEMENTS
WATER LINE RELOCATION PROJECT**

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ARVIN COMMUNITY SERVICES DISTRICT

**HAVEN DRIVE STREET IMPROVEMENTS
WATER LINE RELOCATION PROJECT**

SECTION A

NOTICE INVITING SEALED PROPOSALS (BIDS)

NOTICE IS HEREBY GIVEN that the Arvin Community Services District (DISTRICT) invites and will receive sealed proposals (bids) up to the hour of **3:00 pm, on Wednesday, May 14th, 2025** for the furnishing to said DISTRICT of all transportation, labor, materials, tools, equipment, services, permits, utilities, and other items necessary to construct said work. At said time, said proposals will be publicly opened and read aloud at the office of the DISTRICT, for the Haven Drive Street Improvements – Water Line Relocation Project.

Bids shall conform to and be responsive to the Contract Documents for the work. Copies of the Contract Documents are on file and may be acquired at the office of the DISTRICT.

Description of Work:

The work includes all labor, materials, equipment and the performance of all operations necessary to construct the water line relocation project along Haven Drive including all utility locating, trenching, backfill, pavement repair, pipelines, valves, hydrants, services, fittings, and appurtenances in accordance with the Drawings and Specifications.

Each bid shall be submitted on a form furnished as part of the Contract Documents and must be accompanied by cash, a cashier's check, a certified check, or a BIDDER'S bond executed by an admitted California surety, or substitute pursuant to Section 995.710 of the Code of Civil Procedure, in an amount not less than ten percent (10%) of the amount of the bid, made payable to the order of or for the benefit of the DISTRICT. The security of unsuccessful BIDDER'S will be returned by the DISTRICT no later than sixty (60) days following the date of award. Each bid shall be sealed and delivered to the DISTRICT at the location designated in this notice for the opening of proposals at or before the time provided in this notice. The check or bond or substitute shall be given as security that the BIDDER will enter into a contract with the DISTRICT and furnish the required payment and performance bonds, or substitutes in lieu thereof, and certificates of insurance and endorsements if awarded the work, and will be declared forfeited if the BIDDER refuses to timely enter into said Contract or furnish the required bonds or substitutes, or certificates of insurance and endorsements if his bid is accepted.

The DISTRICT has obtained from the Director of the California Department of Industrial Relations a determination of the general prevailing rate of per diem wages and the general prevailing rate for legal holiday and overtime work in the locality in which said work is to be performed for each craft, classification, or type of worker needed. Not less than the determined rates shall be paid to all workers employed in the performance of the Contract. Such rates of wages can be found on the Department of Industrial Relations website located at <http://www.dir.ca.gov/dlsr>.

Pursuant to Public Contract Code Section 22300, equivalent securities may be substituted for monies withheld to ensure performance of the Contract. The DISTRICT reserves the right to solely determine the adequacy of the securities being proposed by the BIDDER and the value of those securities. The DISTRICT shall also be entitled to charge an administrative fee, as determined by DISTRICT in its sole discretion, for substituting equivalent securities for retention amounts. The DISTRICT'S decisions with respect to the administration of the provisions of Section 22300 shall be final and shall include, but not be limited to, determinations of what securities are equivalent, the value of the securities, the negotiability of the securities, the costs of administration and the determination of whether or not the administration should be accomplished by an independent agency or by the DISTRICT. The

DISTRICT shall be entitled, at any time, to request the deposit of additional securities of a value designated by DISTRICT, in DISTRICT'S sole discretion, to satisfy this requirement. If the DISTRICT does not receive satisfactory securities within twelve (12) consecutive days of the date of the written request, DISTRICT shall be entitled to withhold amounts due BIDDER until securities of satisfactory value to DISTRICT have been received.

The CONTRACTOR'S license classification(s) required for this project is as follows:

California General Engineering Contractor's License – Class "A";

These classifications are provided for information purposes only. The DISTRICT does not warrant that all classifications required for the project are listed.

It is the DISTRICT'S intent that "Plans", as used in Public Contract Code Section 3300, is defined as the construction contract documents, which include both the Drawings and the Specifications.

The DISTRICT reserves the right to reject any and all bids, and to waive any and all irregularities in any bid.

Sealed proposals shall include: Bid Form (Pages B-10 through B-13); Non-Collusion Affidavit (Page B-14); Bid Bond (Pages B-15 through B-16); Listing of Similar Projects in the Last Ten Years (Pages B-17 through B-19); and copies of any addenda issued.

***Each Bidder must attend a mandatory prebidder's job walk. The Bidders may choose one of two job walks to attend. The first job walk is scheduled for 10:00 am on Thursday, May 1st, 2025 and the second job walk is scheduled for 10:00 am on Thursday, May 8th, 2025. The designated meeting area is at the intersection of Haven Drive and Meyer Street in Arvin, California. If necessary, contact Curtis Skaggs with Dee Jasper & Associates, Inc. at (661) 393-4796 for directions.**

(END OF SECTION)

SECTION B
BID DOCUMENTS

ARVIN COMMUNITY SERVICES DISTRICT
HAVEN DRIVE STREET IMPROVEMENTS
WATER LINE RELOCATION PROJECT

APRIL 2025

ARVIN COMMUNITY SERVICES DISTRICT
HAVEN DRIVE STREET IMPROVEMENTS
WATER LINE RELOCATION PROJECT

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**ARVIN COMMUNITY SERVICES DISTRICT
HAVEN DRIVE STREET IMPROVEMENTS
WATER LINE RELOCATION PROJECT**

SECTION B

BID DOCUMENTS

1.0 BIDDING INFORMATION

1.1 DEFINITIONS

Whenever the following terms occur in the contract documents, their meaning is as follows:

DISTRICT	Arvin Community Services District 309 Campus Drive Arvin, CA 93203
GOVERNING BODY	Board of Directors
PROJECT MANAGER	Curtis Skaggs
ENGINEER	Dee Jaspar & Associates, Inc. 2730 Unicorn Road, Building A Bakersfield, CA 93308
CONSTRUCTION ADMINISTRATION	Dee Jaspar & Associates, Inc. 2730 Unicorn Road, Building A Bakersfield, CA 93308

1.2 TERMS

Command type sentences used in the contract documents refer to and are directed to the CONTRACTOR.

1.3 AUTHORITY FOR THE WORK

The drawings, specifications, and other contract documents for the work were approved and adopted by the Governing Body of the DISTRICT.

1.4 MARKING AND ADDRESSING BID ENVELOPE

Seal the bid in an envelope addressed to the Owner and marked:

BID FOR
ARVIN COMMUNITY SERVICES DISTRICT
HAVEN DRIVE STREET IMPROVEMENTS
WATER LINE RELOCATION PROJECT

1.5 INVESTIGATIONS AND REPORTS

The following reports which have been prepared for the DISTRICT are available for review at the office of the ENGINEER:

None

1.6 AWARD OF CONTRACT OR REJECTION OF BIDS

Within a period of sixty (60) calendar days after the opening of bids, the Owner will accept or reject the bids.

1.7 TIME FOR COMPLETION AND FORFEITURE DUE TO DELAY

Project work will be substantially completed within NINETY (90) CONSECUTIVE CALENDAR DAYS, from and after the date of the Notice to Proceed.

Pursuant to Government Code 53069.85, forfeiture for each day completion is delayed beyond the time allowed will be at the rate of \$500 PER DAY.

1.8 TIME TO FURNISH BONDS, INSURANCE AND CONTRACT

The Bidder hereby agrees to execute the Agreement, furnish the required bonds, insurance, and Contract within FIFTEEN (15) CALENDAR DAYS from and after the date of Award of the Contract, or within such additional time as allowed by DISTRICT. Furthermore, the Contractor shall submit certification forms as noted under Section A "Notice Inviting Sealed Proposals (Bids)".

(END OF SECTION)

2.0 CORRELATION AND INTENT OF DOCUMENTS

2.1 INTENT OF CONTRACT DOCUMENTS

The intent of the Contract Documents is to prescribe the details for the construction and completion of the work which the Contractor undertakes to perform in accordance with the terms of the Contract Documents and to require a complete and finished piece of work. Where the Plans and Specifications describe portions of the work in general terms, but not in complete detail, it is understood that only the best general practice is to prevail and that only materials and workmanship of the first quality are to be used. Unless otherwise specified, the Contractor shall furnish all labor, materials, tools, equipment and incidentals, and do all the work involved in executing the Contract in a satisfactory and competent manner.

The conditions set forth in the Contract Documents are complementary, and what is called for in any one (1) shall be as binding as if called for in all.

(END OF SECTION)

3.0 BID REQUIREMENTS AND CONDITIONS

3.1 SECURING DOCUMENTS

See Contract Documents Section titled, "Notice Inviting Sealed Proposals ("Bids") for Information.

3.2 BID INSTRUCTIONS

Bids, to receive consideration, shall be made in accordance with these instructions:

Bids shall be made only upon the forms provided in the Contract Documents, with all items properly filled out. Non-erasable permanent ink shall be used; numbers shall be stated both in writing and in figures; signatures of all persons signing shall be in long-hand; and completed forms shall be without interlineations, alterations or erasures.

All Bids submitted shall include in the lump sum and/or unit prices bid, all sales or other taxes of city, county, state or federal government of every nature in effect at the time of bidding. If the product of a unit price and an estimated quantity does not equal the extended amount quoted, the unit price shall govern, and the correct product of the unit price and the estimated quantity shall be deemed to be the amount bid. If the sum of two or more items in a bidding schedule does not equal the total amounts quoted, the individual item amounts shall govern and the correct total shall be deemed to be the amount bid.

Bids by corporations must be signed in the corporate name by a corporate officer, and the corporate seal shall be fixed by the signature. The state of incorporation shall be below the corporate name. Bids by partnerships must be signed in the partnership name and signed by a partner with title shown.

Bids shall not contain any recapitulation of the work to be done. Alternate proposals will not be considered unless specifically required by the DISTRICT. No oral, telephonic or telegraphic proposals or modifications will be considered. Bid forms shall have no blank spaces. A bid price shall be indicated for each bid item, or the word "None" entered.

Bids must be accompanied by a certified check, cashier's check or Bidder's bond, executed on the prescribed form and made payable to the DISTRICT in an amount not less than ten percent (10%) of the total amount bid. Such check or bid bond shall be given as a guarantee that the Bidder will enter into a contract if awarded the work. In case of refusal or failure to enter into the Contract, the check or bond will be retained by the DISTRICT without any proof of actual loss.

Before submitting a Bid, each Bidder shall carefully examine and read the Plans and Specifications and other parts of the Contract Documents, visit the site of the work, be fully informed as to all existing conditions and limitations, and shall include in the Bid a sum to cover the costs of all items included and necessary to perform fully the entire Contract.

Where the DISTRICT, or the ENGINEER have made investigations of surface and subsurface conditions in areas where work is to be performed under the Contract, such investigations were made only for the purpose of study and design. Where such investigations have been made, Bidders or Contractor may, upon written request, inspect the records of the ENGINEER and the DISTRICT as to such investigations subject to and upon the conditions hereinafter set forth. Such inspection of records may be made at the office of the DISTRICT.

The records of such investigations, if any, are not a part of the Contract and are made available for inspection solely for the convenience of the Bidders and Contractor. It is expressly understood and agreed by Bidder and Contractor that neither the DISTRICT nor the ENGINEER assume any responsibility whatsoever with respect to the sufficiency or accuracy of any investigations thus made, the

records thereof, or of the interpretation set forth therein or made by the ENGINEER in their use thereof and there is no representation, warranty or guarantee, either express or implied, that the conditions indicated by such investigations or records thereof are correct or representative of those existing throughout such areas or any part thereof, or that unanticipated developments may not occur or that materials other than, or in proportions different from, those indicated may not be encountered.

When a log of test borings showing a record of the data obtained by the Consulting Engineers' investigation of the subsurface conditions is included with the drawings, it is expressly understood and agreed by Bidders and Contractor that said log of test borings does not constitute a part of the Contract, it represents only the opinion of the ENGINEER as to the character of the materials encountered in the test borings, and is included with the plans only for the convenience of Bidders and its use is subject to all of the conditions and limitations set forth in this section. Water levels that may be shown on a log of test borings are valid only for the stated date of observation. The water level may change from season to season and from year to year.

It is the Bidder's responsibility to see that the Bid is received in proper form, time, and place. If any Bid is received after the scheduled closing time for receipt of Bids, it shall be returned to the Bidder unopened.

3.3 APPROXIMATE ESTIMATE

The quantities, if any, given in the Bid are approximate only, being given as a basis for the comparison of Bids, and the DISTRICT does not expressly or by implication, agree that the actual amount of work will correspond therewith, but reserves the right to increase, decrease or omit the amount of any class or portion of the work, as may be deemed necessary or advisable by the ENGINEER.

3.4 INTERPRETATION OF PLANS AND DOCUMENTS

Any explanation desired by the Bidders regarding the meaning or interpretation of any of the Contract Documents must be requested in writing, with sufficient allowance of time for receipt of reply before the time set for opening of Bids. Any such explanations or interpretations will be made in the form of Addenda to the documents and will be furnished to all Bidders who shall submit all Addenda with their Bids. Neither the ENGINEER nor any representative of the DISTRICT is authorized to give oral explanations or interpretations of Contract Documents, and a submission of a Bid constitutes agreement by the Bidder that he/she has placed no reliance on any such oral explanation or interpretation. However, the ENGINEER may, upon inquiry by Bidder, orally direct the Bidder's attention to specific provisions of the Contract Documents that cover the subject of the inquiry.

3.5 ADDENDA

Any written Addenda issued before or during the time of bidding shall become a part of the Plans, Specifications and/or other Contract Documents. Failure to sign the Bid form indicating receipt of Addenda may result in the Bid being determined to be nonresponsive.

3.6 OPENING BIDS

Bids will be publicly opened and read as set forth in the Invitation for Bids. In case only one Bid is received, such Bid may be properly opened and read publicly in the usual manner, and accepted at the option of the DISTRICT. Bidders or their representatives and other interested persons may be present at the opening and reading of Bids. Once opened, Bid documents shall be subject to the provisions of the California Public Records Act.

3.7 REJECTION OF BIDS

The DISTRICT reserves the right to waive any informality in any Bid and to reject any and all Bids.

3.8 WITHDRAWAL OF BIDS

Any Bid may be withdrawn any time prior to the time fixed for opening of Bids only by a written request filed with the DISTRICT for the withdrawal of the Bid. The request shall be executed by the Bidder or his/her duly authorized representative. The withdrawal of the Bid does not prejudice the right of the Bidder to file a new Bid prior to time of opening. No Bids may be withdrawn after opening of Bids, except pursuant to Public Contract Code Section 5101 et seq.

3.9 DISQUALIFICATION OF BIDDERS

More than one Bid Proposal from an individual, a firm or partnership, a corporation or an association under the same or different names will not be considered. Reasonable grounds for believing that any Bidder is interested in more than one Bid Proposal for the work contemplated will cause the rejection of all Bid Proposals in which such Bidder is interested. If there is reason for believing that collusion exists among the Bidders, any and all Bids may be rejected.

3.10 COMPETENCY OF BIDDERS

In accordance with the provisions of Chapter 9, Division 3 of the California Business and Professions Code and Section 3300 of the California Public Contract Code, Bidders must possess a State of California Contractor's License for Classification A which must be valid at the time of Bid, award, and completion of the Contract. All other subcontractors shall have the appropriate California Contractor's License for the work they are performing.

3.11 MATERIAL WARRANTY

Before any Contract is awarded, the Bidder may be required to furnish a complete statement of the origin, composition and manufacture of any or all materials to be used in the construction of the work, together with samples. The samples may be subjected to the tests provided for in the Plans and Specifications to determine their quality and fitness for the work.

3.12 SUBCONTRACTORS

Each Subcontractor, as defined in Public Contract Code Section 4113, which will perform work, labor or fabricate a portion of the work or improvement in excess of one-half of one percent ($\frac{1}{2}\%$) of the CONTRACTOR's total Bid price must be listed in the place provided, with name, address and indication of what class and portion of the work and percentage of Contract price will be done by each Subcontractor. All parts of Section 4100 through Section 4107, inclusive, of the Public Contract Code must be adhered to, including substitution and work not listed. Penalties for failure to comply with the foregoing sections of the Public Contract Code are set forth in sections 4110 and 4111 of the Public Contract Code. The DISTRICT specifically reserves the right to determine that any listed Subcontractor is not responsible and, if it so determines, to require substitution at no additional cost to the DISTRICT.

3.13 MODIFICATION OF BIDS

A Bidder may modify his/her Bid by written communication provided such communication is received by the DISTRICT prior to the closing time for receipt of Bids. The written communication should not reveal the Bid price but should state the addition or subtraction or other modification so that the final prices or terms will not be known by the DISTRICT until the sealed Bid is opened.

3.14 DISCREPANCIES

In the case of discrepancy between unit prices and totals, unit prices will prevail. In case of discrepancy between words and figures, words will prevail.

3.15 SERVICING AND MAINTENANCE

Each Bidder must, if requested, furnish evidence that there is an efficient service organization which regularly carries a stock of repair parts for the proposed equipment to be furnished and installed in the work and that the organization is conveniently located for prompt service.

3.16 INTENTIONALLY OMITTED

3.17 INTENTIONALLY OMITTED

3.18 WORK PERFORMED OUTSIDE OF COUNTY

Unless specified otherwise in the Special Conditions, the Bidder shall include in the Bid, all expenses associated with work related to testing, sampling and inspection for any fabrication of materials, parts and equipment required in the scope of this Contract which occurs outside the County of Kern. Quality control for said work shall be performed by a certified laboratory or inspection firm which shall be pre-approved by the ENGINEER. Any onsite shop inspection required by the DISTRICT shall be performed by the ENGINEER or his/her representative at the expense of the CONTRACTOR.

3.19 CONTRACTOR EXPERIENCE

The Bidder shall have been engaged in the business of the work specified herein for a period of at least ten (10) years. The Bidder shall submit a list with contact names and phone numbers of three (3) or more agencies, districts, or companies for whom the Bidder has constructed similar projects. The list shall show the agencies' names and addresses, and an individual who may be contacted for reference for a project of similar scope. The individuals offered as references will be contacted. Failure to submit this list or unsatisfactory responses from the references shall, in the ENGINEER's sole judgment, be grounds for a non-responsive Bid.

3.20 BID PROTESTS

Bid Protests must be filed within 48 hours of the bid opening. If the 48 hour period ends on a weekend, or state holiday, the protest must be filed by the end of the next DISTRICT business day. Late filed Bid Protests will not be considered and will be returned without further action. The failure to submit a Bid Protest shall be deemed a failure to exhaust administrative remedies. Likewise, the failure to raise an issue in a Bid Protest shall be deemed a failure to exhaust administrative remedies on that issue. If a Bid Protest is filed, the DISTRICT will investigate the protest within a reasonable time period. The DISTRICT's response to a Bid Protest is final and there will be no further action taken by the DISTRICT.

(END OF SECTION)

4.0 AWARD AND EXECUTION OF CONTRACT

4.1 AWARD OF CONTRACT

The DISTRICT reserves the right to reject any and all Bid Proposals. If a contract is awarded, it will be to the lowest responsive and responsible Bidder whose proposal complies with all the requirements prescribed and will be made within sixty (60) calendar days after the public opening of Bids. All Bids will be compared on the basis of the ENGINEER's estimate of the quantities of work to be done.

The DISTRICT reserves the right to accept or reject any and all Bids for a period of sixty (60) days after the date of opening, and to waive any informality or irregularity in any Bid. No Bid can be withdrawn during that period, except pursuant to Public Contract Code Section 5100 et seq.

4.2 RETURN OF BID GUARANTEES

All Bid Bonds will be held until the Contract has been finally executed, after which they will be returned to the respective Bidders. The Bid Security will be forfeited to the DISTRICT as liquidated damages without proof of loss if the Bid Proposal is accepted, a Contract based on that Bid Proposal awarded, and that Bidder fails to enter into the Contract in the form prescribed and submit the Performance and Payment Bonds, Insurance Certificates, and policies or endorsements required by the Contract Documents within fourteen (14) days after such award is made by the DISTRICT.

4.3 CONTRACT BONDS

The successful Bidder must furnish two (2) good and sufficient bonds on forms included in these documents: the Faithful Performance Bond shall be executed in the amount of one hundred percent (100%) of the Contract price and shall guarantee faithful performance of the Contract by the CONTRACTOR; the Payment Bond shall be executed in the amount of 100 percent (100%) of the Contract price and shall guarantee payment of labor, materials and all bills and obligations arising from the performance of the Contract. These bonds shall remain in full force and effect for a period of one (1) year from the date of Notice of Completion.

The Attorney-in-Fact (resident agent) who executes the Performance Bond and Payment Bond on behalf of the surety company must attach a copy of his/her Power of Attorney as evidence of his/her authority. A notary shall acknowledge the Power of Attorney as of the date of the execution of the Surety Bond which it covers. The Contractor shall be responsible for demonstrating to the satisfaction of the DISTRICT that the surety is an admitted California Surety.

Any and all alterations, extensions of time, extra and additional work, and other changes authorized by these Plans and Specifications may be made without securing consent of the surety or sureties on the Contract Bonds and each bond shall so specify.

Whenever any surety or sureties on any such bonds required by law for the protection of the claims of laborers and material persons become insufficient, or the DISTRICT has cause to believe that such surety or sureties have become insufficient, a demand in writing may be made of the CONTRACTOR for such further bond or bonds or additional surety, not exceeding that originally required, as is considered necessary, considering the extent of the work remaining to be done. Thereafter, no payment shall be made upon such Contract to the CONTRACTOR until such further bonds or additional surety has been furnished.

4.4 EXECUTION OF CONTRACT

The Contract shall be signed by the successful Bidder and returned, together with the Faithful Performance and Payment Bonds and insurance forms, in accordance with the time requirements set forth in the Contract Documents Section titled "Bid Documents".

No Bid Proposal shall be considered binding upon the DISTRICT until the execution of the Contract by the DISTRICT.

4.5 FAILURE TO EXECUTE CONTRACT

Failure to execute the Contract in accordance with the time requirements set forth in Contract Documents Section "Special Provisions" after the Bidder has received notice of Contract Award shall be just cause for the annulment of the award at the sole election of the DISTRICT. If the successful Bidder refuses or fails to execute the Contract and deliver the required bonds and certificates of insurance in proper form within the fifteen (15) days, the DISTRICT may award the Contract to another Bidder. If the successful Bidder returns the required bonds and certificates of insurance in proper form after the fifteen (15) days, and the DISTRICT elects to award the Contract to the successful Bidder, the DISTRICT will deduct from the Contract completion period, the number of calendar days in excess of fifteen (15) that the successful Bidder took to submit the bonds and certificates of insurance in proper form. If a Bidder to whom an award is made fails or refuses for any reason to execute the Contract or fails to furnish any or all of the required insurance or Contract Bonds in proper form, within the time stated, it is agreed and stipulated between DISTRICT and the Bidder to whom any award is made that damage has been and will be sustained by the DISTRICT. It is further agreed by the DISTRICT and any and all Bidders that it will be impractical and extremely difficult to fully ascertain and determine the actual damage that the DISTRICT will sustain by such delay. Therefore, the DISTRICT and all parties who submit a Bid under the Notice of Invitation to Bid shall be deemed to have jointly studied and attempted to estimate the damages suffered by the DISTRICT by such delay under these circumstances and agree that the amount of the Bidder's bond or check is agreed to as the liquidated damages payable by such Bidder(s). This Bidder's bond or check will be collected and held by the DISTRICT as the sole property of the DISTRICT for full compensation for the damages suffered by the DISTRICT as a result of the Bidder's failure to execute the Contract and furnish the bonds and insurance as required.

4.6 NOTICE TO PROCEED

The DISTRICT intends to issue a Notice to Proceed within ten (10) days of receipt of the executed Contract, proof of full compliance with all insurance requirements, Faithful Performance Bond, and the Payment Bond from the CONTRACTOR.

(END OF SECTION)

BID FORM

Name of Bidder: _____

Business Address: _____

_____ Phone No. _____

TO THE GOVERNING BODY OF THE
ARVIN COMMUNITY SERVICES DISTRICT

Pursuant to and in compliance with your Notice Inviting Sealed Proposals (Bids) and the other documents relating thereto, the undersigned bidder, being fully familiar with the terms of the Contract Documents, local conditions affecting the performance of the Contract, the character, quality, quantities, and scope of the work, and the cost of the work at the place where the work is to be done, hereby proposes and agrees to perform within the time stipulated in the Contract, including all of its component parts and everything required to be performed, and to furnish any and all of the labor, material, tools, equipment, transportation, services, permits, utilities, and all other items necessary to perform the Contract and complete in a workmanlike manner, all of the work required in connection with the construction of said work all in strict conformity with the plans and specifications and other Contract documents, including Addenda set forth for the prices hereinafter set forth as follows:

<u>ADDENDA NO.</u>	<u>DATE ISSUED</u>
_____	_____
_____	_____
_____	_____
_____	_____

The undersigned as bidder, declares that the only persons or parties interested in this proposal as principals are those named herein; that this proposal is made without collusion with any person, firm, or corporation; and he proposes and agrees, if the proposal is accepted, that he will execute a contract with the DISTRICT in the form set forth in the Contract Documents and that he will accept in full payment thereof the following prices, to wit:

**PROPOSAL TO
ARVIN COMMUNITY SERVICES DISTRICT
FOR THE**

HAVEN DRIVE STREET IMPROVEMENTS - WATER LINE RELOCATION PROJECT

SCHEDULE OF WORK ITEMS – BASE BID

Item No.	Estimated Quantity	Unit of Measure	Item	Unit Price (in figures)	Expansion Price (in figures)
1	1	LS	Mobilization, Demobilization, and Clean-Up	\$	\$
2	1	LS	Utility Locating and Potholing	\$	\$
3	2,855	LF	Furnish and Install 8" DR18 C900 PVC Pipe and Appurtenances	\$	\$
4	600	LF	Furnish and Install 6" DR18 C900 PVC Pipe and Appurtenances	\$	\$
5	15	LF	Furnish and Install 4" DR18 C900 PVC Pipe and Appurtenances	\$	\$
6	26	EA	Furnish and Install 8" Gate Valve and Valve Box Assembly	\$	\$
7	17	EA	Furnish and Install 6" Gate Valve and Valve Box Assembly	\$	\$
8	1	EA	Furnish and Install 4" Gate Valve and Valve Box Assembly	\$	\$
9	6	EA	Fire Hydrant Assembly Replacement	\$	\$
10	1	EA	Blow-Off Assembly	\$	\$
11	46	EA	Water Service Line Replacement	\$	\$
12	6,940	LF	Pavement Sawcutting	\$	\$
13	7,535	SF	Class II Aggregate Base for Pipe Trench	\$	\$
14	1,585	SF	Permanent Pavement Repair	\$	\$
15	16	EA	Connections to Existing System	\$	\$
16	1	LS	Pressure Testing and Disinfection	\$	\$
17	1	LS	Builders' Risk "All Risk"	\$	\$
Base Bid Price (in figures):				\$	
Base Bid Price (in words):					
Alt -1	1	EA	Furnish and Install Line Stop (Anticipate 0 to 5)	\$	\$
Alt -2	3,470	LF	Slurry Fill Abandoned Pipeline	\$	\$

Note:

The Contract will be awarded based on the amount of the base bid.

Elimination and or addition of items to the scope of work shall be at the District's sole discretion.

Acknowledgement of Addenda:

Addenda Numbers _____ are hereby acknowledged as included in this Bid.

Signature

Date

It is understood that the foregoing quantities are approximate only and are solely for the purposes of facilitating the comparison of bids, and that the CONTRACTOR'S compensation will be computed upon the basis of the actual quantities in the completed work, whether they be more or less than those shown. The DISTRICT may reject any or all bids. The prices listed above in the CONTRACTOR'S proposal shall include all applicable taxes for the State of California.

As required by Section 4100-4107 of the Public Contract Code, the CONTRACTOR bidding shall hereinafter list the subcontractor(s) who will be the subcontractor(s) on the job for each particular trade or subdivision of the work and will state the firm name and principal location of the mill, shop, or office of each:

DIVISION OF WORK OR TRADE	NAME OF SUBCONTRACTOR	LOCATION OF MILL, SHOP, OR OFFICE

ACCOMPANYING THIS PROPOSAL IS _____ (insert the words "bidder's bond," "cashier's check," "certified check," or appropriate description of substitute security, as the case may be) in an amount equal to at least 10% of the total amount of the bid, payable to the

ARVIN COMMUNITY SERVICES DISTRICT

The undersigned deposits the above-named security as a proposal guarantee and agrees that it shall be forfeited to the DISTRICT in case this proposal is accepted by the DISTRICT and the undersigned fails to execute a contract with the DISTRICT as specified in the Contract Documents or fails

to furnish the required payment and performance bonds, or substitute, and insurance certificates and endorsements. Should the DISTRICT be required to engage the services of an attorney in connection with the enforcement of this bid, bidder promises to pay DISTRICT's reasonable attorneys' fees, incurred with or without suit.

The names of all persons interested in the foregoing proposals as principals are as follows: (NOTICE - If bidder or other interested person is a corporation, state legal name of corporation and the president, secretary, treasurer, and manager thereof; if a general partnership, state true name of firm, and the names of all individual partners composing firm; if a limited partnership, the names of all general partners and limited partners; if bidder or other interested person is an individual, state first and last names in full; if the bidder is a joint venture, state the complete name of each venturer).

Bidder hereby confirms that it has all licenses and permits required by federal, state, and local statutes, regulations, and ordinances. The following are the CONTRACTOR'S applicable license numbers (add pages if needed):

<u>CONTRACTOR's License No.</u>	<u>Expiration Date</u>
<hr/>	<hr/>
<hr/>	<hr/>
<hr/>	<hr/>
<hr/>	<hr/>
<hr/>	<hr/>

Pursuant to the requirements of California Business and Professions Code Section 7028.15(e), a bid submitted to the DISTRICT by a CONTRACTOR who is not licensed pursuant to Chapter 9 of Division 3 of the Business and Professions Code shall be considered nonresponsive and shall be rejected as provided for by law.

Signature of Bidder:

Printed Name:

Title:

Company:

Dated: _____, 2025.

NOTE: If bidder is a corporation, the legal name of the corporation shall be set forth above, together with the signature of the officer or officers authorized to sign contracts on behalf of the corporation and the corporate seal; if bidder is a partnership, the true name of the firm shall be set forth above, together with the signature of the partner or partners authorized to sign contracts on behalf of the partnership; if the bidder is an individual, his signature shall be placed above; if the bidder is a joint venture, the name of the

joint venture shall be set forth above with the signature of an authorized representative of each venturer.

(END OF SECTION)

NON-COLLUSION AFFIDAVIT

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

Bidder

CALIFORNIA ALL PURPOSE ACKNOWLEDGMENT

A Notary Public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA)

COUNTY OF _____)

On _____, before me, _____,
Notary Public, personally appeared _____

_____ who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature: _____ (Seal)

(END OF SECTION)

BID BOND

We, _____ as Principal, and _____ as an admitted California Surety, jointly and severally, bind ourselves, our heirs, representatives, successors and assigns, as set forth herein, to the

ARVIN COMMUNITY SERVICES DISTRICT

(herein called DISTRICT) for payment of the penal sum of _____ Dollars (\$ _____), lawful money of the United States. Principal has submitted the accompanying bid for the Haven Drive Street Improvements – Water Line Relocation Project.

If the Principal is awarded the Contract and enters into a written contract, in the form prescribed by the DISTRICT, at the price designated by his bid, and files two bonds with the DISTRICT, or substitute security in lieu thereof, one to guarantee payment for labor and materials and the other to guarantee faithful performance, in the time and manner specified by the DISTRICT, and carries all insurance in type and amount which conforms to the Contract Documents and furnishes required certificates and endorsements thereof, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

Forfeiture of this bond, or any deposit made in lieu thereof, shall not preclude the DISTRICT from seeking all other remedies provided by law to cover losses sustained as a result of the Principal's failure to do any of the foregoing.

Executed on _____, 2025

PRINCIPAL

(Seal if Corporation)

By: _____

Title: _____

(Attach Acknowledgment of Authorized Representative of Principal)
Any claims under this bond may be addressed to:

_____ (name and address of Surety)

_____ (name and address of Surety Agent for process of Service in California, if different from above)

_____ (telephone number of Surety's agent in California)

(Attach Acknowledgment)

SURETY

By: _____
(Attorney-in-Fact)

NOTICE:

No substitution or revision to this bond form will be accepted. Sureties must be an admitted California Surety authorized to do business in and have an agent for service of process in California. Certified copy of Power of Attorney must be attached.

(END OF SECTION)

LISTING OF SIMILAR PROJECTS COMPLETED IN THE LAST TEN YEARS

1. **Project Name:** _____

Brief Description: _____

Owner: _____

Date Completed: _____

Reference with Contact Information: _____

2. **Project Name:** _____

Brief Description: _____

Owner: _____

Date Completed: _____

Reference with Contact Information: _____

3. **Project Name:** _____

Brief Description: _____

Owner: _____

Date Completed: _____

Reference with Contact Information: _____

4. **Project Name:** _____

Brief Description: _____

Owner: _____

Date Completed: _____

Reference with Contact Information: _____

5. **Project Name:** _____

Brief Description: _____

Owner: _____

Date Completed: _____

Reference with Contact Information: _____

6. **Project Name:** _____

Brief Description: _____

Owner: _____

Date Completed: _____

Reference with Contact Information: _____

(END OF SECTION)

SECTION C

CONTRACT

ARVIN COMMUNITY SERVICES DISTRICT

**HAVEN DRIVESTREET IMPROVEMENTS
WATER LINE RELOCATION PROJECT**

APRIL 2025

ARVIN COMMUNITY SERVICES DISTRICT
HAVEN DRIVE STREET IMPROVEMENTS
WATER LINE RELOCATION PROJECT

SECTION C

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CONTRACT

THIS AGREEMENT, made and entered into by and between the ARVIN COMMUNITY SERVICES DISTRICT, a Municipal Corporation under the laws of the State of California; hereinafter referred to as "DISTRICT"

and _____,
a corporation under the laws of the state of _____;
a partnership composed of _____;
a joint venture composed of _____;
an individual doing business as _____;
hereinafter referred to as "CONTRACTOR."

DISTRICT and CONTRACTOR agree as follows:

- (1) SCOPE OF WORK: CONTRACTOR will furnish all materials and will perform all of the work for the Haven Drive Street Improvements – Water Line Relocation Project in accordance with the Plans and Specifications and other contract documents therefore.
- (2) TIME FOR COMPLETION: The work shall be completed within the times set forth in the Bid Documents of this Contract. Time is of the essence and forfeiture due to delay will be assessed as provided for in the General Provisions.
- (3) CONTRACT SUM: DISTRICT will pay CONTRACTOR in accordance with the prices shown in the Bid Form in the amount of _____.
- (4) PAYMENTS: Monthly progress payments and the final payment will be made in accordance with the General Provisions as modified by the Special Provisions. The filing of the notice of completion by DISTRICT shall be preceded by acceptance of the work made only by an action of the Governing Body of DISTRICT in session.
- (5) COMPLIANCE WITH PUBLIC CONTRACTS LAW: DISTRICT is a public DISTRICT in the State of California and is subject to the provisions of law relating to public contracts. It is agreed that all provisions of law applicable to public contracts are a part of this Contract to the same extent as though set forth herein and will be complied with by CONTRACTOR.
- (6) CONTRACT DOCUMENTS: The complete contract includes all the Contract Documents set forth herein, to wit: Notice Inviting Sealed Proposals (Bids), Bid Documents, Bid Form, Proposal, Non-Collusion Affidavit, Bid Bond, Contract, Performance Bond, Payment Bond, CONTRACTOR'S Certificate Regarding Workers' Compensation Insurance, Certificate of Insurance (Workers' Compensation and Employers' Liability), Insurance Endorsement (Workers' Compensation and Employers' Liability), Certificate of Insurance (Liability), Insurance Endorsement (Liability), Certificate of Insurance (Builder's All Risk), Insurance Endorsement (Builder's All Risk), General Conditions, Technical Specifications, Drawings, Plans, and also addenda thereto and supplemental agreements, including Change Orders.

This Contract is executed by the DISTRICT pursuant to an action of its Governing Body in session on _____, 2025, authorizing the same, and CONTRACTOR has caused this Contract to be duly executed.

Dated: _____, 2025

By: _____
(Authorized Representative of
DISTRICT)

Title: _____

Dated: _____, 2025

(CONTRACTOR)

By: _____
(Authorized Representative of
CONTRACTOR)

Title: _____

(Seal if Corporation)

(Attach Acknowledgment for Authorized Representative of CONTRACTOR)

CERTIFICATE OF CONTRACTOR

I, _____, certify that I am a/the _____ [designate sole proprietor, partner in partnership, or specify corporate office, e.g., secretary] in the entity named as CONTRACTOR in the foregoing contract.

I hereby expressly certify that the name of the entity to which I am associated is _____; that this entity is in good standing and has complied with all applicable laws and regulations, and that I have been expressly authorized by the proper parties in this entity to execute this Contract on behalf of the above-named entity.

CALIFORNIA ALL PURPOSE ACKNOWLEDGMENT

A Notary Public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA)
COUNTY OF _____)

On _____, before me, _____,
Notary Public, personally appeared _____

_____ who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature: _____ (Seal)

(END OF SECTION)

PERFORMANCE BOND

We, _____ as
Principal, and _____ as
an admitted California Surety, jointly and severally, bind ourselves, our heirs, representatives, successors
and assigns, as set forth herein, to the

ARVIN COMMUNITY SERVICES DISTRICT

(herein called DISTRICT) for payment of the penal sum of _____
Dollars (\$ _____), lawful
money of the United States. DISTRICT has awarded Principal a contract for the Haven Drive Street
Improvements – Water Line Relocation Project.

THE CONDITION OF THIS OBLIGATION IS SUCH that if the Principal shall in all things abide by
and well and truly keep and perform the covenants, and agreements in the said contract, and any
alteration thereof made as therein provided, on his part to be kept and performed at the time and in the
manner therein specified, and shall faithfully fulfill the one-year guarantee of all materials and
workmanship, and shall indemnify and save harmless the DISTRICT, the ENGINEER, the DISTRICT'S
PROJECT MANAGER, and their consultants, and each of their directors, officers, employees and agents,
as therein stipulated, this obligation shall become null and void, otherwise, it shall be and remain in full
force and effect.

Surety agrees that no change, extension of time, alteration, or addition to the terms of the
Contract, or the work to be performed there under, or the Plans and Specifications shall in any way affect
its obligation on this bond, and it does hereby waive notice thereof.

Executed in four original counterparts on _____, 2025 _____
PRINCIPAL

(Seal if Corporation) By: _____
Title: _____

(Attach Acknowledgment of Authorized Representative of Principal)
Any claims under this bond may be addressed to:

_____ (name and address of Surety)

_____ (name and address of Surety Agent for process of
Service in California, if different from above)

_____ (telephone number of Surety's agent in California)

(Attach Acknowledgment)

SURETY

By: _____
(Attorney-in-Fact)

NOTICE:

No substitution or revision to this bond form will be accepted. Sureties must be an admitted California Surety authorized to do business in and have an agent for service of process in California. Certified copy of Power of Attorney must be attached.

(END OF SECTION)

PAYMENT BOND

We, _____ as principal, and _____ as an admitted California Surety, jointly and severally, bind ourselves, our heirs, representatives, successors and assigns, as set forth herein, to the

ARVIN COMMUNITY SERVICES DISTRICT

(herein called DISTRICT) for payment of the penal sum of _____ Dollars (\$ _____), lawful money of the United States. DISTRICT has awarded Principal a contract for the Haven Drive Street Improvements – Water Line Relocation Project.

If Principal or any of his subcontractors fails to pay any of the persons named in Section 3181 of the California Civil Code, or amounts due under the Unemployment Insurance Code with respect to work or labor performed under the Contract or during the one-year guarantee period, 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 his subcontractors pursuant to Section 13020 of the Unemployment Insurance Code, with respect to such work and labor, then Surety will pay the same in an amount not exceeding the sum specified above, and also will pay, in case suit is brought upon this bond, such reasonable attorney’s fees as shall be fixed by the court.

This bond shall inure to the benefit of any of the persons named in Section 3181 of the California Civil Code, so as to give a right of action to them or their assigns in any suit brought upon this bond.

Surety agrees that no change, extension of time, alteration, or addition to the terms of the Contract, or the work to be performed there under, or the Plans and Specifications shall in any way affect its obligation on this bond, and it does hereby waive notice thereof.

Executed in four original counterparts on _____, 2025 _____
PRINCIPAL

(Seal if Corporation) By: _____
Title: _____

(Attach Acknowledgment of Authorized Representative of Principal)

Any claims under this bond may be addressed to:

_____(name and address of Surety)

_____(name and address of Surety’s agent for service of

process in California, if different from above)

_____ (telephone number of Surety's agent in California)

(Attach Acknowledgment)

SURETY

By: _____
(Attorney-in-Fact)

NOTICE:

No substitution or revision to this bond form will be accepted. Sureties must be and admitted California Surety authorized to do business in and have an agent for service of process in California. Certified copy of Power of Attorney must be attached.

(END OF SECTION)

CONTRACTOR'S CERTIFICATE REGARDING WORKERS' COMPENSATION INSURANCE

Labor Code Section 3700 provides (in part):

Every employer except the State shall secure the payment of compensation in one or more of the following ways:

- (a) By being insured against liability to pay compensation in one or more insurers duly authorized to write compensation insurance in this State.
- (b) By securing from the Director of Industrial Relations a certificate of consent to self-insure, which may be given upon furnishing proof satisfactory to the Director of Industrial Relations of ability to self-insure and to pay any compensation that may become due to his employees.

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.

Dated: _____, 2025

(CONTRACTOR)

By: _____

(Official Title)

(SEAL)

(Labor Code Section 1861 provides that the above certificate must be signed and filed by the CONTRACTOR with the DISTRICT prior to performing any work under this Contract.)

(END OF SECTION)

WORKERS' COMPENSATION AND EMPLOYERS' LIABILITY CERTIFICATE OF INSURANCE

THIS IS TO CERTIFY that the following policy has been issued by the below-stated company in conformance with the requirements of the General Conditions and is in force at this time, and is in a form approved by the Insurance Commissioner.

The Company will give at least ten (10) days' written notice to the DISTRICT prior to cancellation of said policy for nonpayment of premium and thirty (30) days' written notice to the DISTRICT prior to cancellation of said policy for any other reason.

POLICY NUMBER

EXPIRATION DATE

LIMITS OF LIABILITY

Worker's Compensation:
Statutory Limits Under the Laws of the State of California

Employers' Liability:

\$ _____ Each Accident

\$ _____ Disease - Policy Limit

\$ _____ Disease - Each Employee

Named Insured (CONTRACTOR)

Insurance Company

Street Name and Number

Street Name and Number

City and State

City and State

By: _____
(Company Representative)

Insurance Company Agent for Service of Process in California:

Name

Company

Street Name and Number

City and State

Telephone Number

This certificate is issued as a matter of information only and confers no rights upon the certificate holder. This certificate does not amend, extend, or alter the coverage afforded by the policy listed herein.

This is to certify that the policy has been issued to the named insured 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 policy described herein is subject to all the terms, exclusions, and conditions of such policy.

(END OF SECTION)

WORKERS' COMPENSATION AND EMPLOYERS' LIABILITY INSURANCE ENDORSEMENT

This endorsement forms a part of Policy No. _____.

ENDORSEMENT

It is agreed that with respect to such insurance as is afforded by the policy, the Company waives any right of subrogation it may acquire against the State of California, the DISTRICT, the ENGINEER, the DISTRICT'S PROJECT MANAGER, and their consultants, and each of their directors, officers, and employees by reason of any payment made on account of injury, including death resulting there from, sustained by any employee of the insured, arising out of the performance of the above-referenced contract.

The additional premium for this endorsement shall be _____%* of the California Workers' Compensation premium otherwise due on such remuneration.

This endorsement does not increase the Company's total limits of liability.

Named Insured (CONTRACTOR)	Insurance Company
Street Name and Number	Street Name and Number
City and State	City and State
	By: _____ (Company Representative)

*CONTRACTOR'S insurance company to fill in this percentage.

(END OF SECTION)

LIABILITY INSURANCE CERTIFICATE OF INSURANCE

THIS IS TO CERTIFY that the following policies have been issued by the below-stated company in conformance with the requirements of the General Conditions and are in force at this time:

Type of Insurance	Policy Number	Effective Date	Expiration Date	Limits	
General Liability				General Aggregate	\$
				Products—Comp/Ops Agg.	\$
				Personal & Adv. Injury	\$
				Each Occurrence	\$
				Fire Damage (Any one fire)	\$
				Med. Expense (Any one person)	\$
Automobile Liability				Combined Single Limit	\$
				Bodily Injury (Per person)	\$
				Bodily Injury (Per Accident)	\$
				Property Damage	\$
Excess Liability				Each Occurrence	\$
				Aggregate	\$

This certificate is issued as a matter of information only and confers no rights upon the certificate holder. This certificate does not amend, extend, or alter the coverage afforded by the policies listed herein.

This is to certify that the policy has been issued to the named insured 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.

The Company will give at least thirty (30) days written notice to the DISTRICT prior to cancellation of said policy for any reason.

Named Insured (CONTRACTOR)

Insurance Company

Street Name and Number

Street Name and Number

City and State

City and State

By: _____
(Company Representative)

Insurance Company Agent for Service
of Process in California:

Name

Company

Street Number

City and State

Telephone Number

NOTICE:

Insurers must be authorized to do business and have an agent for service of process in California and have at least a A- VII rating in accordance with the most current Best's Rating Guide.

(END OF SECTION)

LIABILITY INSURANCE ENDORSEMENT

This endorsement forms a part of Policy No. _____.

ENDORSEMENT

The State of California, the DISTRICT, the ENGINEER, the DISTRICT'S PROJECT MANAGER, and their consultants, and each of their directors, officers, and employees are included as additional insureds under said policy but only while acting in their capacity as such and only as respects operations of the named insured. The insurance afforded to these additional insureds is primary insurance. If the additional insureds have other insurance which might be applicable to any loss, the amount of this insurance shall not be reduced or prorated by the existence of such other insurance.

This endorsement does not increase the Company's total limits of liability.

Named Insured (CONTRACTOR)

Insurance Company

Street Name and Number

Street Name and Number

City and State

City and State

By: _____

(Company Representative)

(END OF SECTION)

BUILDERS' RISK "ALL RISK" CERTIFICATE OF INSURANCE

THIS IS TO CERTIFY that the following policy has been issued by the below-stated company in conformance with the requirements of the General Conditions and is in force at this time:

<u>POLICY NUMBER</u>	<u>EXPIRATION DATE</u>	<u>LIMITS OF LIABILITY</u>
_____	_____	\$ _____
_____	_____	Deductible: \$ _____

This certificate is issued as a matter of information only and confers no rights upon the certificate holder. This certificate does not amend, extend, or alter the coverage afforded by the policy listed herein.

This is to certify that the policy has been issued to the named insured 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 policy described herein is subject to all the terms, exclusions, and conditions of such policy.

The Company will give at least thirty (30) days written notice to the DISTRICT prior to cancellation of said policy for any reason.

_____ Named Insured (CONTRACTOR)	_____ Insurance Company
_____ Street Name and Number	_____ Street Name and Number
_____ City and State	_____ City and State

By _____
(Company Representative)

Insurance Company Agent for Service
of Process in California:

Name

Company

Street Name and Number

City and State

Telephone Number

NOTICE:

Insurers must be authorized to do business and have an agent for service of process in California and have at least a A- VII rating in accordance with the most current Best's Rating Guide.

(END OF SECTION)

BUILDERS' RISK "ALL RISK" INSURANCE ENDORSEMENT

This endorsement forms a part of Policy No. _____.

ENDORSEMENT

The State of California, the DISTRICT, the ENGINEER, the DISTRICT'S PROJECT MANAGER, and their consultants, and each of their directors, officers, and employees are included as additional insureds, as their interest may appear, under said policy but only while acting in their capacity as such with respect to the above-referenced contract.

The insurance afforded to these additional insureds is primary insurance. If the additional insureds have other insurance which might be applicable to any loss, the amount of this insurance shall not be reduced or prorated by the existence of such other insurance.

This endorsement does not increase the Company's total limits of liability.

Named Insured (CONTRACTOR)

Insurance Company

Street Name and Number

Street Name and Number

City and State

City and State

By _____

(Company Representative)

(END OF SECTION)

SECTION G
GENERAL CONDITIONS

ARVIN COMMUNITY SERVICES DISTRICT

HAVEN DRIVE STREET IMPROVEMENTS
WATER LINE RELOCATION PROJECT

APRIL 2025

ARVIN COMMUNITY SERVICES DISTRICT
HAVEN DRIVE STREET IMPROVEMENTS
WATER LINE RELOCATION PROJECT

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1.0 COORDINATION OF WORK AND PERMITS

1.1 DESCRIPTION

This Section generally describes the project and includes work sequence and schedule, CONTRACTOR'S use of premises, maintenance and operation of existing facilities, construction survey staking, and permits.

1.2 GENERAL NATURE OF WORK

The CONTRACTOR shall provide all labor, materials, equipment and perform all operations necessary to furnish and construct the water main piping, valves, fittings, appurtenances, service laterals, connections, and pavement restoration as specified in these Specifications and Drawings for the Haven Drive Water Line Relocation Project.

1.3 LOCATION OF PROJECT SITE

The project is located in the City of Arvin, County of Kern, State of California.

1.4 WORK SEQUENCE AND SCHEDULE

CONTRACTOR shall begin work within fifteen (15) calendar days of the issue date of the Notice to Proceed (NTP) and shall complete the work included in the Contract within the amount of time specified in Section 1.7 of the Bid Documents, "Time for Completion and Forfeiture Due to Delay."

1.5 MAINTENANCE OR OPERATION OF EXISTING FACILITIES

All existing gas, electric, telephone, sewer, and water facilities not owned and operated by the DISTRICT that are within the project site shall remain in continuous operation.

1.6 CONSTRUCTION SURVEY STAKING

Unless otherwise specified, the DISTRICT will provide one set of construction stakes for the project. In the event the CONTRACTOR loses survey control, the CONTRACTOR shall pay for all replacement of survey control at no additional cost to the DISTRICT.

1.7 UTILITY LOCATING

1. Utility companies with services in the area were contacted and utility locations were identified and indicated on the Plans. Some potholing was performed along the alignment to better identify locations, but not at all locations.
2. The CONTRACTOR shall physically locate all utilities prior to starting construction. The work shall be done in a timely manner such that adjustments in pipeline grades or alignment can be accomplished with minimal revisions to the pipeline design. The utility locating (potholing) shall be performed prior to final review of pipe fabrication shop drawings.

3. Any delays during construction caused by utilities identified on the Plans but not shown in correct locations shall be the CONTRACTOR'S responsibility. The DISTRICT will respond to pipeline conflict questions within twenty-four (24) hours.

(END OF SECTION)

2.0 DEFINITIONS AND TERMS

2.1 DEFINITIONS

Whenever the following terms occur in the Contract Documents, the meaning shall be interpreted as follows:

ACCEPTANCE, FINAL ACCEPTANCE - The formal action by the DISTRICT Board of Directors accepting the work as being complete.

ACCEPTED BID - The bid (proposal) accepted by the DISTRICT.

ADDENDA - A document issued by the DISTRICT during the bidding period which modifies, supersedes, or supplements the original Contract Documents.

ALLOWANCE - "Allowance" shall mean an amount of money set aside under the Contract for a special purpose identified in the Contract Documents.

ASBESTOS - Any material that contains more than one percent (1%) asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.

BIDDER - Any individual, partnership, corporation, joint venture, or other combination thereof submitting a proposal for the work contemplated, acting directly or through an authorized representative.

CHANGE OR DEVIATION -The use of an alternative item of material or equipment that may not necessarily conform to the letter of the Contract requirements.

CHANGE ORDER - A document signed by the CONTRACTOR and the DISTRICT and authorized by the DISTRICT regarding an addition, deletion, or revision in the work, or an adjustment in the Contract price or the Contract time, issued on or after the effective date of the Contract.

CLAIM - A separate demand by the CONTRACTOR for (a) a time extension, (b) payment of money or damages arising from work done by or on behalf of the CONTRACTOR pursuant to the Contract and payment of which is not otherwise expressly provide for or the CONTRACTOR is not otherwise entitled to, or (c) an amount the payment of which is disputed by the DISTRICT.

CLARIFICATION - A document issued by the DISTRICT to the CONTRACTOR that interprets the requirement(s) and/or design intent of the Contract Documents, may not represent an addition, deletion, or revision in the Work or an adjustment in the Contract price or the Contract times.

CONSULTANTS - Any individual, partnership, corporation, joint venture, or other combination thereof, performing work or services, directly or indirectly, for the DISTRICT.

CONSULTING ENGINEER - The term "Consulting ENGINEER" means the Consulting ENGINEER or his/her authorized representative.

CONTRACT - The written agreement executed between the DISTRICT and the CONTRACTOR covering the performance of the work.

CONTRACT TIME - The number of calendar days allowed for the completion of the work included in the Contract.

CONTRACTOR - The individual, partnership, corporation, joint venture, or other combination thereof who has entered into the Contract with the DISTRICT for the performance of the work. The term "CONTRACTOR" means the CONTRACTOR or his/her authorized representative.

DAYS - Unless otherwise specified, days shall mean calendar days.

DEFECTIVE WORK - Work that is unsatisfactory, faulty, or deficient; or that does not conform to the Contract Documents; or that does not meet the requirements of any inspection, reference standard, test, or approval referred to in the Contract Documents.

DISTRICT – Arvin Community Services District or its authorized representative.

DISTRICT INSPECTOR - The person or firm authorized by the DISTRICT to conduct construction review or observation.

ENGINEER - The person, agent, consultant, or employee designated by the DISTRICT as ENGINEER authorized by the DISTRICT, as set forth in the Contract Documents, to represent the DISTRICT, for the purposes of administering this Contract. Assistants, if designated by the ENGINEER to act on behalf of the ENGINEER, may do so provided they are authorized by the ENGINEER.

FIELD DIRECTIVE - Written documentation of the actions of the DISTRICT or ENGINEER in directing the CONTRACTOR. Field Directives may be in the form of supplemental Drawings or instructions which may be issued as necessary to clarify or define the intent of the Contract Drawings or Specifications. There may be a change in Contract Sum or Contract Time involved with the work shown in a Field Directive. Also referred to as a Directive.

FIELD ORDER - A written order given to the CONTRACTOR authorizing work that is a change to the scope of the Work carried out on a time and materials basis.

FINAL COMPLETION - The date when the Work is one-hundred percent (100%) complete, including completion and acceptance of all punch list corrections, as certified by the DISTRICT.

FURNISH - The word "furnish," when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.

HAZARDOUS WASTE - The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6906) as amended from time to time.

HOLIDAYS - Legal Holidays shall include the following holidays designated by the DISTRICT: New Year's Day, Martin Luther King Day, President's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, the day after Thanksgiving and Christmas Day.

INSTALL - The word "install," when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

MAY - "May," wherever or in whatever manner used, refers to permissive actions.

MILESTONE - A principal event specified in the Contract Documents relating to an intermediate completion date of a separately identifiable part of the Work or a period of time within which the separately identifiable part of the Work should be performed prior to Substantial Completion of all the Work.

NOTICE OF AWARD - The written notice by the DISTRICT to the apparent successful Bidder stating that upon compliance by the apparent successful Bidder with the conditions precedent enumerated therein within the time specified, the DISTRICT will enter into an Agreement.

NOTICE OF COMPLETION - A form signed by the ENGINEER recommending to the DISTRICT that the Work is 100% complete, including completion and acceptance of all punch list corrections and fixing the date of Final Completion. After acceptance of the Work by the DISTRICT's governing Board, the form is signed by the DISTRICT and filed with the County Recorder.

OR EQUAL - Whenever material or equipment is indicated in these Specifications by stating names of proprietary items or of particular suppliers, the naming of the item is intended to establish the type, function, and quality required. The CONTRACTOR may select any of these named items for use on the Project. When the name is followed by the words "or-equal," it indicates that a substitution may be submitted for approval. An "or-equal" item serves the same function; has the same dimensions, appearance, quality, terms of warranty, durability, reliability, cost in service and maintenance; and complies with the same codes and standards as the named item. Further, its substitution will have no effect on Project details, cost, and program.

PLANS, DRAWINGS - The plans (Drawings), or reproductions thereof, which show the location, character, dimensions, and details of the work to be done.

PROJECT - The total construction of which the Work to be provided under the Contract Documents, may be the whole, or a part thereof as indicated elsewhere in the Contract.

PROVIDE - The words "provide" or "perform," when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use. When "furnish," "install," "perform," or "provide" is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of CONTRACTOR, "provide" is implied.

PUNCH LIST - List of incomplete items of work and of items of work which are not in conformance with the Contract. The list will be prepared by the ENGINEER in writing when the CONTRACTOR notifies the ENGINEER in writing that the work has been completed in accordance with the Contract Documents and is ready for the DISTRICT'S acceptance.

REQUEST FOR INFORMATION (RFI) - A written request prepared by the CONTRACTOR requesting additional information necessary to clarify or amplify an item in the Contract Documents that the CONTRACTOR believes is not clearly shown or called for in the Drawings or Specifications or other portions of the Contract Documents, or to address problems which have arisen under field conditions. An RFI is not to be used for request for materials/equipment substitutions or value engineering/cost reduction incentive proposals.

REQUEST FOR QUOTATION (RFQ) - A request for a proposed cost made to the CONTRACTOR by the DISTRICT to add, delete or change the Work. RFQ's shall not be deemed to be directions to proceed with any addition, deletion or change to the Work.

SALVAGE - All items specified to be salvaged shall be carefully removed so as not to damage the item, and neatly stockpiled at the construction site by the CONTRACTOR. The exact location to stockpile items shall be determined by the ENGINEER. The ENGINEER shall then make a determination as to which items are to be retained by the DISTRICT. All other items shall be properly disposed of at no additional cost to the DISTRICT.

SHOP DRAWINGS (SUBMITTALS) - Shop Drawings (submittals) 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.

SPECIFICATIONS - The directions, provisions, and requirements contained in the General Provisions and Technical Provisions as supplemented by the Special Provisions.

STANDARD DRAWINGS, STANDARD PLANS - That portion of the plans identified or referenced as such.

STOP NOTICE - A legal remedy for subcontractors and suppliers who contribute to public works, but who are not paid for their work which secures payment from construction funds possessed by the DISTRICT. For public property, the Stop Notice remedy is designed to substitute for mechanic's lien rights.

SUBCONTRACTOR - An individual, partnership, corporation, joint venture, or other combination thereof who has a contract with the CONTRACTOR to perform any of the work. Subcontractor also means an individual, partnership, corporation, joint venture, or other combination thereof who has a contract with another subcontractor to perform any of the work.

SUBSTANTIAL COMPLETION - See Section 19.9 of the General Conditions, "Contract Closeout" for definition of substantial completion.

SUBSTITUTION - The use of an "or equal" item of material or equipment that meets the Contract requirements, but is not a listed manufacturer or equipment.

TECHNICAL SPECIFICATIONS - The Contract Documents identified or referenced as such.

UTILITY - Public or private fixed works for the transportation of fluids, gasses, power, signals, or communications.

WORK - Any and all obligations, duties, and responsibilities necessary to complete the construction assigned to, or undertaken by, the CONTRACTOR pursuant to the Contract Documents including all labor necessary to produce such construction and all materials, equipment, and supplies incorporated or to be incorporated in the construction. Also, the completed construction or parts thereof required to be provided under the Contract Documents.

WORKING DAYS - A working day is defined as any day, except Saturdays, Sundays and DISTRICT Legal Holidays. Any work scheduled by the CONTRACTOR on non-working days (Saturdays, Sundays, and DISTRICT Legal Holidays) shall be verified with the DISTRICT at least seventy-two (72) hours in advance. The DISTRICT shall be compensated for inspection work, at an hourly rate, for any work on non-working days and for overtime.

Terms: Wherever the terms "required," "permitted," "ordered," "designated," "directed," "prescribed," or terms of like import are used, it shall be understood that the requirements, permission, order, designation, direction or prescription of the ENGINEER is intended. Similarly, the terms "acceptable," "satisfactory," "or equal," or terms of like import shall mean acceptable to or satisfactory to the ENGINEER, unless otherwise expressly stated. The word "provide" shall be understood to mean furnish and install.

(END OF SECTION)

3.0 MEASUREMENT AND PAYMENT

3.1 WORK LISTED IN THE SCHEDULE OF WORK ITEMS

1. Work under this contract will be paid on a unit price or lump-sum basis as outlined on the Bid Form for the quantity of work installed.
2. The unit prices and lump-sum prices include full compensation for furnishing the labor, materials, tools, and equipment and doing all the work involved to complete the work included in the contract documents.
3. The application for payment will be for a specific item based on the percentage completed or quantity installed. The percentage complete will be based on the value of the partially completed work relative to the value of the item when entirely completed and ready for service.

3.2 WORK NOT LISTED IN THE SCHEDULE OF WORK ITEMS

1. The General Conditions and items in the Special Provisions, general requirements, and specifications which are not listed in the schedule of work items of the bid form are, in general, applicable to more than one listed work item, and no separate work item is provided therefore. Include the cost of work not listed but necessary to complete the project designated in the contract documents in the various listed work items of the bid form.
2. The bids for the work are intended to establish a total cost for the work in its entirety. Should the CONTRACTOR feel that the cost for the work has not been established by specific items in the bid form, include the cost for that work in some related bid item so that the proposal for the project reflects the total cost for completing the work in its entirety.

3.3 MOBILIZATION

See the Section 8.0, "Mobilization and Demobilization", of the General Conditions.

3.4 SHEETING, SHORING, AND BRACING

Payment for sheeting, shoring, and bracing for the protection of life and limb, in conformance with the applicable safety orders, shall be included in the applicable bid items.

(END OF SECTION)

4.0 SUBMITTALS

4.1 GENERAL

1. Three copies of the initial submittal log shall be submitted to the ENGINEER within fifteen (15) working days after receipt of the Notice to Proceed.
2. Three copies of the updated submittal log shall be submitted with each monthly schedule update.
3. The ENGINEER's approval of submittal shall not relieve the CONTRACTOR of the entire responsibility for the correctness of the work covered by the submittal. The CONTRACTOR shall assume all responsibility for misalignments, improper fitting and deficient work due to errors in the submittals.

4.2 DEFINITIONS

1. Or-Equal – Whenever material or equipment is indicated in these Specifications by stating names of proprietary items of particular suppliers, the naming of the item is intended to establish the type, function, and quality required. The CONTRACTOR may select any of these named items for use on the project. When the name is followed by the words “or-equal,” it indicates that a substitution may be submitted for approval. An “or-equal” item serves the same function; has the same dimensions, appearance, quality, terms of warranty, durability, reliability, cost in service and maintenance; and complies with the same codes and standards as the named item. Further, its substitution will have no effect on project details, cost, and program.
2. Substitution – The use of an “or-equal” item of material or equipment that meets contract requirements.
3. Change or Deviation – The use of an alternative item of material or equipment that does not meet the contract requirements. In the section, the same procedure shall be followed to obtain approval as for substitutions. On the letter of transmittal, substitutions, changes, and deviations shall be noted as variations by the CONTRACTOR.

4.3 SUBMITTAL PROCEDURES

1. Accompany each submittal with a separate letter of transmittal containing the following information:
 - a. CONTRACTOR'S name and the name of Subcontractor or supplier who prepared the submittal.
 - b. The project name and identifying contract number.
 - c. Submittal number.
 - d. Description of the submittal and reference to the Contract requirement or technical specification section and paragraph number being addressed.
2. Submit the number and type of copies for each submittal and follow the procedures described below or in other paragraphs in this Section. Submit four (4) copies of submittals not covered in Section 15.6 of the General Conditions.
 - a. Designation of Superintendent: Submit three (3) copies for information. Include name, address, home telephone number and a brief resume.

- b. List of Subcontractors and Major Suppliers: Submit three (3) copies for information. Include address, telephone number and name of responsible party.
- c. Schedule of Values: Submit three (3) copies for information. No copy will be returned.
- d. Manufacturers' Affidavits. Submit three (3) copies for items specified in the Technical Specifications.
- e. Environmental Protection Plan. Submit three (3) copies for information.

4.4 SCHEDULE OF SUBMITTALS

- 1. Submit three (3) copies for information. No copy will be returned.

4.5 SUBMITTAL LOG

- 1. Prepare and maintain an accurate submittal log for the duration of the project. The log shall contain a listing of submittals and shall include the following information for each listed item:
 - a. Specification section reference.
 - b. Projected submission date.
 - c. Actual submission date.
 - d. Projected need date for approval of the submittal.
 - e. Actual return date from the ENGINEER.
 - f. Notation of the ENGINEER's response.
 - g. Notation if re-submittal or record copy is required.

4.6 NUMBER OF COPIES REQUIRED

- 1. Each Submittal: The CONTRACTOR shall furnish four (4) hard copies and one (1) electronic copy of each submittal unless specified otherwise.
- 2. Drawings: Three full sized, thirty-six inches (36") by twenty-four inches (24"), direct prints and 1 clear legible, reproducible transparency of each original drawing shall be submitted for approval before manufacture or fabrication of the respective articles.
- 3. Catalogue sheets, brochures, and other printed sheets: Four (4) copies and one (1) original shall be submitted.
- 4. Other Data: When the Specifications require the submission of certifications, mill test reports, or purchase orders, a minimum of three (3) copies shall be submitted to the ENGINEER, unless otherwise specified.

4.7 DELIVERY ADDRESS

- 1. Unless otherwise specified, submittals shall be marked for the attention of Curtis Skaggs – Engineer, and shall be delivered to Dee Jaspar & Associates' office located at 2730 Unicorn Road, Building A, Bakersfield, CA, 93308.

4.8 RECORD COPIES

1. Within ten (10) working days after approval a photo-sensitized or wash-Mylar material having a matte finish on both sides and with clear and legible lettering and delineation shall be submitted to the ENGINEER for review and acceptance. The shop, assembly, or layout drawings shall be copied directly from the correct original tracings.
2. Within 10 working days after approval an electronic copy of all drawings shall be sent to the ENGINEER for review and acceptance. All shop drawings shall be in electronic AutoCAD or compatible file format.
3. When catalogue sheets, brochures, or other printed sheets have been approved in view of drawings, electronic copies or reproducible transparencies of the printed sheets will not be required.
4. Record copies of the approved drawings shall be clean, legible without the use of magnification, and capable of producing copies that are comparable in quality to the original. Drawings which do not meet these criteria will not be accepted by the DISTRICT. Any record drawing not accepted by the DISTRICT shall be revised and resubmitted until it is acceptable to the DISTRICT.

4.9 PLAN OF OPERATIONS

1. Submit three (3) copies.
2. Before beginning on site work, submit a plan showing CONTRACTOR'S intended use of the site assigned to it. Show location of enclosing fence, access points and gates. Show location for CONTRACTOR'S and Subcontractor's field offices and parking. Show location of CONTRACTOR'S and Subcontractor's work areas and storage areas.

4.10 CONSTRUCTION SCHEDULE

1. Provide a completed critical path method (CPM) construction schedules to the ENGINEER for review and acceptance as required in Section 5.0 of the General Conditions, "Construction Schedule Bar Charts."

4.11 SHOP DRAWING, PRODUCT DATA AND SAMPLES SUBMITTED FOR PRODUCT REVIEW

1. This paragraph covers submittal of Shop Drawings, Product Data and Samples required for the ENGINEER's review. All submittals are required for the ENGINEERs Review unless specifically requested for Information Only.
2. Number and type of submittals:
 - a. Shop Drawings: Submit four copies more than the number required by the CONTRACTOR. Copies in excess of four will be marked, stamped and returned to the CONTRACTOR. The CONTRACTOR shall make and distribute the required number of additional copies to its superintendent, Subcontractors and suppliers.
 - b. Product Data: Submit four (4) clear copies. One copy will be marked, stamped and returned. The CONTRACTOR shall make and distribute the required number of additional copies to its superintendent, Subcontractors and suppliers.
 - c. Samples: Submit three (3) labeled samples or three (3) sets of samples of Manufacturer's full range of colors and finishes. Comply with requirements in

Technical Specification Sections. One sample will be returned to CONTRACTOR.

3. The CONTRACTOR shall make all Product Review submittals early enough to allow adequate time for the ENGINEER's review and for manufacture and delivery to the construction site without causing delay to the Work. Submittals shall be made early enough to allow for unforeseen delays such as:
 - a. Failure to obtain Favorable Review because of inadequate or incomplete submittal or because the item submitted does not meet the requirements of the Contract Documents.
 - b. Delays in manufacture.
 - c. Delays in delivery.
4. Content of Submittals:
 - a. Each submittal shall include all of the items and material required for a complete assembly, system or Specification Section. Each item in every submittal shall be labeled with the Specification Section and paragraph number under which the item is specified.
 - b. Submittals shall contain all of the physical, technical and performance data required by the Specifications or necessary to demonstrate conclusively that the items comply with the requirements of the Contract Documents.
 - c. Include information on characteristics of electrical or utility service required and verification that requirements have been coordinated with services provided by the work and by other interconnected elements of the work.
 - d. Provide verification that the physical characteristics of items submitted, including size, configuration, clearances, mounting points, utility connection points and service access points, are suitable for the space provided and are compatible with other interrelated items that are existing or have or will be submitted.
 - e. Label each Product Data Submittal, Shop Drawing and Sample with the information required in paragraph K of this Section of the Technical Provisions. Highlight or mark every page of every copy of all Product Data submittals to show the specific items being submitted and all options included or choices offered.
 - f. Additional requirements for Product Review submittals are contained in the Technical Provisions Section.
 - g. Designation of work as "NIC" or "by others," shown on Shop Drawings, shall mean that the work will be the responsibility of the CONTRACTOR rather than the Subcontractor or supplier who has prepared the Shop Drawings.
5. Compatibility of Equipment and Material:
 - a. Verify that items contained in the same or in different submittals meet the requirements of the Technical Provisions.
6. Requirements for CONTRACTOR Designed Items and for First Specified (Named) Items.

- a. Verify that items meet the requirements of the Technical Provisions.
7. Submittals that contain deviations from the requirements of the Contract Documents shall be accompanied by a separate letter explaining the deviations. The CONTRACTOR'S letter shall:
- a. Cite the specific Contract requirement including the Specification Section and paragraph number for which approval of a deviation is sought.
 - b. Describe the proposed alternate material, item or construction and explain its advantages and/or disadvantages to the Owner.
 - c. State the reduction in Contract Price if any that is offered to the Owner.
8. ENGINEER's Review Procedure and Meaning:
- a. The ENGINEER will stamp and mark each Product Review submittal prior to returning it to the CONTRACTOR. The ENGINEER shall have twenty-one (21) calendar days from the date of receipt to review a submittal. The stamp will indicate whether or not the review was favorable and what action is required of the CONTRACTOR. Review categories "No Exceptions Taken" and "Make Corrections Noted" both indicate Favorable Review.
 - b. The ENGINEER's Favorable Review is contingent on the CONTRACTOR'S warranties required by General Conditions.
 - c. Favorable Review is also contingent on:
 - (1) The compatibility of items included in a submittal with other related or interdependent items included in previous or future submittals.
 - (2) Future submittal of items related to or required to be part of this submittal that was not included with this submittal.
 - (3) Favorable Review of a submittal does not constitute approval or deletion of items required as part of the submittal but not included with the submittal. Favorable Review of items included in the submittal does not constitute deletion of specified features, options or accessories that were not included in the submittal.
 - d. The action required by the CONTRACTOR for each category of review is as follows:
 - (1) NO EXCEPTIONS TAKEN. NO RESUBMITTAL REQUIRED.
 - (2) MAKE CORRECTIONS NOTED.
 - (3) NO RESUBMITTAL REQUIRED. The CONTRACTOR shall make corrections noted prior to manufacture.
 - (4) PARTIAL RESUBMITTALS REQUIRED. The CONTRACTOR shall submit related accessory or optional items as noted which are required but were not included with the submittal and/or shall resubmit unsatisfactory portions or attributes of items as noted. The CONTRACTOR may proceed to manufacture those portions of the submittal that will be unaffected by required resubmittals.

- (5) AMEND AND RESUBMIT. The CONTRACTOR shall amend and resubmit the submittal as noted or required to comply with the Contract Documents.
 - (6) REJECTED - RESUBMIT. The item submitted does not comply with the Contract Documents in a major way. Resubmit items that comply with the requirements of the Contract Documents.
- e. The letter of transmittal accompanying the returned Product Review submittal may contain numbered notes. Marking a corresponding number on a Shop Drawing or Product Data submittal shall have the same effect as applying the entire note to the submittal.
- 9. Resubmittals that contain changes that were not requested by the ENGINEER on the previous submittal shall be accompanied by a letter explaining the change.
 - 10. Favorable Review Required Prior to Proceeding.
 - a. Do not proceed with manufacture, fabrication, delivery or installation of items prior to obtaining the ENGINEERs Favorable Review of Product Review submittals.
 - 11. Intent and Limitation on ENGINEER's Review:
 - a. The CONTRACTOR has primary responsibility for submitting and providing work that complies with the requirements of the Contract Documents. That responsibility cannot be delegated in whole or in part to Subcontractors or suppliers. Neither the ENGINEER's Favorable Review nor the ENGINEER's failure to notice or comment on deficiencies in the CONTRACTOR'S submittal shall relieve the CONTRACTOR from the duty to provide work which complies with the requirements of the Contract Documents.

4.12 SUBSTITUTIONS OR PROPOSED EQUIVALENTS

- 1. Comply with the submittal requirements for Shop Drawings, Product Data, and Samples submitted for Product Review.
- 2. Time of Submittal:
 - a. Submittal of Proposed Equivalents shall be made within thirty-five (35) days of the Notice to Proceed. The ENGINEER may agree to a later submittal date if requested in writing within 35 days of the Notice to Proceed. The request shall identify the item, give the Specification reference, and proposed manufacturer and model number of the item that will be submitted and the proposed submittal date.
 - b. The ENGINEER's agreement to a later submittal date shall be in writing and shall not be construed as Favorable Review or acceptance of the manufacturer or item proposed.
- 3. Content of submittals shall be the same as that required for Product Data, Shop Drawings and Samples submitted for Product Review. In addition, the ENGINEER may request that the CONTRACTOR provide information on several recent similar installations of the item to verify its suitability. The information shall include the project name and location, the Owner's name, address, telephone number and name of a knowledgeable person to contact for information on performance of the product.

4. When the CONTRACTOR has listed a specific maker's products on its Bid, no changes will be permitted without submittal of acceptable evidence justifying the change and the ENGINEER's written approval.
5. If a non-equivalent substitute is submitted for review, it shall be accompanied by a proposed reduction in Contract Price which shall include the increased cost of engineering service required to evaluate the proposed substitute (which shall be paid to the Owner whether or not the substitute is accepted) plus the greater of 1) the difference in price between the first specified item and the item submitted and 2) the difference in value to the Owner between the two items.

4.13 PRODUCT INFORMATION SUBMITTALS

1. Submit three copies. No copies will be returned.
2. Product Information submittals are required for the Owner's permanent records and will be used for future maintenance, repair, modification or replacement work. Product Information submittals will be examined only to verify that the required submittals have been made; they will NOT BE REVIEWED for compliance with the Contract Documents.
3. Make Product Information submittals prior to delivering material, products or items for which Product Information submittals are required.
4. The CONTRACTOR has the sole and exclusive responsibility for furnishing products and work that meets the requirements of the Contract Documents.
5. The ENGINEER reserves the right to comment on any submittal and to reject any product or work delivered, installed or otherwise at any time that the ENGINEER becomes aware that it is defective or does not meet the requirements of the Contract Documents.

4.14 OPERATION AND MAINTENANCE MANUALS AND PARTS LIST

1. Submit three complete sets. Bind each copy in one or more "D" ring, 8-1/2x11, 3-ring binders with clear view spine and cover, National 79-692(3), K&M or equal. Prepare Titles for the spine and cover and a Table of Contents listing each piece of equipment. Organize the contents by Specification Section and paragraph number under which the equipment was specified. Provide labeled tab separators for each major item or group of smaller similar items. When standard manufacturer's literature is used highlight or mark all copies to show specific items and options provided.
2. Provide operation and maintenance manuals and parts list for all equipment furnished under this contract. Comply with the detailed requirements in Technical Provisions. Include instructions for delivery, storage, assembly, installation, lubrication, adjusting, start-up, operation and maintenance.
 - a. For all equipment include:
 - (1) Startup instructions.
 - (2) Normal operation instructions.
 - (3) Trouble shooting instructions.
 - (4) Lubrication instructions.
 - (5) Maintenance and reinstallation instructions.

- (6) Parts identification.
 - (7) List of spare parts recommended to have on hand.
 - (8) Operator safety instructions.
- b. For all Electrical Equipment, provide the following additional information:
- (1) Equipment ratings.
 - (2) Calibration curves and rating tables if appropriate.
- c. For Complex Equipment provide in addition:
- (1) Alternate specified operating modes.
 - (2) Emergency shutdown instructions.
 - (3) Normal shutdown instructions
 - (4) Long-term shutdown instructions
- d. Operation and maintenance manuals for systems composed of separate pieces of equipment shall include a system explanation of items 1, a, b, and c, and 3a through c, as well as the instructions for each separate piece of equipment.

2. Submit with Final Submittals.

4.15 AS-BUILT DRAWINGS

1. Provide a complete set of construction as-built drawings to the ENGINEER for review and acceptance.

4.16 MANUFACTURER'S CERTIFICATES

1. Submit three (3) copies.
2. When specified in Technical Provisions, submit manufacturers' certificate to ENGINEER for review. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate. Certificates may be recent or previous test results on material or Product, but must be acceptable to the ENGINEER.

(END SECTION)

ATTACHMENT D

LETTER OF TRANSMITTAL
 FOR SUBMITTAL NO.
 CONTRACTOR:
 ADDRESS:
 PHONE:
 FAX:

TO: Dee Jaspar & Associates, Inc. DATE: _____
 2730 Unicorn Road, Building A
 Bakersfield, CA 93308 CONTRACT NO: _____
 SPEC.NO: _____ PROJECT: _____

WE ARE SUBMITTING THE ENCLOSED:

SHOP DRAWING EQUIPMENT DATA MATERIAL DATA
SAMPLES CERTIFICATION OF COMPLIANCE OTHER
FOR YOUR: APPROVAL INFORMATION

PLEASE RETURN _____ COPIES FOR OUR RECORDS

ITEM NO.	DESCRIPTION OF ITEM	NO. OF COPIES	CONTRACT REFERENCE SPEC. SECTION OR DRAWING SHEET NO.	VARIATION

REMARKS: All deviations from the construction contract shall be explained in detail.

I certify that the above submitted items have been reviewed in detail and are correct and in strict conformance with the Contract Drawings and Specifications except as otherwise stated.

 NAME/SIGNATURE OF CONTRACTOR

DISPOSITION:

- APPROVED** **REVIEWED-NO CORRECTIONS NOTED**
 APPROVED AS REVISED **REVIEWED-CORRECTIONS NOTED-NO RESUBMITTAL REQUIRED**
 RETURNED FOR REVISION **REVIEWED-RESUBMITTAL REQUIRED**

SEE ATTACHED SHEET FOR COMMENTS

 SIGNATURE AND TITLE OF APPROVING AUTHORITY DATE _____

5.0 CONSTRUCTION SCHEDULE (BAR CHARTS)

5.1 SUBMITTALS

1. Project schedule submittals shall consist of FOUR (4) paper copies, eight and one-half inches (8 ½") by eleven inches (11") or eleven inches (11") by seventeen inches (17") inches and an electronic copy on CD format.
2. Baseline Project Schedule:
 - a. The CONTRACTOR shall submit the baseline project schedule within TEN (10) working days after receipt of the Notice to Proceed.
 - b. The ENGINEER will meet with the CONTRACTOR to review and discuss the proposed schedule within ten (10) working days of the meeting. At this meeting, the ENGINEER will inform the CONTRACTOR if the schedule is acceptable or if it must be revised and resubmitted.
 - c. In the event that correction of the baseline project schedule is required, the CONTRACTOR shall resubmit four (4) copies of the schedule with the corrections within 10 working days of the meeting. The ENGINEER will meet with the CONTRACTOR to review and discuss the schedule within ten (10) working days after receipt of the resubmittal. At this meeting, the ENGINEER will inform the CONTRACTOR if the Schedule is acceptable or if it must be revised and resubmitted.
3. Updates of the Project Schedule:
 - a. The updated project schedule shall be submitted by the 20th of each month.
4. Narrative Progress Report:
 - a. The CONTRACTOR shall submit four (4) copies of the monthly narrative progress report by the 20th of each month.
5. Failure to submit each package by the required date may result in a reduction in progress payment by DISTRICT for the corresponding month.
6. Look-Ahead Schedule: Look Ahead Schedule shall be submitted weekly. When a project meeting is scheduled, the Look Ahead Schedule shall be submitted at least twenty-four (24) hours prior to the meeting. The number of copies submitted and the payout and format of the look-ahead schedule shall be acceptable to the ENGINEER.
7. Cash-Flow Forecast:
 - a. The CONTRACTOR shall submit the initial cash-flow forecast within ten (10) working days after receipt of the Notice to Proceed.
 - b. The CONTRACTOR shall submit a revised cash-flow forecast when the monthly pay estimate varies from the current cash-flow projection by more than fifty percent (50%), or the cumulative payment to date varies from the forecast by more than twenty percent (20%).
 - c. The CONTRACTOR shall provide 4 copies of all cash-flow forecast submittals on 8½-inch by 11-inch paper and an electronic copy on 3.5-inch disk in a file format specified by the DISTRICT.

5.2 PROJECT SCHEDULE

1. The CONTRACTOR shall provide a critical path method (CPM) computer generated construction schedule using Suretrak, Microsoft Project, or equal software that has the capability of producing a Gantt chart.
2. The CPM schedule shall show in detail the CONTRACTOR'S plan of operations of the project. The degree of detail shall be to the satisfaction of the ENGINEER and shall include:
 - a. The project's critical path and significant project milestones.
 - b. The means, methods, and sequences for performing work.
 - c. Mobilization of plant and equipment.
 - d. Submission and approval of critical submittals.
 - e. Propose shutdowns and durations of existing facilities.
 - f. Fabrication and delivery of critical equipment and materials.
 - g. Approvals and permits required by regulatory agencies or other third parties.
 - h. Access to and availability of work areas.
 - i. Identification of interfaces and dependencies with preceding, concurrent, and follow-on CONTRACTORS.
 - j. Specified project phasing, milestones, and completion dates.
 - k. Testing.
 - l. The activities of the ENGINEER that may affect progress or affect required dates for completion of all or part of the work, including delivery of DISTRICT-furnished equipment.
3. Revisions to the Baseline Project Schedule:
 - a. The CONTRACTOR shall immediately advise the ENGINEER of proposed or required changes in the schedule logic, changes in the critical path or delays to the progress of the work.
 - b. The CONTRACTOR shall furnish a revised schedule within ten (10) days of the event giving rise to such claim. A narrative description of the change, the necessity for the change, the impact of the change to the specified project milestones, and the cost to DISTRICT if the revised schedule is accepted, shall be enclosed.
 - c. Within thirty days after the CONTRACTOR submits to the DISTRICT a written request for an extension of time, the ENGINEER shall return a written recommendation for the extension of time justified.
 - d. The CONTRACTOR shall furnish a final revised schedule within ten (10) days of the award by the ENGINEER of an adjustment in the time of completion of the work.

4. Monthly Project Schedule Updates:
 - a. The CONTRACTOR shall update the current project schedule monthly to show:
 - (i) Actual activity-start dates.
 - (ii) Actual activity-completion dates.
 - (iii) Estimated duration, in working days, to complete each activity that is started but not completed.
 - (iv) Actual total progress achieved to date on each activity in percent.
 - (v) Non-working days granted by the ENGINEER.

5.3 NARRATIVE PROGRESS REPORT

1. As part of the monthly updating process, the CONTRACTOR shall prepare a narrative progress report. The report shall describe the physical progress during the report period, the CONTRACTOR'S plan for continuing the work during the forthcoming report period, and actions planned to correct work that is behind schedule. The report shall also provide a discussion of potential delays and problems and their impact on performance and the overall project completion date.
2. If the project falls behind schedule by more than twenty (20) working days, the report shall contain proposed alternatives for schedule recovery.

5.4 CASH-FLOW FORECAST

1. The CONTRACTOR shall use any reasonable system to develop a cash-flow analysis that depicts the estimated cash expenditures in the aggregate, by month, over the life of the project. The CONTRACTOR shall provide data in both tabular and graphic display form.

(END OF SECTION)

6.0 INSPECTION OF THE WORK

6.1 SUBMITTALS

1. Orders: The CONTRACTOR shall submit, as soon as issued, three (3) copies of orders placed outside the CONTRACTOR'S plant for articles or materials to be incorporated in the work.
2. When requested by the ENGINEER, the CONTRACTOR shall furnish the ENGINEER such additional information as may reasonably be required regarding the character of the materials and the progress of their procurement, including copies of invoices, bills of lading, and shipping lists on all articles and materials for use on the work.
3. Test Report and Certifications:
 - a. Where certifications or mill-test reports are required, the CONTRACTOR shall submit three (3) complete, certified copies.
 - b. Certifications shall show chemical composition, mechanical properties, or other characteristics of the materials to be used in the work.
 - c. Material specified by a referenced standard shall be certifiable by the mill or manufacturer under that standard.
 - d. The testing, analysis, and certification shall be the responsibility of the CONTRACTOR.
4. Notices of Fabrication: The CONTRACTOR shall submit a separate notice of fabrication for each fabricated article and material.
 - a. For articles and materials fabricated outside Southern California, the CONTRACTOR shall submit the notice fourteen (14) days before starting fabrication.
 - b. For articles and materials fabricated within Southern California, the CONTRACTOR shall submit the notice five (5) days before starting fabrication.

6.2 RESPONSIBILITIES

1. The CONTRACTOR shall be responsible for full compliance with every requirement of the contract documents and shall ensure that the work is in full accordance with these requirements. At all times, the CONTRACTOR'S work will be subject to rigid inspection by the ENGINEER. Whether discovered by the CONTRACTOR or the ENGINEER, nonconforming work shall be corrected or replaced by the CONTRACTOR.
2. For convenience, materials or equipment to be incorporated in the work may be designated in the Specifications by a trade name or the name of a manufacturer and the manufacturer's catalog item number information. Materials, articles, or equipment, even if supplied by a manufacturer designated in the Specifications, shall be accepted only if the items meet all other specification requirements.
3. The CONTRACTOR shall furnish all tools, equipment, materials, supplies, and manufactured articles necessary or required for the performance and completion of the work included in the Contract, except for materials and equipment specified to be furnished by the DISTRICT. The materials, articles, and equipment provided for permanent installation in the work shall be new and shall be in accordance with these

Specifications.

4. The CONTRACTOR shall perform quality control on suppliers, manufacturers, products, services, site conditions, and workmanship to ensure that work conforms to the contract documents. The CONTRACTOR shall be prepared to document its quality control activity.
5. The CONTRACTOR shall require and ensure conformance with specified standards as a minimum quality for the work. When more stringent tolerances, codes, or specified requirements are required by a particular manufacturer or a particular item of work, the higher standards or more precise workmanship shall be provided.
6. The ENGINEER's inspections and tests are for the sole benefit of the DISTRICT and shall not:
 - a. Relieve the CONTRACTOR of responsibility for providing adequate quality 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 DISTRICT after acceptance of the completed work.
7. The CONTRACTOR shall be responsible for adjustments, corrections, or repairs found necessary after the delivery or installation of materials and articles.
8. Unidentified materials shall not be used in the work, including work at fabrication plants.

6.3 SEQUENCING AND SCHEDULING OF INSPECTIONS AND TESTS

1. The CONTRACTOR shall fully advise the ENGINEER regarding progress of the work in its various parts.
2. The CONTRACTOR shall furnish and prepare the required samples and test specimens ready for testing in time for the necessary tests and analysis.
3. Where the Specifications require work to be tested or approved, it shall be tested only in the presence of the ENGINEER.
4. The ENGINEER shall be given timely notice of the CONTRACTOR'S readiness for inspection and test. The length of advance notice shall be appropriate for the complexity of the inspection or test, the availability of the ENGINEER's staff, and the location of the inspection or test, but in no case shall less than twenty-four (24) hours advance notice be given.

6.4 TESTING

1. Materials and articles that are to be included in the works shall be subject to testing for conformance with the Specifications and Drawings.
2. When not otherwise specified, sampling and testing shall be in accordance with the methods prescribed in the current standards of ASTM applicable to the class and nature of the articles or materials considered. However, the ENGINEER will have the right to use any generally accepted method of testing that will ensure that the quality of materials,

articles, or work is in full accord with the Specifications and Drawings.

3. The ENGINEER will have the right to select, test, and analyze, at the expense of the DISTRICT, additional test specimens of the materials to be used. Results of these tests and analyses will be considered with the results of other tests or analyses, whether performed by the ENGINEER or the CONTRACTOR, to determine compliance with the applicable specifications for the materials.

6.5 INSPECTION BY THE ENGINEER

1. Materials and articles that are to be included in the works shall be subject to rigid inspection by the ENGINEER for conformance with the Specifications and Drawings. The CONTRACTOR shall plan for the inspections to be continuous, repetitive, and detailed.
2. Orders for materials, articles, and equipment shall note that the articles, materials, and equipment are subject to inspection and acceptance by the DISTRICT, both during manufacture or fabrication and after delivery to the site.
3. When practicable and convenient for the ENGINEER, inspection will be made during the manufacture of the articles and equipment.
4. The location, alignment, grade, plumb, and other physical characteristics of formwork for concrete, items to be embedded in concrete and permanent improvements shall be subject to rigid survey verification.
5. Materials or articles shall not be incorporated in the work until they have been inspected by the ENGINEER.
6. After testing, work shall be covered or backfilled only with the approval of the ENGINEER.

6.6 FACILITIES FOR INSPECTION AND TESTING

1. The CONTRACTOR shall furnish the facilities, utilities, and assistance necessary for the safe and convenient performance of inspections and tests required by the Specifications or by the ENGINEER.
2. The CONTRACTOR shall provide adequate lighting, access, and ventilation for a safe working environment for inspections and tests.
3. The CONTRACTOR shall cooperate with the ENGINEER's staff in the performance of their respective duties and shall provide qualified personnel to assist with the performance of tests and inspections by them.
4. When the Specifications require tests or inspections to be performed by the CONTRACTOR, the CONTRACTOR shall provide qualified personnel to perform them.

6.7 REJECTION OF WORK

1. The ENGINEER will have the right, at all times and in all places, to reject articles or materials to be furnished for the project that fail to meet the requirements of these Specifications. This shall be regardless of whether the defects in these articles or materials are detected at the point of manufacture or after completion of the work at the site.
2. The ENGINEER will be the sole judge as to the acceptable quality of materials, articles,

and work. However, where the ENGINEER, through an oversight or otherwise, accepts material, articles, or work that is defective or that is contrary to the Specifications, the material, article, or work, no matter in what stage or condition of manufacture, delivery, or erection, may be rejected by the ENGINEER.

3. Promptly after notification of rejection by the ENGINEER, the CONTRACTOR shall remove rejected portions or items of materials, articles, or work to a satisfactory distance from the vicinity of accepted items and shall replace them.

6.8 FINAL INSPECTIONS AND ACCEPTANCE

1. Finals inspections for acceptance of materials, articles, equipment, and work will be made at the completion of all contract work.
2. A minimum of ten (10) working days prior to the estimated completions of the work, the CONTRACTOR shall notify the ENGINEER in writing of the pending completion of the entire work or an agreed portion thereof. The CONTRACTOR shall include with the notice a complete list of work items remaining to be completed.
3. On or about the CONTRACTOR'S estimated completion date, the ENGINEER will make a thorough inspection of the entire work. Defects or deficiencies noted during this inspection will be reported to the CONTRACTOR in writing.
4. If the ENGINEER determines the work to be complete, it will be accepted. If defects or deficiencies are noted during this inspection, they will be reported in writing to the CONTRACTOR. When the CONTRACTOR notifies the ENGINEER of the correction of these items, another final inspection will be scheduled.

(END OF SECTION)

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7.0 CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

7.1 SUBMITTALS

1. Drawings: The CONTRACTOR shall submit drawings showing the methods of temporary support and protection, along with calculations for the types of support structures of pipelines, utilities, and structures to remain in place or whose initial or subsequent alignment will be temporarily changed during construction.
2. Leases: If the CONTRACTOR elects to store materials or equipment at warehouses or yards on lands not owned by DISTRICT, a copy of all leases shall be submitted.

7.2 CONTRACTOR'S WORK AND STORAGE YARD AREA

1. The CONTRACTOR shall locate offices, employee parking, storehouses, and storage areas for materials and equipment in the work and storage area.
2. The CONTRACTOR shall be responsible for the care of materials and equipment stored in the work and storage yard areas and warehouses, and for the proper maintenance of fencing and structures.
3. If the CONTRACTORS elect to store materials or equipment at warehouses or land not owned by the DISTRICT, the lease or leases for such premises shall provide that the lesser notify the DISTRICT immediately upon the CONTRACTOR'S default in the payment of rent on one or more of the leases.
 - a. DISTRICT shall have the right to make payment of rent on behalf of the CONTRACTOR, shall be entitled to withhold from payments due the CONTRACTOR the amount paid, and shall, in addition, be entitled to withhold a sum sufficient to reimburse the DISTRICT for expenses incurred in making the rent payments.
 - b. A copy of all leases for yards or storehouses shall be submitted to the ENGINEER at the time of execution of the Contract or when the lease is executed whichever occurs last.

7.3 FIRE PROTECTION AND PREVENTION

1. All materials to be incorporated into the work shall be adequately protected against damage by fire. Hose connections and hose, water casks, chemical equipment, and other equipment required by local jurisdictions shall be provided for fighting fires.
2. The exhaust pipes of internal combustion engines used in the work shall be equipped with approved spark arresters.

7.4 DUST CONTROL

1. The CONTRACTOR shall provide effective measures to prevent operations from producing dust in amounts damaging to personnel, property, plants, or animals, and to prevent causing a nuisance to persons living or occupying buildings in the vicinity.
2. Areas used by the CONTRACTOR for construction roads or other purposes in connection with the work shall be given an approved dust inhibiting surface treatment to avoid production of dust. This surface condition shall be continuously maintained during the entire construction period. The CONTRACTOR'S construction facilities shall be operated in a manner ensuring minimum dust production.

3. Trucks transporting soil, or cement, or debris shall be covered or moistened with water to suppress the dispersion of dust.
4. CONTRACTOR'S construction operations shall be in compliance with his Dust Control Permit at all times during the project.

7.5 LIGHT ABATEMENT

1. The CONTRACTOR shall exercise special care to direct floodlights to shine downward at an angle less than horizontal. These floodlights shall also be shielded to avoid a nuisance to the surrounding areas. No lighting shall include a residence in its direct beam. The CONTRACTOR shall correct lighting nuisance whenever it occurs.

7.6 AIR POLLUTION CONTROL

1. The CONTRACTOR shall not discharge smoke, dust, or other air contaminants into the atmosphere in a quantity that exceeds the legal limit.
2. The CONTRACTOR shall maintain equipment in proper mechanical adjustment to minimize the volume of exhaust emissions.

7.7 NOISE CONTROL

1. The CONTRACTOR shall conduct operations to abate noise and to minimize noise where complete abatement is not possible.
2. To limit noise, construction vehicle equipment shall be kept in proper working order for the duration of the construction activities.

7.8 CLEANING UP

1. During all phases of construction, including suspensions of the work, and until final acceptance the CONTRACTOR shall keep the site clean and free from rubbish and debris.
2. Upon completion of the work and before the final estimate is submitted, the CONTRACTOR shall satisfactorily dispose of or remove from the vicinity of the work all plants, buildings, rubbish, unused materials, concrete forms, and other equipment and materials used during construction.
3. If the CONTRACTOR fails to maintain the premises in a neat and clean condition or fails to remove and dispose of rubbish or materials at the completion of the project, the area may be cleaned and materials, equipment, and rubbish may be removed and disposed of by the DISTRICT at the CONTRACTOR'S expense.
4. The CONTRACTOR will not be permitted to use DISTRICT'S trash bins for disposal of trash or rubbish.

7.9 PROTECTION OF NEW AND EXISTING IMPROVEMENTS

1. The general locations of existing utility installations shown on the Drawings are those that are known to exist, but this listing shall not be construed as a complete listing.
2. Where existing piping, utilities, and structures are to remain in place, these facilities shall be temporarily supported and protected until the work has been completed, and compacted backfill has been placed to fully support them. Facilities adjacent to the work

shall be protected in place when excavating in their vicinity. The support system shall prevent movement, dislocation, and deflection of the piping, utilities, and structures at all times. Supports and protection shall be designed by a Civil Engineer currently registered in the State of California and shall be acceptable to the DISTRICT of the improvement.

3. The CONTRACTOR shall cover and protect open holes at all times.

7.10 RESTORATION OF IMPROVEMENTS

1. Upon completion of the work, the CONTRACTOR shall reconstruct existing roads to a condition equivalent to that which existed before the start of work.

7.11 SECURITY

1. The CONTRACTOR shall prevent unauthorized personnel or vehicular entry into the project site.
2. The CONTRACTOR shall be responsible for providing security within the work site as the CONTRACTOR deems necessary for the protection of its own equipment, materials, or work from vandalism or theft. DISTRICT will not be responsible for theft or damage to the CONTRACTOR'S equipment, materials, or work.

(END OF SECTION)

8.0 MOBILIZATION AND DEMOBILIZATION

8.1 MOBILIZATION

Mobilization shall include moving onto the site; payment for bonds, ordering major equipment; furnishing construction equipment; and furnishing and erecting drilling equipment, temporary buildings, and other construction facilities for the performance and completion of the work and further specified in the Technical Specifications.

8.2 PAYMENT FOR MOBILIZATION

1. As soon as practicable after receipt of the Notice to Proceed, the CONTRACTOR shall submit a breakdown showing the relative value of each major component of mobilization and demobilization, including furnishing bonds, where the total of all these values is equal to the amount of Item No. 1 in the section titled "Schedule of Work Items" in the Bid Documents. This breakdown, when approved by the ENGINEER, shall be the basis for determination of percentage completion and progress payments for mobilization.
2. Progress payments for mobilization will be made on a percentage of completion basis of the price name in the "Bid Form" under Item No. 1.
3. The maximum amount allowed for Mobilization and Demobilization shall not exceed seven and one-half percent (7 ½ %) of the total bid.

(END OF SECTION)

9.0 TEMPORARY UTILITIES AND SERVICES

9.1 REFERENCES

1. General
 - a. The publications listed below form a part of this specification to the extent referenced.
 - b. Where a date is given for reference standards, the edition of that date shall be used. Where no date is given for reference standards, the latest edition available on the date of Notice Inviting Bids shall be used.
2. National Fire Protection Association (NFPA)
 - a. National Electrical code (NEC).

9.2 SUBMITTALS

1. Plans: A plot plan drawing of temporary utility layouts shall be submitted to the ENGINEER's field office. A single line diagram of the temporary construction power system shall be included.
2. Permits: The CONTRACTOR shall obtain and pay for all permits for temporary utilities and shall submit one copy of each permit to the ENGINEER's field office.

9.3 WATER

1. DISTRICT will furnish reasonable quantities for use in construction free of charge to the CONTRACTOR at locations designated by the ENGINEER and under the following terms and conditions:
 - a. The CONTRACTOR shall conserve water supplies and shall install approved meters to provide DISTRICT with records of the volume of water used. Undue waste of water will be reason for DISTRICT to close these sources to further use by the CONTRACTOR.
 - b. The method of pumping and the capacity and condition of pumps used by the CONTRACTOR shall be subject to the ENGINEER's approval.
 - c. The water sources to be designated by the ENGINEER will provide treated and untreated water. However, in permitting the use of water, no representation is made that water will always be available from that source. During system shutdowns or other similar occasions, water may not be available for the CONTRACTOR'S use. At these times, the CONTRACTOR shall provide water from its own sources.
2. The CONTRACTOR shall be solely responsible for the adequate functioning of its water supply system and shall be solely liable for claims or damage resulting from its use.
3. The CONTRACTOR shall provide and operate pumping plants, pipelines, valves, hydrants, storage tanks, and other equipment necessary to store and convey an adequate supply of water from the source to each work area. The design of the storage and conveyance system shall include consideration of the CONTRACTOR'S plan for fire protection. A reduced-pressure-principle backflow preventer or air gap shall be installed by the CONTRACTOR at each connection point of the CONTRACTOR'S water supply

system to the source. The backflow preventer shall be tested by a certified backflow preventer assembly tester, and a copy of the report shall be provided to the ENGINEER. The CONTRACTOR shall provide secondary containment for canal-side pumps to ensure that no oil or other contaminants enter the water supply.

4. Treated and untreated water supply outlets shall be labeled in accordance with applicable laws and regulations.

9.4 ELECTRICITY

1. Electrical Power: The CONTRACTOR shall provide the power required for its operations. The CONTRACTOR shall provide and maintain, in good order, power equipment and installations to perform the work required.
 - a. Construction Lighting: When work is permitted to be conducted at night or under conditions of deficient light, the work area shall be suitably lighted to afford adequate illumination for performance and inspection of the work. Lighting for construction activities shall be directed away from residential areas, public highways, and roads.
2. Construction Electrical Wiring and Equipment: Construction electrical wiring and equipment shall be in accordance with CCR Title 8 and NEC.

9.5 TELEPHONE

1. The CONTRACTOR shall provide and maintain the telephone equipment and service required for its operations. At all times during the progress of the work, not less than one telephone shall be maintained in good order at each work site.
2. Calls originated by DISTRICT employees that involve toll or message unit charges shall be billed to DISTRICT by the CONTRACTOR on an invoice substantiated by a copy of the telephone company billing.

9.6 SANITATION

1. The CONTRACTOR shall provide and maintain sanitary conveniences for the use of all persons employed on the work. They shall be in sufficient number and at such places as ordered or approved by the ENGINEER and shall be in accordance with CCR Title 8.
 - a. Fixed or portable chemical toilets shall be provided wherever needed for the use of employees.
 - b. Washing facilities shall be provided wherever needed for the use of employees.
2. Sanitary fixtures, receptacles, toilet rooms, washrooms, and lavatories shall be kept clean and shall be frequently disinfected. The cleaning and disinfection of sanitary conveniences shall not be less than twice a week.

9.7 OTHER UTILITIES

1. The CONTRACTOR shall provide and maintain all other utilities required for its operations under the Contract.

9.8 REMOVAL OF TEMPORARY UTILITIES

1. Each temporary utility shall be removed, as soon as the need for it has ended.

2. The CONTRACTOR shall remove the CONTRACTOR'S field office promptly upon written direction from the ENGINEER. Utility services shall be disconnected and capped. The area shall be restored, clean and free of any evidence of scarred landscape or damage to the surrounding vegetation.

(END OF SECTION)

10.0 ACCESS, PARKING, AND TRAFFIC

10.1 REFERENCES

1. General
 - a. The publications listed below form a part of this specification to the extent referenced.
 - b. Where a date is given for reference standards, the edition of the date shall be used. Where no date is given for reference standards, the latest edition available on the date of the Notice Inviting Bids shall be used.
2. Caltrans Manual of Traffic Controls for Construction and Maintenance Work Zones.

10.2 SUBMITTALS

1. The CONTRACTOR shall submit a copy of the haul route permit, if applicable.

10.3 ACCESS TO WORK SITE

1. The CONTRACTOR shall coordinate with the ENGINEER to determine appropriate routing of vehicles and personnel to and from the project.
2. In case of need to enter the site after normal working hours, access shall be arranged in advance with the ENGINEER.
3. The CONTRACTOR shall confine its activities and operations within the work area shown on the Drawings except as otherwise permitted by the ENGINEER.

10.4 TRAFFIC CONTROL

1. The CONTRACTOR shall be responsible for the safe movement of vehicular traffic to and from the worksite, including traffic control measures required to ensure safe passage of vehicles and equipment.
2. Traffic control shall be in accordance with CCR Title 8.
 - a. At least one (1) flagman shall be provided at each intersection during periods when the CONTRACTOR'S vehicular activity may conflict with other traffic along roads.
 - b. The flagman shall ensure that the right-of-way is granted to loaded vehicles and shall provide for safety of all users of the road.
3. Traffic control and signage shall be in accordance with Manual of Traffic Control for Construction and Maintenance Work Zones.
4. Contractor shall obtain an encroachment permit from the County of Kern or the City of Arvin, as applicable, and shall prepare and obtain approval of the Plan from the appropriate authorities (see Section 11.0, "Traffic Regulation").

10.5 HAUL ROUTES

1. If a permit is required by local authorities for off-site hauling of materials, the CONTRACTOR shall prepare the truck-routing plan, obtain the permit, and submit a copy

of the permit to the ENGINEER before construction begins.

2. The plan shall include provisions for cleaning soil and rock from the truck route.
3. Consideration shall be given to weight restrictions on all roads.
4. The CONTRACTOR shall obtain approval of the local authority for construction signage along the haul route to notify the public of the potential for delay.
5. The CONTRACTOR shall inform the ENGINEER and local authorities when hauling operations are to begin and end.

10.6 ACCESS ROADS

1. Throughout the entire Contract period, the CONTRACTOR shall share access roads, both those constructed by the CONTRACTOR or otherwise provided for CONTRACTOR'S use, with the DISTRICT and other CONTRACTORS whose work is adjacent to the CONTRACTOR'S work.

- a. Coordination with other CONTRACTORS shall be the responsibility of the CONTRACTOR. In case of conflicts or disputes, the Engineer's decision will be final.
- b. The CONTRACTOR shall be responsible for the maintenance and upkeep of access roads constructed by the CONTRACTOR.
- c. The CONTRACTOR shall provide dust control on project site access roads used in CONTRACTOR operations and on those roads subject to dust because of conditions created by the work.
 - (1) Roads shall be sprayed by water truck at least daily or more frequently during actual haul operations.
- d. If any paved access roads become damaged during the work, the CONTRACTOR shall promptly repair them with equivalent surfacing.

10.7 PARKING

1. On-site parking areas for CONTRACTOR personnel shall be limited to the areas approved by the DISTRICT.
 - a. Parking areas required in excess of those areas shown shall be developed by the CONTRACTOR, off-site, at the CONTRACTOR'S expense.
 - b. The CONTRACTOR shall provide transportation for personnel from parking areas to the work areas.
 - c. The CONTRACTOR'S personnel, suppliers, and delivery vehicles shall not park anywhere other than areas approved by the DISTRICT within the project site fencing.
 - d. At the CONTRACTOR'S option, the CONTRACTOR'S personnel may park in the area designated for CONTRACTOR storage.

(END OF SECTION)

11.0 TRAFFIC REGULATION

11.1 DESCRIPTION

This Section describes procedures for traffic regulation during construction in public streets and highways, if applicable as determined by the DISTRICT.

11.2 STANDARD SPECIFICATIONS

Wherever reference is made to the State Specifications and Plans, such reference shall mean the State of California, Business and Transportation District, Department of Transportation Standard Specifications and Plans, 1992 edition for English units.

11.3 SUBMITTALS

The CONTRACTOR shall provide a complete plan for traffic control during the project to the DISTRICT prior to the execution of work, if applicable.

11.4 MEASUREMENT AND PAYMENT

Payment for conforming to all of the traffic control requirements of these Specifications shall be considered to be included in the contract unit or lump-sum price paid for the various items of work wherein maintenance of traffic and detours is required and no additional allowance will be made therefore.

11.5 GENERAL

1. Provide safe and continuous passage for pedestrian and vehicular traffic at all times.
2. Control traffic at those locations indicated and in conformance with the approved traffic control plans and specifications.
3. Furnish, construct, maintain, and remove detours, road closures, traffic signal equipment, lights, signs, barricades, fences, K-rail, flares, solar-powered flashing arrow signs, miscellaneous traffic devices, flagmen, drainage facilities, paving, and such other items and services as are necessary to adequately safeguard the public from hazard and inconvenience. All such work shall comply with the ordinances, directives, and regulations of authorities with jurisdiction over the public roads in which the construction takes place and over which detoured traffic is routed by the CONTRACTOR. After devices have been installed, the CONTRACTOR shall, at his own expense, maintain and keep them in good repair and working order until no longer required. The CONTRACTOR shall also pay the cost of replacing such devices that are lost or damaged, to such an extent as to require replacement, regardless of the cause of such loss or damage.
4. Prior to the start of construction operations, notify the police, and fire department in whose jurisdiction the project lies, giving the expected starting date, completion date, and the names and telephone numbers of two responsible persons who may be contacted at any hour in the event of a condition requiring immediate emergency service to remove, install, relocate, and maintain warning devices. In the event these persons do not promptly respond or the authority deems it necessary to call out other forces to accomplish emergency service, the CONTRACTOR will be held responsible for the cost of such emergency service.
5. Provide a minimum of 48 hours' notice to the DISTRICT for any work which may affect signal loops, equipment, or devices. In the event that any underground utilities, traffic devices, pipes, or conduits are damaged and require emergency repair by the respective

utility owner, all costs incurred by the utility owner in making such repairs, plus 5% percent for administration costs, shall be paid by the CONTRACTOR.

6. Post the construction information signs at least three (3) weeks prior to construction.

11.6 TRAFFIC CONTROL DEVICES AND SIGNS

1. Traffic control devices and temporary striping shall conform to the State Standard Plans and Specifications. Construction signs shall conform to the latest edition of the State of California Sign Specification Sheets.
2. The placement of construction signing, striping, barricades, and other traffic control devices used for handling traffic and public convenience shall conform to the latest edition of the State of California, Department of Transportation, "Manual of Traffic Controls for Construction and Maintenance Work Zones".
3. Signs shall be illuminated or reflectorized when they are used during hours of darkness. Cones and portable delineators used for night lane closures shall have reflective sleeves. Barricades used in the diversion of traffic shall be equipped with flashers if in place during hours of darkness.
4. During the duration of a detour, cover all existing signs not in accordance with the traffic control plan. Existing signs which are in force shall be relocated to provide visibility from all relocated traffic lanes.

(END OF SECTION)

12.0 DELIVERY, STORAGE, AND HANDLING

12.1 SUBMITTALS

1. Product Data: Two copies of the manufacturer's printed recommendations for storage, handling, and protection of materials, articles, and equipment to be incorporated in the work shall be submitted a minimum of thirty (30) days prior to the receipt of the material, article, or equipment at the site.
2. Test Reports and Certifications: Items requiring certification or mill test reports shall not be delivered or unloaded until 3 copies of the certification or mill test report have been delivered to the ENGINEER's field office.

12.2 GENERAL

1. Materials, articles, and equipment shall be delivered, stored, and handled in accordance with these Specifications and the printed recommendations of the manufacturer; using means and methods that will prevent damage, deteriorations, and loss, including theft.

12.3 DELIVERY

1. Delivery shall be scheduled to minimize long-term storage at the site and to prevent overcrowding of construction spaces. Special emphasis shall be placed on ensuring minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, or other losses.
2. Items shall be delivered to the site in the manufacturer's original sealed container or packaging system, complete with legible and intact labels and instructions for handling, protecting, storing, and unpacking. The label shall include the manufacturer's name, product name, manufacturing batch number (if appropriate), expiration date, ANSI hazard classification and ANSI handling precautions, if applicable.

12.4 STORAGE

1. Items subject to damage by the elements shall be stored in a warehouse or within a weatherproof enclosure or wrap that has adequate ventilation to prevent condensation. Flammable materials shall be stored in a separate area. Temperature and humidity shall be maintained within the range required by the manufacturer's printed recommendations.
2. Materials and equipment that are to be included in the CONTRACTOR'S estimate for partial payment shall be stored in a manner that will facilitate inspection and inventory. Items requiring periodic maintenance or inspection shall be stored in a manner that will facilitate these operations.
3. If the ENGINEER determines that satisfactory storage of an item is not being provided by the CONTRACTOR, the ENGINEER may direct the CONTRACTOR to provide additional protection. If the CONTRACTOR fails to provide the additional protection, protection may be provided by DISTRICT. The cost for providing the protection may be charged to the CONTRACTOR or deducted from payment due the CONTRACTOR.
4. Installed items shall have protection provided equivalent to that specified above, with additional regard for possible damage or loss due to continuing construction operations.

12.5 HANDLING

1. CONTRACTOR shall supply appropriate equipment and personnel to handle materials,

articles and equipment in a safe manner and in a manner that will not cause damage to the product, to the environment, to work in progress, or to work in place.

(END OF SECTION)

13.0 CLEANING DURING CONSTRUCTION & FINAL CLEANING

13.1 GENERAL

1. This Section includes cleaning during construction and final cleaning on completion of the work.
2. At all times maintain areas covered by the Contract and adjacent properties and public access roads free from accumulations of waste, debris, and rubbish caused by construction operations.
3. Conduct cleaning and disposal operations to comply with local ordinances and antipollution laws. Do not burn or bury rubbish or waste materials on project site. Do not dispose of volatile wastes, such as mineral spirits, oil, or paint thinner, in storm or sanitary drains. Do not dispose of wastes into streams or waterways.
4. Use only cleaning materials recommended by manufacturer of surface to be cleaned.

13.2 CLEANING DURING CONSTRUCTION

1. During execution of work, clean site, adjacent properties, and public access roads and dispose of waste materials, debris, and rubbish to assure that buildings, grounds, and public properties are maintained free from accumulations of waste materials and rubbish.
2. Wet down dry materials and rubbish to lay dust and prevent blowing dust.
3. Provide containers for collection and disposal of waste materials, debris, and rubbish.
4. Cover or wet excavated material leaving and arriving at the site to prevent blowing dust. Clean the public access roads to the site of any material falling from the haul trucks.

13.3 FINAL CLEANING

1. At the completion of work and immediately prior to final inspection, clean the entire project site as follows.
2. Clean, sweep, and pick-up all work, equipment, and trash from the area.
3. Grade project site to be smooth, flat and uniform as approved by the ENGINEER.
4. Ensure that all holes, tubes, and casings are adequately capped and covered to prevent access to openings as approved by the ENGINEER.
5. Remove from the site all temporary - structures and all materials, equipment, and appurtenances not required as a part of, or appurtenant to, the completed work.
6. Wash down all paved areas and remove all sediment and debris for the project area.

(END OF SECTION)

14.0 CONTROL OF THE WORK

14.1 AUTHORITY OF ENGINEER

The ENGINEER is defined as the person or firm authorized by the DISTRICT to represent it during the performance of the work by the CONTRACTOR. The ENGINEER shall include persons, designated by the ENGINEER in writing to the CONTRACTOR, expressly authorized to act for the ENGINEER when the ENGINEER is not available to make decisions or take action required of the ENGINEER under the Contract Documents. The ENGINEER has the authority to decide all questions which may arise as to the quality or acceptability of materials furnished and work performed; and as to the manner of performance and rate of progress of the work; all questions which arise as to the interpretation of these Contract Documents; all questions as to the acceptable fulfillment of the Contract on the part of the CONTRACTOR; and all questions as to compensation. The ENGINEER's decision shall be final and not subject to appeal to DISTRICT staff or Board of Directors. The ENGINEER shall further have the authority to implement decisions by direction to the CONTRACTOR which CONTRACTOR shall carry out promptly.

14.2 USE OF MATERIALS FOUND ON THE PROJECT SITE

The DISTRICT does not warrant the suitability of any native material on the Project Site for use in the Project. The CONTRACTOR, with the approval of the ENGINEER, may use in the proposed construction such stone, gravel, sand or other material as may be found on the Project Site and deemed suitable in the opinion of the ENGINEER. The CONTRACTOR shall replace at his/her own expense all of that portion of the material so removed and used with other suitable material. No charge for native materials so used will be made against the CONTRACTOR. The CONTRACTOR shall not excavate or remove any material from any roadway location that is not within the excavation, as indicated by the slope and grade lines shown on the Contract Drawings, without written authorization from the ENGINEER.

14.3 CONFORMITY WITH PLANS AND ALLOWABLE DEVIATIONS

Pipes, structures and finished surfaces in all cases shall conform to the lines, grades, cross-sections and dimensions shown on the Plans. Deviations from the Contract Drawings as may be required by the exigencies of the construction will be in all cases determined by the ENGINEER and authorized in writing only.

14.4 COORDINATION OF GENERAL CONDITIONS, SPECIAL PROVISIONS, PLANS AND DRAWINGS

These General Conditions, Special Provisions, Technical Provisions, Plans, Drawings, Contract Change Orders, and all supplementary documents are essential parts of the Contract, and a requirement occurring in one (1) is as binding as though occurring in all. All parts are intended to be cooperative and to describe and provide for a complete work. In the event of conflict between Sections, the most stringent requirements shall apply.

14.5 INTERPRETATION OF DRAWINGS AND SPECIFICATIONS

Should it appear that the work to be done, or any matter, is not sufficiently detailed or explained in the Contract Documents, the CONTRACTOR shall apply to the ENGINEER for such further explanations as may be necessary and shall conform to them as part of the Contract, so far as may be consistent with the DISTRICT'S original intent. Any reference made in these Specifications or on the Drawings to any specification, standard, method, or publication shall be understood to refer to the latest revision of the reference. In the event of any discrepancy between any drawing and the figures written thereon, the figures shall be taken as correct.

14.6 SUPERINTENDENCE

Before starting work, the CONTRACTOR shall designate in writing an authorized representative who shall have complete authority to represent and act for the CONTRACTOR. An authorized representative of the CONTRACTOR shall be present at the Project Site at all times while work is in progress. Whenever the CONTRACTOR is not present on any part of the work where his/her presence may be desired to give direction, orders may be given by the ENGINEER in writing, and shall be received and obeyed by the superintendent or foreperson in charge of the particular work in reference to which orders are given. The ENGINEER shall have the authority to remove from the Project any employee of CONTRACTOR or any subcontractor, including, without limitation, any superintendent, foreman or other authorized representative, who refuses to obey an order or otherwise delays or disrupts the Project.

The CONTRACTOR shall supervise and direct the work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the work in accordance with the Contract Documents. The CONTRACTOR shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction, but the CONTRACTOR shall not be responsible for the negligence of others in the design or selection of a specific means, method, technique, sequence, or procedure of construction where indicated in and required by the Contract Documents.

The CONTRACTOR shall be responsible to see that the completed work complies with the Contract Documents.

14.7 INSPECTION

One (1) or more inspectors may be assigned to observe the work and to act in matters of construction under this Contract. Such inspectors shall have the power to issue instructions and make decisions within the limitations of the authority of the ENGINEER. Such inspection shall not relieve the CONTRACTOR of the obligations to conduct comprehensive inspections of the work, to furnish materials, to perform acceptable work, and to provide adequate safety precautions in conformance with the intent of the Contract. Neither the inspection by the DISTRICT through the ENGINEER, the DISTRICT Inspector or any DISTRICT employees, nor any order by the DISTRICT for payment of money, nor any payment for, or acceptance of, the whole or any part of the work by the DISTRICT, nor any extension of time, nor any possession taken by the DISTRICT or its employees, shall operate as a waiver of any provision of this Contract, or any power herein reserved to the DISTRICT or any right to damages herein provided, nor shall any waiver of any breach in this Contract be held to be waiver of any other or subsequent breach.

14.8 FINAL INSPECTION

When the Contract work has been completed, the CONTRACTOR shall file notification in writing with the ENGINEER, and the ENGINEER will make a final inspection.

14.9 REMOVAL OF DEFECTIVE OR UNAUTHORIZED WORK

All work which has been rejected shall be remedied or removed and replaced by the CONTRACTOR in an acceptable manner and no compensation will be allowed for such removal or replacement. Any work done beyond the lines and grades shown on the Contract Drawings or established by the ENGINEER, or any extra work done without written authority will be considered as unauthorized and will not be paid for. Work so done may be ordered removed at the CONTRACTOR's expense. Upon failure on the part of the CONTRACTOR to comply promptly with any order of the ENGINEER made under the provisions of this article, the ENGINEER shall have the authority to cause defective work to be remedied or removed and replaced, and unauthorized work to be removed, and to deduct the costs from any monies due or which become due the CONTRACTOR.

14.10 EQUIPMENT

The CONTRACTOR shall provide adequate and suitable equipment to produce the quality and quantity of work required, and, when ordered by the ENGINEER, shall remove unsuitable equipment from the site. All vehicles used to haul materials over existing highways shall be equipped with pneumatic tires.

14.11 RIGHT OF DISTRICT TO TERMINATE CONTRACT

14.11.1 Termination for Convenience - The DISTRICT may terminate this Contract in whole or in part at any time by written notice to the CONTRACTOR, if the DISTRICT determines that termination is in its interest or the public interest. If the Contract is so terminated CONTRACTOR shall be entitled to payment for all work performed acceptably and to payment for all acceptable goods or services ordered by and delivered to CONTRACTOR before receipt of the written notice of termination, and to all reasonable costs of closing out the Contract, provided that CONTRACTOR provides a final itemized invoice for the above amounts within thirty (30) days after receiving the termination notice. CONTRACTOR shall not be entitled to its as-bid profit for the project or any work not performed. Profit on work performed shall be paid at the contract rates for time-and-materials extra work, provided that no profit shall be paid for mobilization, record Drawings, or O&M Manual line items, as applicable.

14.11.2 Termination for Cause - If the work to be done under this Contract shall be abandoned by the CONTRACTOR, or if this Contract shall be assigned by CONTRACTOR otherwise than as herein provided, or if a general assignment of assets be made for the benefit of creditors, or if a receiver should be appointed for the CONTRACTOR or any of CONTRACTOR's property, or if at any time the ENGINEER finds that the performance of the work under this Contract is being unnecessarily delayed or that the CONTRACTOR is violating any of the conditions or covenants of this Contract, or executing the same in bad faith or otherwise not in accordance with the terms of said Contract, or if the work be not substantially completed within the time named for its completion or within the time to which such completion date may be extended, then the DISTRICT may serve written notice upon the CONTRACTOR and his/her Surety of said DISTRICT'S intention to terminate this Contract and, unless within five (5) days after the serving of such notice upon the CONTRACTOR, a satisfactory arrangement is made for the continuance thereof, this Contract shall cease and terminate. In the event of such termination, the DISTRICT will immediately serve notice thereof upon the Surety and the CONTRACTOR, and the Surety shall have the right to take over and complete the work; provided, however, that if the Surety does not commence performance within fifteen (15) days from the date of said notice of termination, the DISTRICT may take over the work and prosecute same to completion, by Contract or otherwise, for the account and at the expense of the CONTRACTOR, and the CONTRACTOR and its Surety shall be liable to the DISTRICT for any and all excess costs sustained by the DISTRICT by reason of such prosecution and completion, including, without limitation, all costs incurred by reason of termination and all damages, including liquidated damages, from late completion. In such event the DISTRICT may take possession of, and utilize in completing the work all such plant materials, equipment, and tools as may be on the work site and necessary therefore.

14.12 CONTRACTOR'S RIGHT TO TERMINATE CONTRACT

If the work shall be stopped in its entirety under an order of any court or other public authority for a period of three (3) months through no act or fault of the CONTRACTOR or of anyone employed by him/her, then the CONTRACTOR may on seven (7) days' written notice to the DISTRICT, stop work or terminate this Contract and recover from the DISTRICT payment for all work executed, any losses sustained on any material, and a ten percent (10%) profit on work performed.

14.13 SUSPENSION OF WORK

The DISTRICT reserves the right to suspend and reinstate execution of the whole or any part of the work contracted without invalidating the provisions of the Contract in any way.

Orders for suspension or reinstatement of work will be issued by the DISTRICT to the CONTRACTOR in writing. The time for completion of the work so suspended shall be extended for a period equal to the time lost by reason of the suspension.

Extra direct costs and expenses not including lost profit and/or overhead costs which, in the opinion of the ENGINEER, are caused by work suspensions so ordered by the DISTRICT will be paid by the DISTRICT to the CONTRACTOR.

14.14 CONSTRUCTION WATER

Water for construction and testing purposes required by the Contract Documents at the Project Sites will be available during normal working hours from the DISTRICT'S system as approved by the DISTRICT at no cost to the CONTRACTOR. Arrangements and verifications as to the sources, locations, and times for water use by the CONTRACTOR shall be made with the DISTRICT prior to any and all water use. The CONTRACTOR shall make all arrangements and supply all pumps, hoses, fittings, or other related items for drawing water at no cost to the DISTRICT. Any costs of water for repair of defective work, re-testing of rejected work, cleanup of CONTRACTOR's equipment or repair of damage to property of third parties, shall be borne by CONTRACTOR.

14.15 EROSION AND SEDIMENT CONTROL

All actions and costs for erosion and sedimentation control shall be the responsibility of the CONTRACTOR.

The CONTRACTOR shall provide all reasonable erosion and sedimentation control measures that may be required by the state, county, and/or local jurisdictions and to protect disturbed ground from erosion and watercourses from sedimentation. Areas of clearing, grading and/or other disturbance shall be confined within the limits shown on the plans, or as marked by the ENGINEER, to prevent undue damage by construction.

Precautions shall be taken by the CONTRACTOR to ensure that vehicles and equipment do not track and/or spill earth and/or materials onto public and/or private streets, roads, or rights-of-way. Any spillage and/or tracking shall be immediately removed should erosion and/or sediment discharge occur, even on a temporary basis, control measures shall immediately be taken by the CONTRACTOR to avoid further problems.

Proper erosion control measures and practices shall be followed during construction. An Erosion and Sediment Control Plan shall be submitted to the DISTRICT for its records not later than ten (10) days before implementing any erosion control measures or practices included in the plan. CONTRACTOR shall be responsible for the filing of all notices required by the State Water Resources Control Board for the compliance with all permits applicable to storm water and erosion control during construction.

14.16 SURFACE RESTORATION

Surface restoration shall be defined as that work necessary to restore the excavated area above backfill and the scarred surrounding work areas to a condition equivalent to or better than existed prior to the construction. This may include pavement replacement, seeding, shrub and plant replacement, and restoration of ditches and drainage areas.

The replacement of grass and/or wild flowers shall be accomplished by seeding. The kind and type of seed is to be determined by the ENGINEER. Replacement of plants and shrubs shall be required

where the easement travels through a developed parcel. In this case the DISTRICT or Developer and CONTRACTOR shall agree before proceeding as to which plants and shrubs shall be saved or replaced.

The restoration of trench surfaces shall include measures to prevent surface erosion of the trench. This shall include seeding, cutoff walls, surface header boards, water bars, interceptor dikes, gravel filter dikes, or rip rap energy dissipaters. These measures shall be used as required to prevent surface erosion.

14.17 POLLUTION CONTROL

Water - Oily or greasy substances, or other materials harmful to fish life, originating from the CONTRACTOR's operation shall not be allowed to enter or be placed where they may later enter any river, creek, canal, stream, or other water way. The CONTRACTOR shall not increase the turbidity of any watercourse flowing past the construction site unless precautions are taken downstream of the work to limit the increase in turbidity to a maximum of 25 Jackson Turbidity Units. CONTRACTOR shall be responsible for preparing a Storm Water Pollution Prevention Plan (SWPPP) and complying with such plan during the construction project.

Noise - It shall be the CONTRACTOR's responsibility to keep noise pollution due to construction activities as low as possible. In no case shall noise levels produced by the CONTRACTOR exceed any of these maximums or the Community Standards whichever are more stringent:

14.17.1 No individual piece of equipment shall produce a noise level exceeding 55 dBA at a distance of twenty-five feet (25'). Equipment in excess of this level shall be mitigated with the use of sound barrier walls.

14.17.2 The noise level at any point outside the right-of-way or temporary construction area shall not exceed 55 dBA during non-working hours. No equipment violating these standards shall be allowed to operate. Operations in excess of this level shall be mitigated with the use of sound barrier walls.

Air - The CONTRACTOR shall comply with all state and local pollution control regulations. No burning shall be allowed on the Project. Idling of internal combustion engines shall be held to an absolute minimum. All work shall conform to the San Joaquin Valley Air Pollution Control District (SJVAPCD) and the California Air Resources Board (CARB). CONTRACTOR shall be responsible for preparing a Dust Control Plan and obtaining permits, if necessary, and shall be responsible for all associated costs.

14.18 SITE SECURITY

The CONTRACTOR shall provide in advance of starting construction, a list of all employees and vehicles that need access to the site. The CONTRACTOR shall provide periodic updates to this list. The CONTRACTOR shall provide a list of all scheduled deliveries to the Project Site. This list shall include the items to be delivered, the name of the delivery company and the time the delivery is to be made.

All access gates to the Project Site are to remain closed and locked at all times that traffic is not using the gates. The CONTRACTOR will be assigned a specific access point at the Project Site. The CONTRACTOR may provide security personnel for access control during Project work hours.

It is the CONTRACTOR's sole responsibility to secure all equipment, material, tools and other items used during the execution of the Contract.

14.19 HAZARDOUS WASTES AND UNFORESEEN CONDITIONS

In accordance with Section 7104 of the California Public Contract Code, if the work contemplated hereunder involves digging trenches or other excavations that extend deeper than four (4) feet below the

surface, the CONTRACTOR shall promptly, and before the following conditions are disturbed, notify the DISTRICT, in writing, of any: (I) material that the CONTRACTOR believes may be material that is hazardous waste, as defined in Section 25117 of the California 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; (ii) subsurface or latent physical conditions at the site differing from those indicated; or (iii) unknown physical conditions at the site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract.

The DISTRICT will promptly investigate the conditions, and if it finds that the conditions do materially so differ, or do involve hazardous waste, and cause a decrease or increase in the CONTRACTOR's cost of, or time required for, performance of any part of the work shall issue a change order under the procedures described in this Contract. In the event that a dispute arises between the DISTRICT and the CONTRACTOR whether the conditions materially differ, or involve hazardous waste, or cause decrease or increase in the CONTRACTOR's cost of, or time required for, performance of any part of the work, the CONTRACTOR shall not be excused from any scheduled completion date provided for by the Contract, but shall proceed with all work to be performed under the Contract. 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.

14.20 EXISTING UTILITIES

The CONTRACTOR shall contact the following parties to ascertain and verify the existence and location of utility lines and facilities and shall coordinate all work in accordance with the information obtained from such inquiries in order to prevent damage to such lines and facilities.

Underground Service Alert (USA) (1-800-642-2444)

Prior to conducting any excavation, the CONTRACTOR shall contact the appropriate regional notification center as required by Government Code Section 4216 et seq. In accordance with Government Code Section 4215, the CONTRACTOR shall be compensated for the costs of locating, repairing damage not due to the failure of the CONTRACTOR to exercise reasonable care, and removing or relocating existing main or trunkline utility facilities not indicated in the Contract Plans and Specifications with reasonable accuracy, and for the equipment on the Project necessarily idled during such work; provided that the CONTRACTOR shall first notify the DISTRICT before commencing work on locating, repairing damage to, removing or relocating such utilities.

Any sewer crossings shall conform to the State Health Department regulations for water/sewer separation and materials. Cost for special pipeline materials to meet Health Department regulations, and repair of services damaged shall be included in the cost of the bid items to which the work is appurtenant. No separate payment will be made.

The ENGINEER or his/her representative has endeavored to determine the existence of utilities at the work site from the records of the DISTRICT's of known utilities in the vicinity of the work. The positions of these utilities, as derived from such records, are shown on the Plans. The service connections to these utilities may not be shown on the Plans.

The CONTRACTOR shall make his/her own investigations, including exploratory excavations, to determine the locations and type of existing service laterals or appurtenances when their presence can be inferred from the presence of other visible facilities, such as buildings, meters and junction boxes, on or adjacent to the work site.

14.21 SUBCONTRACTS

The attention of the CONTRACTOR is directed to the provisions of Public Contract Code Sections 4100-4114, regarding subcontracting and said provisions are by this reference incorporated herein and made a part hereof.

Each Subcontract shall contain a suitable provision for the suspense or termination thereof should the work be suspended or terminated or should the subcontractor neglect or fail to conform to every provision of the Contract Documents insofar as such provisions are relevant. No subcontractor or supplier will be recognized as such, and all persons engaged in work will be considered as employees of the CONTRACTOR, and the CONTRACTOR will be held responsible for their work, which shall be subject to the provisions of the Contract Documents. The CONTRACTOR shall be fully responsible to the DISTRICT for the acts or omissions of his/her subcontractors and the persons either directly or indirectly employed by him/her. Nothing contained in the Contract Documents shall create any contractual rights for a subcontractor against the DISTRICT. If a legal action, including arbitration and litigation, against the DISTRICT is initiated by a subcontractor or Supplier, the CONTRACTOR shall reimburse the DISTRICT for the amount of legal, engineering and all other expenses incurred by the DISTRICT in defending itself in said action.

The DISTRICT and the ENGINEER reserve the right to approve all subcontractors. The DISTRICT and the ENGINEER shall have the right to cause the CONTRACTOR to remove subcontractors and have them replaced with subcontractors approved by the DISTRICT and the ENGINEER.

(END OF SECTION)

15.0 CONTROL OF MATERIALS

15.1 STORAGE OF MATERIALS

Materials shall be stored to ensure the preservation of their quality and fitness for the work. When considered necessary by the ENGINEER, they shall be placed on wooden platforms or other hard, clean surfaces and not on the ground. They shall be placed under cover when so directed. Stored materials shall be located to facilitate prompt inspection. Materials shall not be located or stored where detrimental to traffic and pedestrians. All material paid for as "Materials on Hand" shall be securely stored and shall be covered by the CONTRACTOR's fire and theft insurance.

15.2 DELIVERY OF MATERIALS

The CONTRACTOR shall furnish the ENGINEER with a duplicate delivery ticket for all materials to be used in the work. The delivery tickets shall show the quantity and type of materials to be used in the work.

15.3.1 MATERIALS AND EQUIPMENT

Unless specifically provided otherwise in each case, all materials and equipment furnished for permanent installation in the work shall be new, unused and undamaged when installed or otherwise incorporated in the work.

15.4 MATERIALS SPECIFIED

Whenever any material, process, or article is indicated or specified by grade, patent or proprietary name, or by name of manufacturer, such specification shall be deemed to be used for the purpose of facilitating description of the materials, process, or articles desired and shall be deemed to be followed by the words "or (approved) equal," and the CONTRACTOR may offer any material, process, or article which shall be substantially equal or better in every respect to that so indicated or specified; provided, however, that if the material, process, or article offered by the CONTRACTOR is not, in the opinion of the ENGINEER, equal or better in every respect to that specified, then the CONTRACTOR must furnish the material, process, or article specified or one that in the opinion of ENGINEER is the substantial equal or better in every respect. In the event that the CONTRACTOR furnishes material, process, or article more expensive than that specified, the difference in cost of such material, process, or article so furnished shall be borne by the CONTRACTOR.

All materials, equipment, and supplies provided shall, without additional charge to DISTRICT, fully conform to all applicable state and federal safety laws, rules, regulations, and orders, and it shall be CONTRACTOR's responsibility to provide only such materials, equipment, and supplies notwithstanding any omission in the Contract Documents therefore or that a particular material, equipment, or supply was specified.

In accordance with Section 3400 of the Public Contract Code, the CONTRACTOR shall submit data substantiating requests for substitution of "equal" items within thirty-five (35) days after award of the Contract.

15.5 REMOVAL OF DEFECTIVE OR UNAUTHORIZED MATERIALS

The CONTRACTOR, upon written notice from the DISTRICT, shall remove from the premises all materials condemned or rejected by the DISTRICT, as defective, unsound, or improper, or in any way failing to conform to the requirements of the Contract Documents. The CONTRACTOR shall at his/her sole expense, make good all work destroyed or damaged by such removal, and promptly replace materials damaged or improperly worked by him/her and re-execute his/her own work in accordance with the Contract without expense to the DISTRICT. This includes re-executing or replacing the work of any other contractor that is in any way affected by the removal of such defective work of the CONTRACTOR. The obligations of the CONTRACTOR under this Section shall not extend to defective materials or

equipment supplied by the DISTRICT for incorporation into the work performed under this Contract. If the CONTRACTOR does not respond within ten (10) days after written notice, the DISTRICT may remove and replace such materials at the expense of the CONTRACTOR.

15.6 SUBMITTALS

Submittals will be required for all materials, equipment, fabricated articles and purchased items. No portion of the work requiring a shop drawing submittal shall be commenced until the submittal has been reviewed by the ENGINEER and returned to the CONTRACTOR with a notation indicating that resubmittal is not required. Submittals required by the Specifications shall be in accordance with this section, the Technical Specifications, and Section 4.0 of the General Conditions titled "Submittals", unless otherwise specified. Submittals not in accordance with the section requiring the submittal will be returned to the CONTRACTOR as unsatisfactory. Prior to transmission to the ENGINEER, the CONTRACTOR shall carefully review each submittal to confirm that it is complete and to verify whether or not the proposed items of work conform to Contract requirements. Each submittal shall be dated, signed, and certified by the CONTRACTOR as being correct and in conformance with the Drawings and the Specifications.

The ENGINEER will not review any items which have not been certified by the CONTRACTOR. All non-certified submittals will be returned to the CONTRACTOR without action taken by the ENGINEER, and any delays caused thereby shall be the responsibility of the CONTRACTOR. Items that are not in accordance with the Contract requirements shall be conspicuously noted as such. The CONTRACTOR shall identify each proposed deviation on the corresponding letter of transmittal and include a written explanation of the necessity for each deviation with the letter of transmittal. Deviations that are not conspicuously marked on both the letter of transmittal and the corresponding drawing or data will be deemed to have been disapproved by the ENGINEER or not reviewed by the ENGINEER.

Only those products that have been approved at the time of opening bids will be acceptable for use in the work; except, products may be approved after the bid opening date when there is sufficient time within the Contract period to permit testing and qualification.

Criteria pertaining to the qualification of products may be obtained from the ENGINEER. No extension of time will be granted for the purpose of testing and qualifying proposed products. If the CONTRACTOR believes that any shop drawing or communication relative thereto calls for changes in the work for which the Contract amount or time for completion should be changed, he/she shall not proceed with the changes in the work so called for and shall promptly notify the ENGINEER in writing of his/her estimate of the changes in the Contract amount and time for completion he/she believes to be appropriate.

The CONTRACTOR shall refer to Section 4.0 of the General Conditions, "Submittals" and the Technical Specifications for project specific submittal requirements.

15.7 MANUALS AND RECORD DRAWINGS

Service and Parts Manuals - The CONTRACTOR shall furnish the DISTRICT four (4) copies of all installation, operation, and service manuals, with a parts list for each piece of equipment furnished. The service and parts manuals shall be labeled, indexed, and organized in three (3)-ring binders.

Record Drawings - On the job, the CONTRACTOR shall maintain an up-to-date marked set of the As-Built Contract Drawings, showing the location and details of any changes made during construction. The CONTRACTOR shall give the DISTRICT a clean, marked set of the As-Built Contract Drawings showing construction changes before final payment and acceptance of the work. These shall be received and approved by the ENGINEER prior to final acceptance of electrical work.

15.8 PLACING WORK IN SERVICE

If desired by the DISTRICT, portions of the work may be placed in service when completed, and the CONTRACTOR shall provide proper access to the work for this purpose. Nothing in this article shall be construed as relieving the CONTRACTOR of the full responsibility for completing the work in its entirety, for making good all defective work and materials, for protecting the work from damage, and for being responsible for damage and for the work as set forth in the General Provisions and other Contract Documents, nor shall such action by the DISTRICT be deemed completion and acceptance, and such action shall not relieve the CONTRACTOR, his/her sureties, or insurers of the provisions as outlined in the Contract Document Sections titled "Contractor's Certificate Regarding Worker's Compensation Insurance", "Worker's Compensation and Employer's Liability Certificate of Insurance", "Worker's Compensation and Employer's Liability Insurance Endorsement", "Liability Insurance Certificate of Insurance", "Liability Insurance Endorsement", "Builders' Risk "All Risk" Certificate of Insurance", and "Builders' Risk "All Risk" Insurance Endorsement" on CONTRACTOR'S INSURANCE, and the article on INDEMNIFICATION.

(END OF SECTION)

16.0 WARRANTIES AND REPAIRS

The CONTRACTOR hereby agrees to pay to the DISTRICT, or to make at his/her own expense, all repairs, replacements or payments necessitated by defects in materials or workmanship supplied under the terms of this Contract which exist within one (1) year after the date of final acceptance of the work. This agreement shall cover defects which shall be in existence during such one (1) year period but which shall not become apparent until thereafter. The CONTRACTOR shall be fully responsible for all direct and indirect damages and expenses to the DISTRICT proximately caused by such defects in materials or workmanship including defects in materials or workmanship supplied to the CONTRACTOR by any subcontractor or manufacturer of equipment. As to any equipment which bears a guarantee or warranty in writing or by law for a period longer than one (1) year, CONTRACTOR hereby stipulates and agrees that such guarantee shall inure to the benefit of the DISTRICT for such longer period. The effective date for the start of the guarantee or warranty period shall be the date of recordation of the Notice of Completion. The CONTRACTOR also agrees to hold the DISTRICT harmless from liability of any kind arising from damage due to said defects. The CONTRACTOR shall make all repairs and replacements or payments promptly upon receipt of written order for same from the DISTRICT. If the CONTRACTOR fails to make the repairs, replacements or payments promptly, the DISTRICT may do the work, and the CONTRACTOR and his/her Surety shall be liable for the cost thereof.

(END OF SECTION)

17.0 LEGAL RELATIONS AND RESPONSIBILITY

17.1 LAWS TO BE OBSERVED

The CONTRACTOR shall keep fully compliant with all local, county, state and federal laws and ordinances and regulations which in any manner affect those engaged or employed in the work, or the manufacture of materials used in the work, or which in any way affect the conduct of the work, and of all such orders and decrees of those having any jurisdiction or authority over the same.

17.1.1 Hours of Labor - The CONTRACTOR shall forfeit, as penalty to the DISTRICT, twenty-five dollars (\$25.00) for each worker employed in the execution of the Contract by the CONTRACTOR or by any subcontractor of any tier under the CONTRACTOR, for each calendar day during which such worker is permitted or required to labor more than eight (8) hours in any one day or forty (40) hours per one (1) calendar week, unless compensated at not less than time and a half per provisions of the Labor Code, Section 1810 to Section 1816 thereof, inclusive.

17.1.2 Exception - If the prevailing wage determination requires a higher rate of pay for overtime work than is required under Labor Code Section 1815, then that higher overtime rate shall be paid as specified in subsection 16200(a)(3)(F) of the Title 8, California Code of Regulations.

17.1.3 Labor Discrimination - A contractor shall not discriminate in the employment of persons upon public works on any basis listed in Subdivision (a) of Section 12940 of the Government Code, as those bases are defined in Sections 12926 and 12926.1 of the Government Code, except as otherwise provided in Section 12940 of the Government Code. Every contractor for public works who violates this Section is subject to all the penalties imposed for a violation of this Chapter.

17.1.4 Prevailing Wage - The minimum rates of wages applicable to the work to be done have been determined in accordance with the provisions of Sections 1770 et seq. of the California Labor Code.

Copies of the current schedules for prevailing wages are on file in the DISTRICT'S office, and the contents of those schedules are included herein as if set forth in full. The CONTRACTOR shall post at each job site in a place readily available to all workers the current prevailing wage rate for each craft, group, and worker working on the job.

The CONTRACTOR shall forfeit, as penalty to the DISTRICT, fifty dollars (\$50.00) for each calendar day, or portion thereof, for each worker paid less than the prevailing rates for any work done under the Contract by him/her or by any subcontractor under him/her, in violation of the provisions of the Labor Code and in particular, Sections 1770 to 1780 thereof, inclusive. In addition to this penalty, the difference between such prevailing wage rate and the amount actually 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.

The DISTRICT will not recognize any claim for additional compensation because of the payment by the CONTRACTOR of any wage rate in excess of the prevailing wage rate adopted by the DISTRICT. The possibility of wage increases is one of the elements to be considered by the CONTRACTOR in determining bid prices, and will not under any circumstances be considered as the basis of a claim against the DISTRICT.

The District will establish a PWC100 with DIR for the project within 30 days of the contract's award. All contractors and subcontractors shall be registered with DIR per SB96.

17.1.5 Payroll Records - Attention is directed to Section 1776 of the Labor Code of the State of California. Regulations complementing said Section 1776 are located in Sections 16000 and Sections 16400 through 16403 of Title 8, California Code of Regulations. The CONTRACTOR is

required to comply with the provisions of Section 1776 of said Labor Code. The CONTRACTOR shall also be responsible for compliance by his/her subcontractors.

17.1.6 Reporting Requirements and Sanctions - Failure to provide specific information, records, reports, certifications, or any other documents required for compliance with these Specifications shall be considered noncompliance. The minimum documents required include:

List of Subcontractors - Due seven (7) calendar days after date of Preconstruction Conference;

Certified Payroll Reports - An original and three (3) legible copies are due within seven (7) calendar days, upon the request of the ENGINEER;

Fringe Benefit Statement - Due with first payroll report and any time thereafter that fringe benefits change; and

Apprenticeship Certifications - Due with the first payroll report on which the apprentice appears. Other documentation may be required depending on the source of funding for the Project.

17.1.7 Apprentices - In accordance with the provisions of Section 1777.5 of the Labor Code, and in accordance with the regulations of the Department of Industrial Relations, Division of Apprenticeship Standards, the appropriate number of properly indentured apprentices are to be employed in the prosecution of the work. Information relative to number of apprentices, identification, wages, hours of employment, and standards of working conditions shall be obtained from the Department of Industrial Relations, Division of Apprenticeship Standards.

17.1.8 Fair Labor Standards Act - Bidders note the fact that Contractors are required to meet the provisions of the Fair Labor Standards Act of 1938, and as amended (52 Stat. 1060).

17.1.9 Registration of Contractors - In accordance with the provisions of Chapter 9, Division 3 of the Business and Professions Code and Section 3300 of the Public Contract Code, bidders must possess a State of California Contractor's License for the proper classification which must be valid at the time of bid, award, and until completion of the Contract.

CONTRACTORS ARE REQUIRED BY LAW TO BE LICENSED AND REGULATED BY THE CONTRACTORS' STATE LICENSE BOARD. ANY QUESTIONS CONCERNING A CONTRACTOR MAY BE REFERRED TO THE REGISTRAR, CONTRACTORS' STATE LICENSE BOARD, 9835 GOETHE ROAD, SACRAMENTO, CALIFORNIA. MAILING ADDRESS: P.O. BOX 26000, SACRAMENTO, CALIFORNIA 95826.

17.1.10 Permits and Licenses - The CONTRACTOR shall procure all permits and licenses, pay all charges and fees, and give all notices necessary and incidental to the due and lawful prosecution of the work. The costs for permits and inspections shall be included in the price entered in the Proposal under the line item entitled "Mobilization and Demobilization". When the terms of permits obtained by either the CONTRACTOR or the DISTRICT require inspections by agencies or authorities other than the DISTRICT, the CONTRACTOR shall schedule the inspections and notify the ENGINEER a minimum of twenty-four (24) hours prior to the inspection being performed.

All work performed within road rights-of-way shall be done in accordance with the requirements of the Kern County Department of Public Works encroachment permit or City of Arvin encroachment permit, as applicable. It shall be the responsibility of the CONTRACTOR to determine all requirements of said entities and to comply with all requirements. The

CONTRACTOR shall be responsible for ascertaining the need for and obtaining any additional permits required. If there are conflicts among the requirements of said entities and DISTRICT'S requirements, the most restrictive requirements shall be used.

17.1.11 Codes - The codes and regulations, together with local amendments when applicable adopted by the state and other governmental authorities having jurisdiction, shall establish minimum requirements for this Project. Wherever references are made in the Contract to the respective standards or codes in accordance with work are to be performed or tested, it is to be understood that the revision of the standards in effect on the date of the Bidder's proposal shall apply unless otherwise expressly set forth in the Contract.

17.1.12 Standard Specifications - Where the state standard specifications or the words "Standard Specifications" are referred to, the reference shall be to the Standard Specifications, State of California, State Department of Transportation, ("Caltrans") July 1999, except where in the case where work is subject to Caltrans' approval, in which case the latest addition shall be used. As a minimum, this Project shall comply with the following:

- A. California Building Standards Administrative Code, 2001 edition
- B. California Building Code, 2001 edition
- C. California Electrical Code, 2001 edition
- D. California Mechanical Code, 2001 edition
- E. California Plumbing Code, 2001 edition
- F. California Fire Code, 2001 edition
- G. California Code of Regulations: Title 8, Industrial Relations, CAL-OSHA
- H. California Code of Regulations: Title 19, Public Safety

17.1.13 Fire Hazard - Flammable, volatile solvents in coating system components constitute a major hazard with regard to fire and explosions wherever flame or spark exposure is possible. All flames, smoking, and unapproved welding, etc., are strictly prohibited in work or storage areas. Fire abatement devices shall be readily available and in operating condition. Necessary precautions shall be taken to keep fire hazard to a minimum; all oily rags, waste, and other combustibles not in covered containers shall be removed from the area daily. All coatings, solvents, thinners and related products shall be stored in conformance with applicable state, county and/or local fire codes pertaining to flammable materials.

17.1.14.1 Public Contracts Code Section 7103.5 - 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. Section 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 the subcontract. This assignment shall be made and become effective at the time the awarding body tenders final payment to the CONTRACTOR, without further acknowledgment by the parties.

17.2 EQUAL OPPORTUNITY

During the performance of this Contract, the CONTRACTOR agrees as follows:

17.2.1 The CONTRACTOR will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The CONTRACTOR will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The CONTRACTOR agrees

to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this Equal Opportunity clause.

17.2.2 The CONTRACTOR will, in all solicitations or advertisements for employees placed by or on behalf of the CONTRACTOR, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.

17.2.3 The CONTRACTOR will send to each labor union or representative of workers, with which he/she has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representative of the CONTRACTOR's commitments under this Section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

17.2.4 The CONTRACTOR will comply with all provisions of federal and state law, and of the rules, regulations, and relevant orders of the Secretary of Labor, Director of the California Department of Fair Employment and Housing and/or the California Labor Commissioner.

17.2.5 The CONTRACTOR will furnish all information and reports required by federal or state law, and by the rules, regulations, and orders of the Secretary of Labor, Director of the California Department of Fair Employment and Housing, California Labor Commissioner, or pursuant thereto, and will permit access to his/her books, records, and accounts by the administering district and the Secretary of Labor, Director of the California Department of Fair Employment and Housing or California Labor Commissioner for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

In the event of the CONTRACTOR's noncompliance with the Equal Opportunity clause of this Contract or with any of the said rules, regulations, or orders, this Contract may be canceled, terminated, or suspended, in whole or in part, and the CONTRACTOR may be declared ineligible for further DISTRICT contracts, and such other sanctions may be imposed and remedies invoked by rule, regulation, or order of the Secretary of Labor, Director of the California Department of Fair Employment and Housing or California Labor Commissioner.

The CONTRACTOR will include this Equal Opportunity clause in every subcontract or purchase order unless exempted by the rules, regulations, or orders of the Secretary of Labor, Director of the California Department of Fair Employment and Housing or California Labor Commissioner, so that such provisions will be binding upon each subcontractor or vendor, the CONTRACTOR will take such action with respect to any subcontract or purchase order as the administering district may direct as a means of enforcing such provisions, including sanctions for noncompliance; provided however, that in the event a CONTRACTOR becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering district, the CONTRACTOR may request the administering district to enter into such litigation to protect the interests of the administering district.

The DISTRICT further agrees that it will be bound by the above Equal Opportunity clause with respect to its own employment practices when it participates in assisted construction work.

The DISTRICT agrees that it will assist and cooperate actively with the administering district and the Secretary of Labor, Director of the California Department of Fair Employment and Housing in obtaining the compliance of CONTRACTOR and subcontractors with the Equal Opportunity clause and the rules, regulations and relevant orders of the Secretary of Labor, Director of the California Department of Fair Employment and Housing, that it will furnish the administering district and the Secretary of Labor, Director of the California Department of Fair Employment and Housing such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering district in the discharge of the DISTRICT'S primary responsibility for securing compliance.

17.3 PATENTS

The CONTRACTOR shall assume all costs arising from the use of patented materials, equipment, devices or processes used on or incorporated in the work, and agrees to indemnify and save harmless the DISTRICT, the Directors, the General Manager, the ENGINEER, their employees and duly authorized representatives from all suits at law, or actions of every nature for, or on account of the use of any patented materials, equipment, devices or processes.

17.4 SANITARY PROVISIONS

The CONTRACTOR shall provide sanitary facilities at all work locations.

17.5 PRESERVATION OF PROPERTY

Due care shall be exercised to avoid injury to street improvements or facilities, utilities' facilities, adjacent property per Civil Code 832, and roadside trees and shrubbery that are not to be removed. If ordered by the ENGINEER, the CONTRACTOR shall provide and install suitable safeguards, approved by the ENGINEER, to protect such objects from injury or damage. If such objects are injured or damaged by reason of the CONTRACTOR's operations, they shall be replaced or restored, at the CONTRACTOR's expense, to a condition as good as when the CONTRACTOR began work.

Full compensation for furnishing all labor, materials, tools and equipment and doing all work involved in protecting property as above specified, shall be considered as included in the prices paid for the various Contract items of work, and no additional compensation will be made.

17.6 RESPONSIBILITY FOR DAMAGE

The Directors, the General Manager, the Project Manager, the ENGINEER, volunteers, consultants, and employees of the DISTRICT shall not be answerable or accountable in any manner for any loss or damage that may happen to the work or any part thereof, or for any material or equipment used in performing the work, or for injury or damage to any person or persons, either workers or the public, or for damage to an adjoining property from any cause whatsoever during the progress of the work or at any time before final acceptance.

The CONTRACTOR hereby agrees to defend, indemnify and to hold the DISTRICT, and all representatives, employees, volunteers, consultants, and ENGINEERS of the DISTRICT harmless and free of any and all liability, claims, judgments or damages of whatsoever kind or character, including attorney's fees and costs of all types incurred in defending any of the parties from said claims or liability, which may directly or indirectly arise from acts or omissions of the CONTRACTOR, the CONTRACTOR's independent CONTRACTORS, and employees, representatives, and invitees of each of them, regardless of whether or not there shall be insurance policies covering and applicable to such damages, claims or liabilities.

17.7 DISPOSAL OF MATERIALS

Unless otherwise specified in the Special Provisions, the CONTRACTOR shall make arrangements for disposing of materials. Excess excavated material not required for backfill shall be disposed of legally by the CONTRACTOR.

When any materials, including excess or unsuitable excavated earth or other roadway materials, are to be disposed of outside the right-of-way, the CONTRACTOR shall first obtain a written permit from the property OWNER on whose property the disposal is to be made and shall file said permit or certified copy, together with a written release from the property OWNER, absolving the DISTRICT from any and all responsibility in connection with the disposal of material on said property. Before any material is disposed of on said property, the CONTRACTOR shall obtain permission from the ENGINEER to dispose of the material at the location designated in said permit.

Unless otherwise provided in the Special Provisions, full compensation for all costs involved in disposing of materials, including all costs of overhaul, shall be considered as included in the prices paid for the various contract items of work and no additional allowance will be made.

17.8 CONTRACTOR'S RESPONSIBILITY FOR WORK

Until the formal acceptance of the work by the DISTRICT, the CONTRACTOR shall have the charge and care and shall bear the risk of injury or damage to any part thereof by the action of the elements or from any other cause, whether arising from the execution or non-execution of the work.

The CONTRACTOR shall rebuild, repair, restore and make good all injuries or damages to any portion of the work occasioned by any of the above causes before final acceptance and shall bear the expense, except such injuries or damages occasioned by the acts of the federal government or acts of war.

In case of suspension of work from any cause whatsoever, the CONTRACTOR shall be responsible for the work as previously specified and shall also be responsible for all materials delivered to the worksite. Where necessary to protect the work from damage, the CONTRACTOR shall, at his/her own expense, provide suitable drainage of the worksite and erect such temporary structures as are necessary to protect the work from damage during any period of suspension of work.

The CONTRACTOR shall provide twenty-four (24) hour emergency service for all maintenance and operations of the work specified and shall supply the DISTRICT with the name and phone number of the responsible person. Emergency service shall be within thirty (30) minutes from the time of notification. If the CONTRACTOR fails to provide this service the DISTRICT shall perform such emergency service and the cost thereof shall be deducted from the next Progress Pay Estimate due the CONTRACTOR.

17.9 ACCEPTANCE OF CONTRACT

When the ENGINEER has made the final inspection and determines that the Contract has been completed in general conformance with these Plans and Specifications, the ENGINEER shall submit to the Board of Directors the recommendation that the DISTRICT formally accept the Contract.

17.10 PROPERTY RIGHTS FOR MATERIALS

Nothing in the Contract shall be construed as vesting to the CONTRACTOR any right to property or materials used after they have been attached or affixed to the work or the soil, or after payment has been made for ninety percent (90%) of the value of materials delivered by the CONTRACTOR to the Project Site, or other location approved in writing by the ENGINEER.

17.11 PERSONAL LIABILITY

In carrying out any of the provisions hereof, or in exercising any authority granted by the Contract, there will be no personal liability upon any Directors or employees of the DISTRICT, the ENGINEER, their employees or volunteers.

(END OF SECTION)

18.0 CONTRACTOR'S INSURANCE

18.1 GENERAL

The CONTRACTOR shall not commence or continue to perform any work unless he, at his own expense, has in full force and effect all required insurance. The CONTRACTOR shall not permit any subcontractor to perform work on this project unless all of the required insurance has been complied with by such subcontractor.

The types of insurance the CONTRACTOR shall obtain and maintain are Worker's Compensation and Employer's Liability Insurance, General and Automobile Liability Insurance, Builder's Risk "All Risk" and at the time of award of the Contract, Earthquake and Flood Insurance, all as set forth herein.

Worker's Compensation and Employers' Liability Insurance and Liability Insurance shall be maintained in effect for the full guarantee period.

Insurers must be authorized to do business and have an agent for service of process in California and must have at least an "A- VII" rating in accordance with the most current Best's Rating Guide.

Upon the DISTRICT'S request, the CONTRACTOR shall furnish to the DISTRICT one (1) copy of each policy certified by an authorized representative of the insurer. CONTRACTOR shall provide the DISTRICT with an updated certificate of insurance for any change to its insurance coverage to include changes in insurers, policy limits, etc. Failure to provide updated certificates can cause a temporary stop in the Project being ordered by the DISTRICT, until such time as the DISTRICT has accepted a revised/new certificate of insurance.

CONTRACTOR shall give written notice to the ENGINEER by certified mail at least thirty (30) calendar days prior to termination, cancellation, or reduction of coverage of any policy required by this Section.

The CONTRACTOR waives any right of recovery against the DISTRICT, its ENGINEER, Directors, or employees, for any loss or damage to the CONTRACTOR's construction equipment or tools, including equipment and tools rented or leased by the CONTRACTOR.

The requirements as to the types, limits, and the DISTRICT'S approval of insurance coverage to be maintained by the CONTRACTOR are not intended to and shall not in any manner limit or qualify the liabilities and obligations assumed by the CONTRACTOR under the Contract.

In addition to any other remedy the DISTRICT may have, if the CONTRACTOR or any of the subcontractors fail to maintain the insurance coverage as required in this Section, the DISTRICT may obtain such insurance coverage as is not being maintained, in the form and amount substantially the same as required herein, and the DISTRICT may deduct the cost of such insurance from any amounts due or which may become due the CONTRACTOR under this Contract.

Any deductibles or self-insured retentions other than those expressly allowed by this Section or subsections must be declared to and approved by the DISTRICT. At the option of the ENGINEER, either the insurer shall reduce or eliminate such deductible or self-insured retentions as respects to the DISTRICT, its ENGINEER, Directors, and employees; or the CONTRACTOR shall procure a bond guaranteeing payment of losses and related investigation, claim administration and defense expense.

18.2 INSURANCE SUBMITTALS

As evidence of specified insurance coverage, the CONTRACTOR shall provide certificates of insurance and endorsements.

The CONTRACTOR shall provide and maintain insurance and indemnification as described in this section. Neither the CONTRACTOR nor any subcontractors shall commence any work until all required insurance has been obtained, at their own expense, and such insurance has been approved by the ENGINEER.

Any insurance bearing on adequacy of performance shall be maintained after completion of the Project for the full guarantee period.

18.3 CONTRACTOR'S LIABILITY ENDORSEMENT

18.3.1 INTENTIONALLY OMITTED

18.3.2 INTENTIONALLY OMITTED

18.3.3 Workers' Compensation and Employer's Liability Insurance - The CONTRACTOR shall procure and maintain insurance to protect the CONTRACTOR from all claims under Worker's Compensation Act and Employer's Liability. The CONTRACTOR shall maintain limits no less than the following:

- A. Workers' Compensation – Statutory
- B. Employer's Liability:
- C. Each Accident – One Million Dollars (\$1,000,000)
- D. Disease-Policy Limit -- One Million Dollars (\$1,000,000)
- E. Disease-Employee Limit - One Million Dollars (\$1,000,000)

18.3.4 Commercial General Liability Insurance - The insurance shall include, but shall not be limited to, protection against claims arising from death, bodily or personal injury, or damage to property resulting from actions, failures to act, operations or equipment of the CONTRACTOR or his/her employees, consultants, or subcontractors. Coverage shall be at least as broad as ISO "occurrence" form, number CG 0001 (Edition 10/93) covering general liability.

The limits of liability shall be not less than one million dollars (\$1,000,000) each occurrence and two million dollars (\$2,000,000) general aggregate. Coverage may be provided either in a primary policy, or in a combination of primary and umbrella or excess policies. The insurance may have a deductible or self-insured retention not to exceed fifty thousand dollars (\$50,000).

The Commercial General Liability insurance coverage shall also include the following:

Coverage, without limitation, for property damage arising out of explosion, collapse or underground damage, commonly referred to by insurers as the explosion, collapse and underground property damage hazards.

Provision or endorsement stating that the General Aggregate Limit shall apply separately to the Project covered by this Contract.

Provision or endorsement naming the State of California, the DISTRICT, its ENGINEER, Directors, employees, and volunteers as additional insureds in regards to liability arising out of the performance of any work under the Contract and providing that such insurance is primary insurance as respects the interest of the DISTRICT and that any other insurance maintained by the DISTRICT is excess and not contributing insurance with the insurance required hereunder. A copy of the additional insured endorsement is required by the DISTRICT prior to commencement of work.

18.3.5 Automobile Liability Insurance - The insurance shall include, but shall not be limited to, protection against claims arising from death, bodily injury, or damage to property resulting from ownership, operation, maintenance or use of automobiles by the CONTRACTOR or his/her employees, consultants, or subcontractors. Coverage shall be at least as broad as ISO form number CA 0001 (Edition 12/93) covering automobile liability, symbol 1 "any auto."

The limits of liability shall be not less than two million dollars (\$2,000,000) each accident. Coverage may be provided either in a primary policy, or in a combination of primary and umbrella or excess policies.

The Automobile Liability insurance coverage shall be primary insurance as respects the interest of the DISTRICT and that any other insurance maintained by the DISTRICT is excess and not contributing insurance with the insurance required hereunder.

18.3.6 Builder's Risk Insurance - CONTRACTOR shall purchase and maintain in force builder's risk insurance on the full value of the Contract. Such insurance shall be written on a completed value form and in an amount equal to the initial Contract sum subject to subsequent modifications of the Contract sum. The insurance shall apply on a replacement cost basis. The policy may have a deductible or self-insured retention not to exceed one hundred thousand dollars (\$100,000), except for the peril of earthquake, which may have a deductible not to exceed five percent (5%) of the Contract amount.

The builder's risk coverage shall extend to full replacement costs without any deduction for depreciation.

The builder's risk insurance shall name as insured the State of California, the DISTRICT, CONTRACTOR and all subcontractors and sub-subcontractors in the work. The insurance policy shall contain a provision that the insurance will not be cancelled or allowed to expire until at least thirty (30) days' prior written notice has been given to the DISTRICT. The insurance policy shall also contain a provision stating that it is primary insurance, as respects the interests of the DISTRICT, and that any insurance maintained by the DISTRICT shall be excess of, and shall not contribute with it.

The builder's risk insurance shall cover the entire work included in the Project including expenses made necessary by an insured loss. Insured property shall include portions of the work located away from the site but intended for use in the Project, and shall also cover portions of the work in transit. The policy shall include as insured property all materials stored onsite but not yet incorporated into the Project, and shall also include scaffolding, falsework, and temporary buildings located at the site. The policy shall cover the cost of removing debris, including demolition as may be made legally necessary by the operation of any law, ordinance, or regulation by endorsement if necessary, the builder's risk insurance shall cover actual costs incurred by the DISTRICT in providing inspection services for repairs to the work due to covered losses not to exceed a five-hundred thousand dollar (\$500,000) sublimit, CONTRACTOR shall be liable for all DISTRICT inspection/reinspection costs.

The builder's risk insurance shall be written to cover all risks of physical loss except those specifically excluded in the policy, and shall insure at least against the perils of fire and extended coverage, theft, vandalism, malicious mischief, rain, hail, wind and collapse.

Any deductible applicable to the builder's risk insurance shall be the responsibility of the CONTRACTOR in the event of a loss.

The builder's risk insurance shall be maintained in effect, unless otherwise provided for in the Contract Documents, until the Project is accepted as completed by the DISTRICT Board of Directors. The policy shall not contain any exclusion of coverage for any period during which

Project systems are being tested or during which the Project is being partially occupied by the DISTRICT.

In the event of a covered loss, proceeds of builder's risk insurance shall be applied first to reimburse actual costs of demolition, debris removal, reconstruction, and repair or replacement incurred in the discharge of the CONTRACTOR's obligations of repair or replacement under the Contract Documents. The DISTRICT shall have no liability for such costs. Insurance proceeds shall be deposited in a separate account in a local bank satisfactory to the DISTRICT and shall be withdrawn only with the DISTRICT'S written approval to reimburse such actual costs as the builder's risk carrier has agreed to reimburse. The DISTRICT shall have no liability for failure of builder's risk carrier to pay for particular cost of repairs. This article shall not qualify or modify the CONTRACTOR's responsibility for the work under Section 17.8.

Before the commencement of work, CONTRACTOR shall provide the DISTRICT with a Certificate of Insurance for the builder's risk policy including all deductibles and sublimits. The policy shall be supplied to the DISTRICT for review upon request.

If the DISTRICT is damaged by the failure of CONTRACTOR to maintain the required insurance, the CONTRACTOR shall bear all reasonable costs properly attributable to that failure.

In the event of termination of the CONTRACTOR for default under Section 14.11.2, the CONTRACTOR shall forfeit all rights to builder's risk insurance proceeds and the DISTRICT may expend such proceeds to complete the Project as if they were unpaid Contract monies.

18.4 WAIVER OF SUBROGATION

CONTRACTOR waives all rights against the State of California, the DISTRICT and any of their officers, the ENGINEER, directors, agents, and employees, for recovery for damages caused by fire and other perils to the extent covered by builder's risk insurance, or any other property insurance applicable to the work or the Project.

18.5 CONTRACTOR'S LIABILITY NOT LIMITED BY INSURANCE

To the fullest extent permitted by law, the CONTRACTOR shall indemnify and hold harmless the State of California, the DISTRICT, the ENGINEER, and their consultants, and each of their directors, volunteers, officers, and employees from and against all claims, damages, losses, expenses, and other costs, including costs of defense and attorneys' fees, arising out of or resulting from or in connection with the performance of the work, both on and off the job site, provided that any of the foregoing is 1) attributable to personal injury, bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the work itself), including the loss of use resulting there from; and, 2) caused in whole or in part by an act or omission of the CONTRACTOR, any subcontractor, any supplier, anyone directly or indirectly employed by any of them or anyone for whose acts or omissions any of them may be liable, regardless of whether or not caused in part by any act or omission (active, passive, or comparative negligence included, excepting the active negligence, sole negligence or willful misconduct of the DISTRICT), of a party indemnified hereunder. The CONTRACTOR's obligation to indemnify shall not be restricted to insurance proceeds, if any received by the DISTRICT, its directors, officers, volunteers, or employees.

The obligations of the CONTRACTOR under the first and fourth paragraphs of this Section 18.5 shall not extend to the liability of the ENGINEER, and their consultants, and each of their directors, officers, employees, and volunteers arising out of or resulting from or in connection with the preparation or approval of maps, Drawings, opinions, reports, surveys, designs or Specifications, providing that the foregoing was the sole and exclusive cause of the loss, damage or injury.

The CONTRACTOR shall also indemnify and hold harmless the State of California, the DISTRICT, the ENGINEER, and their consultants, and each of their directors, officers, volunteers and

employees from and against all losses, expenses, damages (including damages to the work itself), attorneys' fees, and other costs, including all costs of defense, which any of them may incur with respect to the failure, neglect, or refusal of CONTRACTOR to faithfully perform the work and all of the CONTRACTOR's obligations under the Contract. Such costs, expenses, and damages shall include all costs, including attorneys' fees, incurred by the indemnified parties in any lawsuit to which they are a party.

The CONTRACTOR shall assume the defense of, and indemnify and save harmless, the State of California, the DISTRICT, the ENGINEER, and their consultants, and each of their Directors, employees, and volunteers from all claims, costs, losses, damages and expenses, including attorneys' fees of any kind arising from the performance of this Contract, including claims for personal injury or death, claims for damage to property, and claims for loss of business. The CONTRACTOR agrees to require that in any agreement and/or subcontract entered into with any one for the performance of work under this Contract, that all work will be done pursuant to the DISTRICT'S Improvement Standards, Technical Specifications and Drawings, and that the CONTRACTOR will indemnify and save harmless the State of California, the DISTRICT, the ENGINEER, and their consultants, and each of their Directors, employees, and volunteers from all claims of any kind arising from any and all Contractors' and subcontractors' performance of this Contract, including claims for personal injury and death, claims for damages to property and claims for loss of business.

18.6 COMPLIANCE WITH STATE REQUIREMENTS FOR USE OF SUBCONTRACTORS

The CONTRACTOR's attention is directed to Section 6109 of the Public Contract Code, which prohibits a contractor or a subcontractor who is ineligible to bid or work on, or be awarded, a public works project pursuant to Section 1777.1 or 1777.7 of the Labor Code to bid on, be awarded or perform work as a subcontractor on a public works project. This Section also prohibits a contractor from performing work on this Contract with a subcontractor who is ineligible to perform work on this Contract pursuant to the above Labor Code sections. The CONTRACTOR shall comply with all of the provisions of Section 6109 of the Labor Code.

(END OF SECTION)

19.0 PROSECUTION AND PROGRESS

19.1 SUBCONTRACTING

The CONTRACTOR shall give personal attention to the fulfillment of the Contract and shall keep the work under his/her control. The CONTRACTOR shall perform with his/her own organization and with the assistance of workers under his/her immediate superintendence, work of a value of not less than fifty percent (50%) of the value of all work embraced in the Contract. The value of the work subcontracted shall be determined by summing all of the percentages identified for listed subcontractors on the Proposal Form. If the sum of such percentages exceeds fifty percent (50%), the DISTRICT may treat the bid as nonresponsive and reject it on that basis. When a portion of the work which has been subcontracted by the CONTRACTOR is not being prosecuted in a manner satisfactory to the DISTRICT, the subcontractor shall be removed immediately on the request of the ENGINEER and shall not again be employed on the work. No changes will be allowed from the approved subcontractor list without approval of the ENGINEER.

The CONTRACTOR agrees to be as fully responsible to the DISTRICT for the acts and omissions of his/her subcontractors at all levels and for persons either directly or indirectly employed by them, as for the acts and omissions of persons directly employed by him/her. Nothing contained in the Contract Documents shall create any contractual rights for any subcontractor against the DISTRICT. The CONTRACTOR shall cause every subcontractor to be bound by the terms of the Contract Documents.

19.2 ASSIGNMENT

The performance of the Contract may not be assigned directly or indirectly except upon the written consent of the DISTRICT. Consent will not be given to any proposed assignment which would relieve the original Contractor or his/her Surety of their responsibilities under the Contract, nor will the DISTRICT consent to any assignment of a part of the work under the Contract.

The Contract may assign monies due or to become due to the CONTRACTOR under the Contract and such assignment will be recognized by the DISTRICT, if given proper notice thereof, to the extent permitted by law, but any assignment of monies shall be subject to all proper off-sets in favor of the DISTRICT and to all deductions provided for in the Contract and particularly all money withheld, whether assigned or not, shall be subject to being used by the DISTRICT for the completion of the work in the event that the CONTRACTOR should be in default.

19.3 DELAYS AND TIME EXTENSION

If the CONTRACTOR is delayed in the progress of the work by any act or neglect of the DISTRICT or the ENGINEER, or by any separate contractor employed by the DISTRICT, or by strikes, lockouts, fire, acts of God, unusual weather conditions, or unavoidable casualties, the CONTRACTOR shall, within twenty-four (24) hours of the start of the occurrence, give written notice to the DISTRICT of the cause of the potential delay and an estimate of the possible time extension involved. Within seven (7) days after the cause of delay has been remedied, the CONTRACTOR shall give notice to the DISTRICT of any actual time extension requested as a result of the aforementioned occurrence.

For purposes of this Contract, the CONTRACTOR shall be entitled to a time extension to the Substantial Completion Milestones listed on the construction schedule as required by the Section 5.0 of the General Conditions, "Construction Schedules (Bar Charts)" for weather delays only when the CONTRACTOR's critical path activity, as shown on its most recent schedule update, is delayed by unusual weather for over four (4) hours in a given work day. Unusual weather shall be deemed to include only days of rainfall in excess of 0.10 inches.

Rainfall shall be as measured at Bakersfield, California and reported by the Western Regional Climate Center website, www.wrcc.dri.edu. No extra payment to the CONTRACTOR will be made for delays caused by unusual weather conditions. CONTRACTOR shall note that no time extensions to

Operational Milestones as defined in the Section 5.0 of the General Conditions, "Construction Schedule (Bar Charts)" shall be allowed for weather events.

Delays in delivery of equipment or material purchased by the CONTRACTOR or his/her subcontractors shall not be considered as a just cause for delay. The CONTRACTOR shall be fully responsible for the timely ordering, scheduling, expediting, delivery, and installation of all equipment and materials. The DISTRICT does not warrant the availability of "sole source" items or the timely performance of sole source suppliers and subcontractors and the CONTRACTOR's remedies for delay or other breach by such entities shall solely be against them and not against the DISTRICT.

Other time extension claims by the CONTRACTOR must be within ten calendar days after occurrence of the event giving rise to such claim or within ten calendar days after the claimant first recognizes the condition giving rise to the Claim, whichever is later. Claims for time extension must be made by written notice. An additional claim made after the initial Claim has been implemented by contract change order will not be considered.

Any delay claim shall be accompanied by a critical path method (CPM) schedule showing that the delayed task was on the Project's critical path at the time of the delay. Project schedule shall be in the form detailed in the Section 5.0 of the General Conditions, "Construction Schedules (Bar Charts)".

19.4 TEMPORARY SUSPENSION OF WORK

The ENGINEER shall have the authority to suspend the work wholly, or in part, for such period deemed necessary due to conditions considered unfavorable for the suitable prosecution of the work, or for such time deemed necessary due to the failure on the part of the CONTRACTOR to carry out orders given or to perform the work in accordance with these Plans and Specifications. The CONTRACTOR shall immediately comply with the written order of the ENGINEER to suspend the work wholly or in part. The work shall be resumed when conditions are favorable and/or methods are corrected, as ordered or approved in writing by the ENGINEER. The period of suspension will be included in determining the time for completion of work. In the event of a suspension of work under any of the conditions previously set forth, such suspension of work shall not relieve the CONTRACTOR of his/her responsibilities as set forth under Section 17.0, "Legal Relations and Responsibility", in these General Provisions.

19.5 PROGRESS SCHEDULE AND ORDER OF COMPLETION

To ensure completion of the work within the time limit specified, and to assist the DISTRICT in the scheduling of other work, CONTRACTOR shall submit to the DISTRICT within ten (10) calendar days after he/she receives the Notice to Proceed a detailed schedule showing the proposed dates of beginning and completion of all significant items of work under the Contract. If the actual progress of the work varies materially from the proposed program, or if the CONTRACTOR proposes to change the program for any reason, he/she shall submit to the DISTRICT the revised construction program which he/she proposes to follow. The proposed original and revised program shall be adequate, in the opinion of the DISTRICT, to meet the requirements for completion of the work as herein set forth. If, in the opinion of the DISTRICT, the CONTRACTOR's proposed program or the actual progress of the work is insufficient to meet the specified requirements, the CONTRACTOR shall take such steps as are necessary to accomplish the required progress and completion.

When in the judgment of the DISTRICT it is necessary to accelerate any part of the work ahead of schedule, the CONTRACTOR shall, when directed, concentrate his/her efforts on such part of the work.

19.6 FAILURE TO COMPLETE THE WORK IN THE TIME AGREED UPON - LIQUIDATED DAMAGES

The CONTRACTOR agrees to provide all materials, labor and equipment for the project. It is further stipulated and agreed that if the work contracted for is not completed within the time provided, the

DISTRICT will be actually and seriously damaged in the conduct of its affairs, and that from the nature of the circumstances, it would be impractical and extremely difficult to fix or compute the actual damage which may be sustained by the DISTRICT in such event, and it is therefore stipulated and agreed that upon the failure of the CONTRACTOR to complete the work contracted for within the time provided, the CONTRACTOR shall pay the DISTRICT the sum specified in Section B of this Contract, document titled "Bid Document" for each and every day after the number of specified days from and after the issuance of the Notice to Proceed until the completion of said work and the acceptance thereof by the DISTRICT, and that all sums due and payable by the CONTRACTOR to the DISTRICT shall be deemed to be liquidated damages for such period and not a penalty, and may be offset by the DISTRICT against any monies due the CONTRACTOR hereunder.

The work contracted for shall be deemed to be completed within the meaning of this Contract when same has been actually completed in accordance with the Plans and Specifications thereto and to the satisfaction of the DISTRICT. Nothing in this Section shall prohibit the DISTRICT from granting to the CONTRACTOR an extension of time beyond the fixed date of completion and waiving of the damages specified in the Contract Documents Section titled "Special Provisions".

19.7 PROJECT QUALITY CONTROL

19.7.1 Test Reports And Certifications - Where certifications or mill-test reports are required, the CONTRACTOR shall submit three (3) complete, certified copies. Certifications shall show chemical composition, mechanical properties, or other characteristics of the materials to be used in the work. Material specified by a referenced standard shall be certifiable by the mill or manufacturer under that standard. The testing, analysis, and certification shall be the responsibility of the CONTRACTOR.

19.7.2 Notices Of Fabrication - The CONTRACTOR shall submit a separate notice of fabrication for each fabricated article and material. For articles and materials fabricated outside Kern County, the CONTRACTOR shall submit the notice fourteen (14) days before starting fabrication. The CONTRACTOR shall provide a certified third party inspection firm for all work performed outside Kern County. For articles and materials fabricated within Kern County, the CONTRACTOR shall submit the notice five (5) days before starting fabrication.

19.7.3 Responsibilities - The CONTRACTOR shall be responsible for full compliance with every requirement of the Contract Documents and shall ensure that the work is in full accordance with these requirements. At all times, the CONTRACTOR's work will be subject to rigid inspection by the ENGINEER. Whether discovered by the CONTRACTOR or the ENGINEER, nonconforming work shall be corrected or replaced by the CONTRACTOR. For convenience, materials or equipment to be incorporated in the work may be designated in the Specifications by a trade name or the name of a manufacturer and the manufacturer's catalog item number information. Materials, articles, or equipment, even if supplied by a manufacturer designated in the Specifications, shall be accepted only if the items meet all other specification requirements.

The CONTRACTOR shall furnish all tools, equipment, materials, supplies, and manufactured articles necessary or required for the performance and completion of the work included in the Contract, except for materials and equipment specified to be furnished by the DISTRICT. The materials, articles, and equipment provided for permanent installation in the work shall be new and shall be in accordance with these Specifications.

The CONTRACTOR shall perform quality control on suppliers, manufacturers, products, services, site conditions, and workmanship to ensure that work conforms to the Contract Documents. The CONTRACTOR shall be prepared to document its quality control activities. The CONTRACTOR shall require and ensure conformance with specified standards as a minimum quality for the work. When more stringent tolerances, codes, or specified requirements are required by a particular manufacturer or a particular item of work, the higher standards or more precise workmanship shall be provided.

The ENGINEER's inspections and tests are for the sole benefit of the DISTRICT and shall not:

- A. Relieve the CONTRACTOR of responsibility for providing adequate quality 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.

The CONTRACTOR shall be responsible for adjustments, corrections, or repairs found necessary after the delivery or installation of materials and articles. Unidentified materials shall not be used in the work, including work at fabrication plants.

Sequencing and Scheduling of Inspections and Tests - The CONTRACTOR shall furnish and prepare the required samples and test specimens ready for testing in time for the necessary tests and analysis. Where the Specifications require work to be tested or approved, it shall be tested only in the presence of the ENGINEER.

The ENGINEER shall be given timely notice of the CONTRACTOR's readiness for inspection and test. The length of advance notice shall be appropriate for the complexity of the inspection or test, the availability of the ENGINEER's staff, and the location of the inspection or test, but in no case shall less than twenty-four (24) hours' advance notice be given.

19.7.4 Testing - Materials and articles that are to be included in the works shall be subject to testing for conformance with the Specifications and Drawings. When not otherwise specified, sampling and testing shall be in accordance with the methods prescribed in the current standards of ASTM applicable to the class and nature of the articles or materials considered. However, the ENGINEER will have the right to use any generally accepted method of testing that will ensure that the quality of materials, articles, or work is in full accord with the Specifications and Drawings. The ENGINEER will have the right to select, test, and analyze, at the expense of the DISTRICT, additional test specimens of the materials to be used. Results of these tests and analyses will be considered with the results of other tests or analyses, whether performed by the ENGINEER or the CONTRACTOR, to determine compliance with the applicable Specifications for the materials.

19.7.5 Inspection By The ENGINEER - Materials and articles that are to be included in the work shall be subject to rigid inspection by the ENGINEER for conformance with the Specifications and Drawings. The CONTRACTOR shall plan for the inspections to be continuous, repetitive, and detailed. Orders for materials, articles, and equipment shall note that the articles, materials, and equipment are subject to inspection and acceptance by the DISTRICT, both during manufacture or fabrication and after delivery to the site.

When practicable and convenient for the ENGINEER, inspection will be made during the manufacture of the articles and equipment. The location, alignment, grade, plumb, and other physical characteristics of formwork for concrete, items to be embedded in concrete, and permanent improvements shall be subject to rigid survey verification. Materials or articles shall not be incorporated in the work until they have been inspected by the ENGINEER. After testing, work shall be covered or backfilled only with the approval of the ENGINEER.

The duties of the ENGINEER in conducting review of the CONTRACTOR's performance is not intended to include review of the adequacy of the CONTRACTOR's work methods, equipment, bracing, scaffolding or safety measures in, on, or near the construction site.

19.7.6 Facilities For Inspection And Testing - The CONTRACTOR shall furnish the facilities, utilities, and assistance necessary for the safe and convenient performance of inspections and tests required by the Specifications or by the ENGINEER. The CONTRACTOR shall provide adequate lighting, access, and ventilation for a safe working environment for inspections and tests. The CONTRACTOR shall cooperate with the ENGINEER's staff in the performance of their respective duties and shall provide qualified personnel to assist with the performance of tests and inspections by them. When the Specifications require tests or inspections to be performed by the CONTRACTOR, the CONTRACTOR shall provide qualified, licensed, personnel to perform them.

19.7.7 Rejection Of Work - The ENGINEER will have the right, at all times and in all places, to reject articles or materials to be furnished for the Project that fail to meet the requirements of these Specifications. This shall be regardless of whether the defects in these articles or materials are detected at the point of manufacture or after completion of the work at the site. The ENGINEER will be the sole judge as to the acceptable quality of materials, articles, and work. However, where the ENGINEER, through an oversight or otherwise, accepts material, articles, or work that is defective or that is contrary to the Specifications, the material, article, or work, no matter in what stage or condition of manufacture, delivery, or erection, may be rejected by the ENGINEER.

Promptly after notification of rejection by the ENGINEER, the CONTRACTOR shall remove rejected portions or items of materials, articles, or work to a satisfactory distance from the vicinity of accepted items and shall replace the rejected materials, etc., with items acceptable to the ENGINEER.

19.7.8 Final Inspections And Acceptance - Final inspections for acceptance of materials, articles, equipment, and work will be made at the completion of all Contract work. A minimum of ten (10) working days prior to the estimated completion of the work, the CONTRACTOR shall notify the ENGINEER in writing of the pending completion of the entire work or an agreed portion thereof. The CONTRACTOR shall include with the notice a complete list of work items remaining to be completed. On or about the CONTRACTOR's estimated completion date, the ENGINEER will make a thorough inspection of the entire work. Defects or deficiencies noted during this inspection will be reported to the CONTRACTOR in writing. The CONTRACTOR shall notify the ENGINEER in writing when all items on the list are corrected. Shortly thereafter, the ENGINEER will make a thorough final inspection of the entire work.

If the ENGINEER determines the work to be complete, it will be accepted. If defects or deficiencies are noted during this inspection, they will be reported in writing to the CONTRACTOR. When the CONTRACTOR notifies the ENGINEER of the correction of these items, another final inspection will be scheduled.

19.8 SAFETY

The CONTRACTOR shall be solely and completely responsible for conditions of the job site, including safety of all persons and property during performance of the work. This requirement will apply continuously and not be limited to normal working hours and/or days. The CONTRACTOR shall have in full force and effect an Injury and Illness Prevention Program (IIPP) and a Site Specific Safety Plan covering all work of the CONTRACTOR and subcontractor employees at the site.

Safety provisions shall conform to all applicable federal, state, county, and local laws, ordinances, and to other rules of law applicable to the work. Where any of these are in conflict, the more stringent requirement shall be followed.

The CONTRACTOR shall maintain at the job office and/or other well-known place on the job site, all articles necessary for giving first-aid to the injured, and shall establish the procedure for the immediate removal, to the hospital or a doctor's care, of persons who may be injured on the job site.

The right of the ENGINEER and/or DISTRICT to conduct construction review of the CONTRACTOR's performance is not intended to and will not include a review of the adequacy of the CONTRACTOR's safety measures in, on, or near the construction site.

Attention is directed to Section 832 of the Civil Code of the State of California relating to lateral and subjacent support, and the CONTRACTOR shall comply with this law.

19.8.1 Valley Fever - Notices to Employees - A special biological problem of the Project Site is presence of tiny organisms living in the soil which can cause valley fever in man. As is typical of many desert areas in southwestern United States, valley fever is endemic to Kern and Tulare County. Although everyone living in the valley has some contact with the disease-causing organisms, the illness is especially hazardous to those whose work brings them into close contact with the soil, as for example agricultural and construction workers.

19.8.2 Ventilation - Ventilation and control of oxygen-deficient atmospheres, dusts, fumes, mists, vapors, and gases shall be in accordance with the CSO and all other applicable laws, ordinances and regulations.

19.8.3 Trench Safety - In accordance with Section 6705 of the State Labor Code, the CONTRACTOR shall submit to the DISTRICT specific plans to show details of provisions for worker protection from caving ground. This trench safety plan shall be submitted to and approved by the DISTRICT prior to starting excavation for any trench or trenches five (5) feet or more in depth. The trench safety plan working Drawings shall be detailed plans showing the design of shoring, bracing, sloping or other provisions to be made for worker protection from the hazard of caving ground. If such plan varies from the shoring system standards established by the Construction Safety Orders of the California Division of Industrial Safety or the Federal Safety Standards of the Department of Health, Education and Welfare, the plan shall be prepared by a registered civil or structural ENGINEER. As a part of the plan, a note shall be included stating that the registered civil or structural ENGINEER certifies that the plan complies with the CAL-OSHA Construction Safety Orders, or that the registered civil or structural ENGINEER certifies that the plan is not less effective than the shoring, bracing, sloping, or other provisions of the Safety Orders. In no event shall the CONTRACTOR use a shoring, sloping, or protective system less effective than that required by said Construction Safety Orders, or less effective than that required by said Federal Safety Standards. Submission of this plan in no way relieves the CONTRACTOR from the requirement to maintain safety in all areas. If excavation or trench work requiring a CAL-OSHA permit are to be undertaken, the CONTRACTOR shall submit a copy of his/her permit with the excavation/trench work safety plan to the DISTRICT before work begins.

The DISTRICT or the ENGINEER may have made investigations of subsurface conditions in areas where the work is to be performed. If so, these investigations are identified in the Special Provisions, and the records of such investigations are available for inspection at the Engineering Office. The detailed plan showing the design of shoring, which the CONTRACTOR is required to submit to the DISTRICT for acceptance prior to excavation, shall not be accepted by the DISTRICT if the plan is based on subsurface conditions which are more favorable than those revealed by the investigations made by the DISTRICT or their consultants; nor will the plan be accepted if it is based on soils-related design criteria which is less restrictive than the criteria set forth in the report on the aforesaid investigations of subsurface conditions.

The detailed plan showing the design of shoring shall include surcharge loads for nearby embankments and structures, for spoil banks, and for construction equipment and other construction loadings. The plan shall indicate for all trench conditions the minimum horizontal distances from the side of the trench at its top to the near side of the surcharge loads. Nothing contained herein shall be construed as relieving the CONTRACTOR of the full responsibility for providing shoring, bracing, sloping, or other provisions which are adequate for worker protection.

Inspection or testing by the DISTRICT or any agent of the DISTRICT is not intended to include review of the adequacy of the CONTRACTOR's work methods, equipment, bracing or scaffolding or safety measures, in, on, or near the construction site, and shall not be construed as supervision of the actual construction, nor make the DISTRICT responsible for providing a safe place for the performance of work by the CONTRACTOR, subcontractors, or suppliers; or for access, visits, use, work, travel or occupancy by any person.

If death or serious injuries or serious damages are caused, the accident shall be reported immediately by telephone to the DISTRICT. In addition, the CONTRACTOR must promptly report in writing to the ENGINEER all accidents whatsoever arising out of, or in connection with, the performance of the work whether on, or adjacent to, the site, giving full details and statements of witnesses.

If any claim is made by anyone against the CONTRACTOR or any subcontractor on account of any accident, the CONTRACTOR shall promptly report the facts in writing to the ENGINEER, giving full details of the claim.

Whenever abrasive blasting is to be performed for the removal of painted coating systems, the blast media shall be certified by CARB for unconfined blasting pursuant to CCR Title 17.

19.8.4 Facility Startup - The CONTRACTOR shall commission all systems and equipment to verify performance, function, and correct operation by performing procedures to activate, startup, adjust, test, and demonstrate that the work is in operating order in accordance with these general requirements of this Section and the detailed requirements of the technical sections under the system or equipment specified.

To ensure that the work is ready for full-time operation, the procedures shall include verification, balancing, calibration, witness testing, documentation, inspection by equipment manufacturers and operator training where specified. The CONTRACTOR shall notify the ENGINEER five (5) days prior to starting each system or piece of equipment. During the startup period, the CONTRACTOR shall coordinate the operation of the facilities with ENGINEER, subcontractors, DISTRICT'S operators, and manufacturer's representatives.

The CONTRACTOR shall furnish test equipment, measuring devices and supplies required to conduct tests. The CONTRACTOR shall maintain the equipment until acceptance, provide all lubricants, chemicals, and electricity necessary until acceptance, furnish all expendable supplies, gas, water, etc., required for startup, demonstration and testing, and dispose of all waste or used supplies, water, etc.

19.9 CONTRACT CLOSEOUT

19.9.1 Final Cleanup - Prior to final inspection, clean the entire construction area and all other areas affected by the performance of work under this Contract. Clean up work area using personnel specializing in and skilled in cleaning and maintenance work. The CONTRACTOR shall repair work using personnel skilled in executing the type of work being repaired. All work shall be executed to the highest trade standards applicable to that type of work.

The CONTRACTOR shall perform the following work prior to final inspection:

- A. The CONTRACTOR shall remove all temporary construction, signs, tools, equipment, excess material and debris.
- B. Remove all lumps, splatters, spots and stains caused by paint, adhesive, asphalt, concrete, mortar, sealant or other foreign material from exposed or finished surfaces. Remove all temporary labels.

- C. Repair, patch or replace new or existing work including pavement, sidewalks, curbs, gutters, catch basins, gratings, manholes, covers, landscaping, plant materials and other items that have been damaged, broken, cracked or chipped as a result of performing this work.
- D. Sweep clean and wash down all exterior pavements.
- E. Remove all hazardous material and material that may cause sediment in drainage systems prior to wash down.
- F. Remove all grease and oil stains on pavement caused by CONTRACTOR's equipment.

19.9.2 CONTRACTOR's Action List of Items to Be Corrected and/or Completed - During construction, the CONTRACTOR shall maintain an action list of items to be corrected and/or completed. The CONTRACTOR shall regularly add items and update the list as information becomes available or as requested by the ENGINEER. The CONTRACTOR shall deliver a current copy of the list to the ENGINEER at each progress meeting.

19.9.3 Semifinal Inspection/Substantial Completion - When the CONTRACTOR considers the work nearly complete, the CONTRACTOR shall review the Contract Documents, inspect the work, and use the CONTRACTOR's action list to prepare a CONTRACTOR's punch list of all deficient or uncompleted items. The CONTRACTOR shall complete or correct items on the punch list. When the work is substantially complete, the CONTRACTOR shall notify the ENGINEER in writing that the CONTRACTOR has reviewed the Contract Documents, inspected the work and believes that the work is substantially complete and ready for semifinal inspection.

On receipt of the CONTRACTOR's punch list and notice that the work is ready for semifinal inspection; the ENGINEER will inspect the work. The ENGINEER may add additional items to the CONTRACTOR's punch list; may find that the work is not ready for inspection; is ready for inspection but not substantially complete; or that the work is substantially complete. When the ENGINEER finds the work is substantially complete, it will prepare a final punch list and a Notice of Substantial Completion which will state the date of substantial completion and the time agreed to by the DISTRICT and the CONTRACTOR (not to exceed thirty [30] days) in which the work shall be fully complete and ready for final inspection.

19.9.4 Final Inspection, Final Completion And Final Payment - When the CONTRACTOR has completed or corrected all the items on the ENGINEER's final punch list, the CONTRACTOR shall give the ENGINEER written notice that the work is ready for final inspection. When the ENGINEER finds the work acceptable and fully complete in accordance with the Contract Documents, and upon receipt of a final Application for Payment and all final submittals, the ENGINEER will recommend that the DISTRICT issue a Notice of Final Completion, make final payment and accept the work stating that to the best of the ENGINEER's knowledge, information and belief, and on the basis of the ENGINEER's observations and inspection, the work has been fully completed in accordance with the terms and conditions of the Contract Documents.

19.9.5 Final Submittals include:

- A. Operation and Maintenance Manuals and Parts Lists
- B. Record Drawings
- C. Extra Materials
- D. Special Guarantees
- E. Insurance Certificate showing required continuation of coverage beyond Final Payment
- F. Release of Liens
- G. Waiver of Claims by CONTRACTOR
- H. And any other submittals required by the Contract Documents and not previously received

The DISTRICT will record the Notice of Final Completion at the County Recorder's Office. The DISTRICT will make Final Payment to the CONTRACTOR thirty-five (35) days after recording the Notice of Final Completion.

19.9.6 Record Drawings - The CONTRACTOR shall maintain on the jobsite, a complete set of Contract Documents and a complete file of all addenda, Contract modifications and favorably reviewed submittals. The CONTRACTOR shall prepare a set of Record Drawings concurrently with the construction of the Work and in accordance with the following:

- A. Show the invert elevation of all gravity piping and the top of pipe, top of conduit or top of protective concrete encasement for other utilities. Elevations shall be related to a permanent visible elevation bench mark set at the site by the CONTRACTOR.
- B. Show the horizontal location of underground utilities measured from permanent visible physical features such as face of building, face of tank, or centerline of manhole.
- C. Comply with detailed requirements in technical specification sections describing the type of information required on Record Drawings. The CONTRACTOR's copy of Contract Documents, Contract modifications and Record Drawings shall be available to the ENGINEER for weekly verification that the records are being currently updated.
- D. The CONTRACTOR shall submit Record Drawings and obtain acceptance prior to completion.

19.9.7 Extra Materials - Deliver specified extra materials and parts to DISTRICT. Itemize all items on a transmittal letter in duplicate and obtain signature of receiving party. Submit copies of signed transmittals for all specified extra materials and parts prior to completion.

19.9.8 Twelve-Month Inspection – Unless specified otherwise in the Technical Specifications, approximately thirty (30) days prior to the expiration of the one (1)-year guarantee period, the CONTRACTOR shall tour the Project with the ENGINEER and/or the DISTRICT to prepare a list of corrective work required under the twelve (12)-month guarantee. The CONTRACTOR shall correct all items found to be defective within twenty (20) days of receipt of the list of items to be corrected.

19.10 GUARANTEE AND WARRANTY

Guarantee And Warranty Requirements - The CONTRACTOR shall warrant and guarantee that the entire work constructed under the Contract fully meets all requirements of the Contract. The CONTRACTOR shall further warrant and guarantee that all work, including materials, articles, and equipment furnished by the CONTRACTOR under the Contract, shall be free of deficiencies and defects for a period of one (1) year after the date of final acceptance of the work unless specified otherwise.

The CONTRACTOR shall further warrant and guarantee to make or have made at CONTRACTOR's expense repairs, adjustments, replacements, or other corrective work necessary to restore or bring into full compliance with the requirements of the Specifications any part of the work which during the guarantee period is found to be deficient with respect to any provision of the Specifications.

If a defect or deficiency is of a kind which in the opinion of the ENGINEER requires immediate correction to avoid injury to the DISTRICT, the ENGINEER may make or have made such repairs, adjustments, replacements, or other corrective work and the CONTRACTOR agrees to promptly pay the DISTRICT invoice for the corrective work.

If a defect or deficiency is of a kind which in the opinion of the ENGINEER requires immediate correction but the CONTRACTOR has failed to undertake corrective work within three (3) working days of receipt of written notice from the ENGINEER, the ENGINEER may make or have made such repairs,

adjustments, replacements, or other corrective work and the CONTRACTOR agrees to promptly pay the DISTRICT invoice for the corrective work.

The DISTRICT will have the right to use deficient material and equipment until it can be taken out of service without injury to the DISTRICT. The guarantees and agreements set forth herein shall be secured by the "Faithful Performance Bond" furnished by the CONTRACTOR to the DISTRICT at the time of execution of the Contract, which bond shall be deemed to continue in effect during the period of guarantee.

This guarantee is not the exclusive remedy for the DISTRICT in the event of any breach of this Contract.

(END OF SECTION)

20.0 MEASUREMENT AND PAYMENT

20.1 MEASUREMENT OF QUANTITIES

Where the Contract provides for payment on a lump sum price basis, no measurement of quantity will be made. Where the Contract provides for payment on a unit price basis, the quantities of work performed will be computed by the ENGINEER on the basis of measurements taken by the ENGINEER, and these measurements shall be final and binding.

All quantities of work computed under the Contract shall be based upon measurements by the ENGINEER according to United States Measurements and Weights.

20.2 SCOPE OF PAYMENT

The CONTRACTOR shall accept the compensation as provided in full payment for furnishing all materials, labor, tools, and equipment necessary to the completed work; for performing all work contemplated and embraced under the Contract; for loss or damage arising from the nature of the work, or from the action of the elements, except as before provided, or from any unforeseen difficulties which may be encountered during the prosecution of the work until final acceptance by the DISTRICT, and for all risks of every description connected with the prosecution of the work; and for completing the work according to these Plans and Specifications. Neither the payment of any estimate nor of any retained percentage shall relieve the CONTRACTOR of any obligation to make good any defective work or material.

No allowance will be made, other than as indicated in this Contract, for loss of anticipated profits. Increased or decreased work involving supplemental agreements will be paid for as provided in such agreements.

20.3 CHANGE ORDER/PAYMENT FOR EXTRA WORK

It is the intention of this Contract that the differences between the parties, arising 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 promptly taken. In no event shall the CONTRACTOR be entitled to additional compensation or an extension of time for any claim that may be based on any act, failure to act, event, thing or occurrence for which no written notice of potential claim was filed prior to the CONTRACTOR commencing any action which the CONTRACTOR seeks additional compensation or an extension of time for.

Without invalidating the Contract and without notice to any surety or insurer, DISTRICT may, at any time, or from time to time, order additions, deletions, or revisions in the Work by a written Contract Change Order. Upon receipt of any such document, CONTRACTOR shall promptly proceed with the extra work involved which will be performed under the applicable conditions of the Contract Documents, except as otherwise specifically provided in the Change Order. Payment for extra work shall be made at the unit or lump sum price bid, when applicable, or as otherwise agreed upon in the written Contract Change Order.

Extra work shall not be performed without written approval from the Engineer. All proposed change orders submitted by the Contractor shall clearly outline the scope of work, provide an itemized list of manpower, manpower costs, and hours, provide an itemized list of equipment to be used, equipment costs, and hours, provide an itemized list of all materials to be furnished, and outline all additional costs such as project management, office supplies, insurance and bond costs, etc. Contractor mark-ups on labor, material, and equipment shall not exceed 15%. The Contractor mark-up on subcontractors work shall not exceed 5%. Subcontractors shall be restricted to a maximum 15% mark-up on all labor, equipment, and material associated with their work as well. All change order costs shall be detailed and substantiated with the documentation acceptable to the District's Representative.

Time and Material or Force Account work, if authorized by the District's Representative, shall be in accordance with the following paragraphs.

The CONTRACTOR shall provide a copy of the Daily Extra Work Report (DEWR) for each day of extra work. The DEWR is to be signed by the CONTRACTOR's authorized representative and the DISTRICT'S on site representative on the day the work is performed. THE DEWR is to include the name and hours for each person, equipment designation and hours and designation and quantities of all materials. Mark-ups shall be limited to fifteen percent (15%). Items not included on the DEWR will not be paid for. Work on DEWR not signed by the DISTRICT'S on site representative will not be paid for.

A copy of each DEWR with the labor rates, equipment rates, cost of materials, extended amounts, markups and total. Computer generated sheets can be submitted if the information on the computer sheets can be readily cross referenced with the signed DEWR.

When extra work to be paid for on a force account basis is performed by a subcontractor, approved in accordance with the provisions in Section 19.1 titled "Subcontracting," an additional markup of five percent (5%) will be added to the total cost of said extra work including all markups specified in Section 20.3, titled "Payment for Extra Work." Said additional five percent (5%) markup shall reimburse the CONTRACTOR for additional administrative costs, and no other additional payment will be made by reason of performance of the extra work by a subcontractor.

When both additional and deleted work are involved in any one change, the markup allowances of this Section shall be applied to the net extra cost of the work, if any, after subtraction of the costs for the omitted work from the extra work. For Change Order work which results in a net decrease in cost a minimum of five percent (5%) markup shall be added to the sum of the direct labor, materials and equipment as a deduction for profit, indirect and overhead costs and reduction in bond and insurance. The CONTRACTOR shall neither be entitled to nor claim anticipated profits on work that may be omitted.

The added fixed fees shall be considered to be full compensation, covering the cost of general supervision, overhead, profit, small tools, incidentals and any other general expenses. The above fixed fees represent the maximum limits which will be allowed, and they include, but are not limited to, the CONTRACTOR's and all subcontractor's indirect field and home office expenses and all other costs for cost proposal preparation, schedule analysis and preparation, operation and maintenance manual documentation, and record documents and change order administration.

20.3.1 Direct Labor Cost - Charges for all of the labor furnished and used by the CONTRACTOR shall be made for manual classifications up to and including general foreman, when authorized by the ENGINEER for the workers used in the actual and direct performance of the work. It will not include charges for assistant superintendents, superintendents, office personnel, timekeepers and maintenance mechanics. The time charged to extra work shall be subject to the daily approval of the ENGINEER and evidence of such daily approval shall be submitted with the billing. Labor rates used to calculate the costs shall be those basic wages including current employer contributions for fringe benefits and including applicable subsistence and travel allowances, all as actually paid to workers under collective bargaining agreements or as regular workers under collective bargaining agreements or as a regular practice of the employer. No time or charges will be allowed except when the workers are actually engaged in the proper, efficient and diligent performance or completion of the extra work as authorized. The CONTRACTOR shall submit with the billing, copies of certified payrolls for labor associated with extra work. Overtime shall not be worked without prior approval of the ENGINEER.

20.3.2 Equipment Cost - Charges for the rental and operation of the equipment furnished and used by the CONTRACTOR shall be made for all prime construction and automotive equipment. It shall not include charges for listed equipment or major tools with a new cost of five-hundred dollars (\$500.00) or less. Equipment time charges shall be subject to the daily approval of the ENGINEER and evidence of such daily approval submitted with the billing. The CONTRACTOR will be paid for the use of equipment at the rental rates listed for such equipment in the California

Department of Transportation publication entitled Labor Surcharge And Equipment Rental Rates, which is in effect on the date upon which the work is accomplished and which is a part of the Contract, regardless of ownership and any rental or other agreement, if such may exist, for the use of such equipment entered into by the CONTRACTOR, except that for those pieces of equipment with a rental rate of ten dollars (\$10.00) per hour or less as listed in the Labor Surcharge And Equipment Rental Rates publication and which are rented from a local equipment DISTRICT, other than CONTRACTOR owned, the CONTRACTOR will be paid at the hourly rate shown on the rental DISTRICT invoice or agreement for the time used on force account work. If a minimum equipment rental amount is required by the local equipment rental DISTRICT, the actual amount charged will be paid to the CONTRACTOR.

If it is deemed necessary by the ENGINEER to use equipment not listed in said publication, a suitable rental rate for such equipment will be established by the ENGINEER. The CONTRACTOR may furnish any cost data which might assist the ENGINEER in the establishment of such rental rate. If the rental rate established by the ENGINEER is ten dollars (\$10.00) per hour or less, the provisions above concerning rental of equipment from a local equipment DISTRICT shall apply.

20.3.3 The rental rates paid as above provided 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.

20.3.4 Operators of rented equipment will be paid for as provided in Section 20.3.1, titled "Direct Labor Cost."

20.3.5 All equipment shall, in the opinion of the ENGINEER, be in good working condition and suitable for the purpose for which the equipment is to be used.

20.3.6 Unless otherwise specified, manufacturer's ratings and manufacturer approved modifications shall be used to classify equipment for the determination of applicable rental rates. Equipment which has no direct power unit shall be powered by a unit of at least the minimum rating recommended by the manufacturer. Rental time will not be allowed while equipment is inoperative due to breakdowns.

20.3.7 The time to be paid for equipment on the work shall be the time the equipment is in operation on the extra work being performed, and in addition, shall include the time required to move the equipment to the location of the extra work and return it to the original location or to another location requiring no more time than that required to return it to its original location, except that moving time will not be paid for if the equipment is used at the site of the extra work on other than such extra work. Loading and transporting costs will be allowed, in lieu of moving time, when the equipment is moved by means other than its own power, except that no payment will be made if the equipment is used at the site of the extra work on other than such extra work. The following shall be used in computing the rental time of equipment on the work:

- A. When hourly rates are listed, less than thirty (30) minutes of operation shall be considered to be two (2) hours of operation.
- B. When daily rates are listed, less than four (4) hours of operation shall be considered to be two (2) days of operation.

20.3.8 When owner-operated equipment is used to perform extra work to be paid for on a force account basis, the CONTRACTOR will be paid for the equipment and operator, as follows:

Payment for the equipment will be made in accordance with the provisions in Section 20.3.2, titled "Equipment Cost."

Payment for the cost of labor and subsistence or travel allowance will be made at the rates paid by the CONTRACTOR to other workers operating similar equipment already on the Project or, in the absence of such other workers, at the rates for such labor established by collective bargaining agreements for the type of workman and location of the work, whether or not the owner-operator is actually covered by such an agreement.

To the direct cost of equipment rental and labor, computed as provided herein, will be added the markups for equipment rental and labor as provided in Section 20.3, titled "Change Order/Payment for Extra Work."

All force account work shall be adjusted daily upon Daily Extra Work report sheets, furnished to the CONTRACTOR by the ENGINEER and signed by both parties, which daily reports shall thereafter be considered the true record of force account work done.

20.3.9 Material Costs - Charges for the cost of materials furnished by the CONTRACTOR shall be made provided such furnishing was specifically authorized in the extra work order and the actual use verified by the ENGINEER. Charges shall be net cost to the CONTRACTOR delivered at the job, including all applicable sales taxes and vendor's invoice must accompany the billing along with verification of use of such materials by the ENGINEER.

20.4 DISPUTED CHANGE ORDER WORK VERIFICATION

- A. In no event may the CONTRACTOR refuse to proceed with the work as directed by the ENGINEER. It is agreed and understood that the CONTRACTOR's failure to properly and timely carry out the directions of the ENGINEER shall be deemed as a material breach of this Contract.
- B. If the CONTRACTOR believes that the DISTRICT or the ENGINEER has failed to provide a Change Order when one is due to the CONTRACTOR, or his subcontractors, the CONTRACTOR shall immediately notify the DISTRICT and the ENGINEER of such belief in writing and shall immediately document the work the CONTRACTOR feels justifies the Change Order in accordance with the provisions herein provided for in this Section 20.4.
- C. The CONTRACTOR's failure to document the work as provided for in this Section 20.4 shall be deemed as a waiver by the CONTRACTOR of any right to an adjustment in Contract Price and/or Contract Time for the work in question. Likewise, the CONTRACTOR's failure to assert the disputed work in the Request for Payment and the Progress Payment Waiver covering the time period in question shall be deemed as a waiver by the CONTRACTOR of any right to an adjustment in Contract Price and/or Contract Time for the work in question.
- D. For Disputed Change Order Work Verification, the CONTRACTOR, or his subcontractor through the CONTRACTOR, shall submit on a daily basis at the end of each day a Force Account Worksheet for the day to the DISTRICT's Representative for examination and review. The worksheet shall include an itemized breakdown of the labor, materials, tools and equipment used in performing the work. The DISTRICT's Representative shall receive the worksheet on a daily basis and shall provide to the CONTRACTOR a receipt to signifying the acceptance of the daily worksheet. The receipt only signifies that the DISTRICT's Representative has received the worksheet and in no way shall said receipt be construed as an admission by the DISTRICT, or the DISTRICT's Representative, that the matters claimed in the worksheet are accurate and require payment.
- E. The DISTRICT's Representative shall examine and review the worksheet and make any adjustments as needed based upon the Representative's observations of the work that day; said adjustments shall be limited to the itemized break down of labor, materials, tools and equipment used in performing the work. The CONTRACTOR shall be given a copy of the worksheet with any adjustments noted by the DISTRICT's Representative the following day.

- F. The Engineer shall review the worksheets as adjusted by the DISTRICT's Representative and shall verify the costs and entitlements listed on the same. As a part of this process, the Engineer shall reject for payment any portion of the Force Account Worksheet which does not reflect a Change in the Contract Price and/or Contract Time or which is otherwise improperly charged to the DISTRICT.
- G. Once verified by the Engineer, any Work listed on the worksheets which the CONTRACTOR is entitled to payment for shall be paid along with the Progress Payment for the time period covering in question.
- H. Submission of daily worksheets under this Section 20.4 shall not alleviate the CONTRACTOR's responsibility to properly list any and all claims, including but not limited to the claims found in the daily worksheets on the monthly Request for Payment and the Progress Payment Waiver covering the time period in question and the failure to do so shall act as a waiver to said claims. Likewise, it is agreed and understood that the submission of daily worksheets in accordance with this Section 20.4 is a condition precedent to the filing of any claim under Section 20.7, or any other applicable law, and the failure to submit a daily worksheet or worksheets shall act as a waiver to said claims.

20.5 PROGRESS PAYMENTS

Once each month the CONTRACTOR shall submit to the DISTRICT a Request for Payment, including waivers and releases, on forms to be provided by the DISTRICT. CONTRACTOR shall list all claims for payment, including all disputed claims if any, on the required monthly form for the work period covered by the form. CONTRACTOR acknowledges and agrees that the failure to list any and all work on the forms, including all disputed claims if any, shall act as a waiver and release of any claim the CONTRACTOR may have, of whatever type or nature, for the period specified on the required monthly form. Likewise, CONTRACTOR agrees and acknowledges that said monthly forms cannot be revised more than 7 days after the work period covered by the form and the Request for Payment shall follow the form of the Schedule of Values required by the ENGINEER.

In addition to the required monthly Request for Payment forms, CONTRACTOR must submit Waiver and Releases on forms provided by the DISTRICT. Waiver and Release submittal sequence shall be as follows:

1. Upon initial submittal for progress payment, submit for each subcontractor, material or equipment supplier a "**CONDITIONAL WAIVER AND RELEASE UPON PROGRESS PAYMENT**". If initial submittal is also a final submittal for any or all subcontractors, material or equipment suppliers, submit a "**CONDITIONAL WAIVER AND RELEASE UPON FINAL PAYMENT**" for those suppliers or subcontractors.
2. Upon each subsequent submittal for progress payment, submit for each subcontractor, material or equipment supplier a "**CONDITIONAL WAIVER AND RELEASE UPON PROGRESS PAYMENT**" for a total amount reflecting the current progress payment. Also submit an "**UNCONDITIONAL WAIVER AND RELEASE UPON PROGRESS PAYMENT**" reflecting the previous progress payment aggregate sum.
3. Upon submittal for final progress payment, submit for each subcontractor, material or equipment supplier a "**CONDITIONAL WAIVER AND RELEASE UPON FINAL PAYMENT**". Also submit an "**UNCONDITIONAL WAIVER AND RELEASE UPON PROGRESS PAYMENT**" reflecting the previous progress payment aggregate sum.
4. Prior to final payment, submit for each subcontractor, material or equipment supplier a "**CONDITIONAL WAIVER AND RELEASE UPON FINAL PAYMENT**".

5. Upon receipt of final payment, Contractor shall submit an **"UNCONDITIONAL WAIVER AND RELEASE UPON FINAL PAYMENT"**.

Upon receipt of a Request for Payment, the DISTRICT shall review it as soon as practicable to determine if it is proper. Any Request for Payment determined not to be a proper request suitable for payment shall be returned to the CONTRACTOR as soon as practicable, but not less than seven (7) days after receipt. Any Request for Payment returned to the CONTRACTOR shall be accompanied by a document setting forth in writing the reasons why the request is not proper.

Upon receipt of an undisputed and properly submitted Request for Payment the DISTRICT shall prepare a written Progress Pay Estimate which shall include the total amount of work done including Contract Change Orders and/or force account and allowances for materials on hand. The Progress Pay Estimate shall be submitted to the DISTRICT Board of Directors for approval.

In accordance with the provisions of Section 20104.50 of the Public Contract Code, the DISTRICT shall pay interest at the legal rate set forth in subdivision (a) of Section 685.010 of the Code of Civil Procedure on any Request for Payment submitted by the CONTRACTOR if the DISTRICT fails to make the progress payment within thirty (30) days after receipt of an undisputed and properly submitted Request for Payment. The number of days available to the DISTRICT to make a progress payment without incurring interest pursuant to Section 20104.50 of the Public Contract Code shall be reduced by the number of days by which the DISTRICT exceeds the seven (7) day requirement set forth above for the return of an improper Request for Payment.

Pipelines, whether paid on a lump sum or unit price basis shall be considered 75% complete when laid and backfilled with compaction tests passed; 85% complete when hydrostatic and bacteria tests have passed, and pipe has been tied-in to the DISTRICT'S system; and 100% complete when the paving is accepted.

To be acceptable for partial payment, materials on hand must be clean, undamaged, and properly stored as directed by the ENGINEER. The quantity of materials on hand shall not include materials used in any partially completed items of work. The Request for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that the DISTRICT has received the materials and equipment free and clear of all liens, charges, security interests and encumbrances ("Liens") and evidence that the materials and equipment are covered by appropriate property insurance and other arrangements to protect DISTRICT'S interest therein, all of which will be satisfactory to DISTRICT. The amount of retainage with respect to progress payments will be as stipulated in the Contract.

Each Progress Pay Estimate shall include an accounting of the Contract time, including any allowances or revisions due to weather and/or Contract Change Orders.

The DISTRICT will pay ninety-five percent (95%) of the amount of each Progress Pay Estimate less any withholds under this or the following sections, within thirty (30) days of approval of the Progress Pay Estimate by the CONTRACTOR and the ENGINEER. No payments, except the final payment, shall constitute an acceptance of any portion of the work.

Prior to issuance of a check from the DISTRICT, the DISTRICT may require the CONTRACTOR to furnish the following information: a current list of subcontractors, current fringe benefit statements, apprenticeship certifications, and certified payrolls.

If the CONTRACTOR fails to correct a prevailing wage deficiency within fifteen (15) days after notification, a deduction shall be made. In such cases, the deduction shall be ten percent (10%) of the estimated value of the work done during the month, except that the deduction shall not exceed ten-thousand dollars (\$10,000), nor be less than one-thousand dollars (\$1,000), and shall be deducted from the progress payment.

Deductions for noncompliance shall be in addition to all other deductions provided for in these Specifications, and shall apply irrespective of the number of instances of noncompliance. Deductions shall be made separately and additively for each estimate period in which a new deficiency appears. When all deficiencies for a period have been corrected, the deduction covering that period shall be released on the next progress payment. Otherwise, the deduction shall be retained.

The CONTRACTOR may elect to receive one-hundred percent (100%) of payments due under the Contract from time to time, without retention of any portion of the payment by the DISTRICT, by depositing securities of equivalent value with the DISTRICT in accordance with the provisions of Section 22300 of the Public Contract Code. Such securities, if deposited by the CONTRACTOR, shall be valued by the DISTRICT, whose decision on valuation of the securities is final.

20.6 RIGHT TO WITHHOLD PAYMENTS

When, in the judgment of the ENGINEER, the work is not proceeding in accordance with the provisions of the Contract or good construction practice, or when in the ENGINEER's judgment the total amount of work done since the last estimate amounts to less than five thousand dollars (\$5,000.00), the DISTRICT may elect to not prepare a Progress Pay Estimate and make no Progress Payment.

In addition to all other rights and remedies of the DISTRICT hereunder and by virtue of law, the DISTRICT may withhold or nullify the whole or any part of any progress payment or up to one-hundred and fifty percent (150%) of the disputed amount from the final payment (see California Public Contract Code Section 7107) to such extent as may reasonably be necessary to protect the DISTRICT from loss on account of:

- A. Defective work not remedied, irrespective of when any such work be found to be defective;
- B. Claims or liens filed or other reasonable evidence indicating probable filing of claims or liens including, but not limited to, claims under California Labor Code Sections 1775, 1776, or 1777.7;
- C. Failure of the CONTRACTOR to make payments properly for labor, materials, equipment, or other facilities, or to subcontractors and/or suppliers;
- D. A reasonable doubt that the work can be completed for the balance then unearned;
- E. A reasonable doubt that the CONTRACTOR will complete the work within the agreed time limits;
- F. Costs to the DISTRICT, including without limitation, liquidated damages, resulting from failure of the CONTRACTOR to complete the work within the proper time;
- G. Failure to comply with environmental and other regulatory requirements;
- H. Cost of insurance arranged by the DISTRICT due to cancellation or reduction of the CONTRACTOR's insurance;
- I. Payments due the DISTRICT from the CONTRACTOR, including but not limited to the monthly service charge, and consumption charge for water used by CONTRACTOR;
- J. Penalties under Labor Code Section 1775, 1776, 1777.5, 1810 through 1815, or any of them;
- K. Failure to adequately supervise the work competently and efficiently and pursue completion of the Project with an adequate work force in compliance with established construction schedule;
- L. Failure to maintain as-constructed information and Drawings current for the Project;
- M. Provisions of law that enable or require the DISTRICT to withhold such payments in whole or in part; or
- N. Damage to another contractor or third party, work or property.

Whenever the DISTRICT shall, in accordance herewith, withhold any monies otherwise due the CONTRACTOR, written notice of the amount withheld and the reasons therefore will be given the CONTRACTOR. After the CONTRACTOR has corrected the enumerated deficiencies, the DISTRICT will promptly pay to the CONTRACTOR the amount so withheld. When monies are withheld to protect the

DISTRICT against claims or liens of mechanics, suppliers, subcontractors, etc., the DISTRICT may at its discretion permit the CONTRACTOR to deliver a surety bond in terms and amount satisfactory to the DISTRICT, indemnifying the DISTRICT against any loss or expense, and upon acceptance thereof by the DISTRICT, the DISTRICT shall release to the CONTRACTOR monies so withheld.

20.7 CLAIMS PROCEDURES PRIOR TO ANY LEGAL ACTION

The CONTRACTOR shall not be entitled to the payment of any additional compensation or any extensions of time for any cause, including any act, or failure to act by the ENGINEER, or happening of any event, thing or occurrence, unless the CONTRACTOR shall have given the ENGINEER due written notice of potential claims as required under this Contract. The CONTRACTOR hereby agrees that he or she shall have no right to additional compensation or an extension of time for any claim that may be based on any act, failure to act, event, thing or occurrence for which no written notice of potential claim was filed prior to the CONTRACTOR commencing any action which the CONTRACTOR seeks additional compensation or an extension of time for. The CONTRACTOR further agrees that this Section 20.7 works in coordination with other Sections within this Contract, including and not limited to notice and verification provisions in those other Sections, and the CONTRACTOR's failure to abide by all of the provisions in those other Sections shall act as a waiver and release of any and all claims against the DISTRICT and/or its representatives.

It is also the general intention of this Section to implement the provisions of Article 1.5 (commencing with Section 20104) of Chapter 1 of Part 3 of the Public Contract Code of California.

All claims shall be filed in writing on or before the times prescribed herein, but in no event later than thirty (30) days after the occurrence of the event giving rise to the claim and stating the general nature of the claim. Notice of the amount of the claim with supporting data shall be delivered within sixty (60) days after such occurrence (unless ENGINEER allows an additional period of time to ascertain more accurate data in support of the claim). All claims shall set forth clearly and in detail, for each item of additional compensation or extension of time claimed, the reasons for the claim, references to applicable provisions of the Specifications, the nature and the amount of the cost involved, the computations used in determining such costs, and all pertinent factual data necessary to substantiate the claim. No claim for an adjustment in the Contract price, or time, will be valid if not submitted in accordance with this Section and when applicable verified under the provisions of Section 20.4 and or Section 20.3. Likewise, the CONTRACTOR's failure to list any and all work, including all disputed claims if any, on the monthly Request for Payment and Release forms for the work period covered by the form shall act as a waiver and release of any claim the CONTRACTOR may have, of whatever type or nature.

20.7.1 Claims of Less Than Fifty-Thousand Dollars (\$50,000) – The DISTRICT will respond in writing to claims for less than fifty-thousand dollars (\$50,000) within forty-five (45) days of receipt of the claim, or may request, in writing, within thirty (30) days of receipt of the claim, any additional documentation supporting the claim or relating to defenses or claims the DISTRICT may have against the CONTRACTOR. If additional information is thereafter required, it shall be requested and provided pursuant to this subsection upon mutual agreement of the DISTRICT and the CONTRACTOR. The DISTRICT'S written response to the claim, as further documented, will be submitted to the CONTRACTOR within fifteen (15) days after receipt of the further documentation, or within a period of time no greater than that taken by the CONTRACTOR in producing the additional information, whichever is greater. If the CONTRACTOR is unsatisfied with the outcome of the DISTRICT'S written response, the CONTRACTOR must file a claim pursuant to Chapter 1 (commencing with Section 900) and Chapter 2 (commencing with Section 910) of Part 3 of Division 3.6 of Title 1 of the Government Code before initialing any legal action.

20.7.2 Claims Over Fifty-Thousand Dollars (\$50,000) But Not Over Three-Hundred and Seventy-Five Thousand Dollars (\$375,000) –

The DISTRICT will respond in writing to claims over fifty-thousand dollars (\$50,000) but not over three-hundred and seventy-five thousand dollars (\$375,000) within forty-five (45) days of

receipt of the claim, or may request, in writing, within thirty (30) days of receipt of the claim, any additional documentation supporting the claim or relating to defenses or claims the DISTRICT may have against the CONTRACTOR. If additional information is thereafter required, it shall be requested and provided pursuant to this subsection, upon mutual agreement of the DISTRICT and the CONTRACTOR. The DISTRICT's written response to the claim, as further documented, shall be submitted to the CONTRACTOR within thirty (30) days after receipt of the further documentation, or within a period of time no greater than that taken by the CONTRACTOR in producing the additional information or requested documentation, whichever is greater. If the CONTRACTOR is unsatisfied with the outcome of the DISTRICT'S written response, the CONTRACTOR must file a claim pursuant to Chapter 1 (commencing with Section 900) and Chapter 2 (commencing with Section 910) of Part 3 of Division 3.6 of Title 1 of the Government Code before initiating any legal action.

20.7.3 All Claims of Three-Hundred and Seventy-Five Thousand Dollars (\$375,000) or Less - If the CONTRACTOR disputes the DISTRICT'S written response or the DISTRICT fails to respond within the times prescribed for claims of three-hundred and seventy-five thousand dollars (\$375,000) or less, the CONTRACTOR may so notify the DISTRICT, in writing, either within fifteen (15) days of receipt of the DISTRICT'S response or within fifteen (15) days of the DISTRICT'S failure to respond within the time prescribed, respectively, and demand an informal conference to meet and confer for settlement of the issues in dispute. Upon such a demand, the DISTRICT will schedule a meet and confer conference within thirty (30) days for settlement of the dispute. If following the meet and confer conference the claim or any portion remains in dispute, the CONTRACTOR must file a claim pursuant to Chapter 1 (commencing with Section 900) and Chapter 2 (commencing with Section 910) of Part 3 of Division 3.6 of Title 1 of the Government Code. For purposes of this specific provision, the running of the period of time in which a claim must be filed shall be tolled from the time the CONTRACTOR submits his or her written claim pursuant to this Section until the time the claim is denied, including any period of time utilized by the meet and confer conference. The procedures governing all civil actions filed by the CONTRACTOR to resolve claims of three-hundred and seventy-five thousand dollars (\$375,000) or less shall be those set forth in Public Contract Code Section 20104.4 which provides for mediation and judicial arbitration. In any suit filed under Section 20104.4, the DISTRICT shall pay interest at the legal rate on any arbitration award or judgment. The interest shall begin to accrue on the date the suit is filed in a court of law. The DISTRICT will pay any portion of a claim that is undisputed in accordance with the payment provisions of the Contract.

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 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.

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.

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.

20.7.4 Claims of Three-Hundred and Seventy-Five Thousand Dollars (\$375,000) or More - All claims of \$375,000 or more are subject to Chapter 1 (commencing with Section 900) and Chapter 2 (commencing with Section 910) of Part 3 of Division 3.6 of Title 1 of the Government Code. Jurisdiction over such claims shall rest with the Superior Court of the State of California in and for Kern County.

20.7.5 Final Payment - Whenever the CONTRACTOR shall deem all work under this Contract to have been completed in accordance therewith, he/she shall so notify the ENGINEER in writing, and the ENGINEER shall promptly ascertain whether the work has been satisfactorily completed and, if not, shall advise the CONTRACTOR in detail and in writing of any additional work required. Completion of work will include submittal and approval of 'As-Built' record Drawings and final O&M manuals. When all the provisions of the Contract have been fully complied with to the satisfaction of the ENGINEER, he/she shall proceed with all reasonable diligence to determine accurately the total value of all work performed by the CONTRACTOR at the prices set forth in the Contract or fixed by Change Orders, in accordance with the Contract. The ENGINEER will then certify to said final estimate and to the completion of the work, and will file copies thereof with the DISTRICT and the CONTRACTOR. The date of completion shall be the date upon which the DISTRICT makes its formal acceptance of the work.

Within ten (10) days after the date of completion, the DISTRICT will file in the Office of the County Recorder, a Notice of Completion of the work herein agreed to be done by the CONTRACTOR. On the expiration of thirty-five (35) days after the recordation of such Notice of Completion, the difference between said final estimate and all payments theretofore made to the CONTRACTOR shall be due and payable to the CONTRACTOR, subject to any requirements concerning the furnishing of a maintenance bond, and excepting only such sum or sums as may be withheld or deducted in accordance with the provisions of this Contract. All prior certifications, upon which partial payments may have been made, being merely estimates, shall be subject to correction in the final certificate.

It is mutually agreed between the parties to the Contract that no certificate given or payments made under the Contract, except the final certificate or final payment, shall be conclusive evidence of the performance of the Contract, either wholly or in part, against any claim of the DISTRICT, and no payment shall be construed to be an acceptance of any defective work or improper materials.

The CONTRACTOR further agrees that the payment of the final amount due under the Contract, and the adjustment and payment for any work done in accordance with any alteration of the same, shall release the DISTRICT, the Directors, the General Manager, the Project Manager, the ENGINEER, employees and volunteers, from any and all claims or liability on account of work performed under the Contract or any alteration thereof.

(END OF SECTION)

PROGRESS PAYMENT REQUEST RELEASE FORM

OWNER: Arvin Community Services District

NAME OF CONTRACTOR: _____

PROJECT DESCRIPTION: Haven Drive Water Line Relocation Project

PERIOD WORK PERFORMED: _____

PAYMENT REQUEST FOR THE WORK PERIOD COVERED: \$ _____

RETENTION AMOUNT FOR THIS PERIOD: \$ _____

The above named Contractor hereby acknowledges the above dollar amount represents payment in full for all compensation of whatever nature due the Contractor for all labor and materials furnished and for all work performed on the above-referenced project for the period specified above with the exception of disputed claim amounts specifically shown below.

DISPUTED CLAIMS

DESCRIPTION OF CLAIM

AMOUNT CLAIMED

The Contractor further expressly waives and releases any claim the Contractor may have, of whatever type or nature, which is not shown as a disputed claim on this form for the period specified. This release and waiver has been made voluntarily by Contractor without any fraud, duress, or undue influence by any person or entity.

Contractor further certifies, warrants, and represents that all bills for labor, materials and work due subcontractors for the specified period have been paid in full and that the parties signing below on behalf of Contractor have express authority to execute this release.

DATED: _____

PRINT NAME OF CONTRACTOR

DESCRIBE ENTITY (Partnership, Corporate, etc.)

By _____

By _____

PROGRESS/FINAL PAYMENT RELEASE FORM

OWNER: Arvin Community Services District

NAME OF CONTRACTOR: _____

PROJECT DESCRIPTION: Haven Drive Water Line Relocation Project

PERIOD WORK PERFORMED: _____

PAYMENT REQUEST FOR THE WORK PERIOD COVERED: \$ _____

RETENTION AMOUNT FOR THIS PERIOD: \$ _____

The above named Contractor hereby acknowledges payment in full for all compensation of whatever nature due the Contractor for all labor and materials furnished and for all work performed on the above-referenced project for the period specified above with the exception of disputed claim amounts specifically shown below.

DISPUTED CLAIMS

DESCRIPTION OF CLAIM

AMOUNT CLAIMED

The Contractor further expressly waives and releases any claim the Contractor may have, of whatever type or nature, which is not shown as a disputed claim on this form for the period specified. This release and waiver has been made voluntarily by Contractor without any fraud, duress, or undue influence by any person or entity.

Contractor further certifies, warrants, and represents that all bills for labor, materials and work due subcontractors for the specified period have been paid in full and that the parties signing below on behalf of Contractor have express authority to execute this release.

DATED: _____

PRINT NAME OF CONTRACTOR

DESCRIBE ENTITY (Partnership, Corporate, etc.)

By _____

By _____

CONDITIONAL WAIVER AND RELEASE UPON PROGRESS PAYMENT

Upon receipt by the undersigned of a check from _____
(Maker of Check)

in the sum of \$ _____ payable to _____
(Amount of Check) (Payee or Payees of Check)

and when the check has been properly endorsed and has been paid by the bank upon which it is drawn, this document shall become effective to release any mechanic's lien, stop notice, or bond right the undersigned has on the job of

Arvin Community Services District located at the Haven Drive Water Line Relocation Project
(Owner) (Job Description)

to the following extent. This release covers a progress payment for labor, services, equipment, or material furnished to

_____ through _____
(Your Customer) (Date)

only and does not cover any retentions retained before or after the release date or extras or items furnished after the release date. Rights based upon work performed or items furnished under a written change order which has been fully executed by the parties prior to the release date are covered by this release unless specifically reserved by the claimant in this release. Likewise the rights based upon any work performed or items furnished which the undersigned, or the Contractor, believe should be paid as part of a change order are covered by this release unless specifically reserved by the claimant. This release and waiver has been made voluntarily without any fraud, duress, or undue influence by any person or entity.

DISPUTED CLAIMS

DESCRIPTION OF CLAIM

AMOUNT CLAIMED

DATE: _____
(Company Name)

By: _____
(Signature) (Title)

UNCONDITIONAL WAIVER AND RELEASE UPON PROGRESS PAYMENT

The undersigned has been paid and has received a progress payment in the sum of \$_____ for labor, services, equipment and/or material furnished to _____ on the job of Arvin Community Services District located at the Haven Drive Water Line Relocation Project

and does hereby release any mechanic's lien, stop notice, or bond right that the undersigned has on the above referenced job to the following extent. This release covers a progress payment for labor, services, equipment and/or materials furnished to

_____ through _____ only, and does not
(Your Customer) (Date)

cover any retentions retained before or after the release date or extras or items furnished after the release date. Rights based upon work performed or items furnished under a written change order which has been fully executed by the parties prior to the release date are covered by this release unless specifically reserved by the claimant in this release. Likewise the rights based upon any work performed or items furnished which the undersigned, or the Contractor, believe should be paid as part of a change order are covered by this release unless specifically reserved by the claimant. This release and waiver has been made voluntarily without any fraud, duress, or undue influence by any person or entity.

DISPUTED CLAIMS

DESCRIPTION OF CLAIM

AMOUNT CLAIMED

DATE: _____
(Company Name)

By: _____
(Signature) (Title)

NOTICE: THIS DOCUMENT WAIVES RIGHTS UNCONDITIONALLY AND STATES THAT YOU HAVE BEEN PAID FOR GIVING UP THOSE RIGHTS. THIS DOCUMENT IS ENFORCEABLE AGAINST YOU IF YOU SIGN IT, EVEN IF YOU HAVE NOT BEEN PAID. IF YOU HAVE NOT BEEN PAID, USE A CONDITIONAL RELEASE FORM.

CONDITIONAL WAIVER AND RELEASE UPON FINAL PAYMENT

Upon receipt by the undersigned of a check from _____
(Maker of Check)

in the sum of \$ _____ payable to _____
(Amount of Check) (Payee or Payees of Check)

and when the check has been properly endorsed and has been paid by the bank upon which it is drawn, this document shall become effective to release any mechanic's lien, stop notice, or bond right the undersigned has on the job of

Arvin Community Services District located at the Haven Drive Water Line Relocation Project
(Owner) (Job Description)

This release covers the final payment to the undersigned for all labor, services, equipment, or material furnished on the job. Likewise, this release covers rights based upon any work performed or items furnished which the undersigned, or the Contractor, believe should be paid as part of a change order are covered by this release unless specifically reserved by the claimant. This release and waiver has been made voluntarily without any fraud, duress, or undue influence by any person or entity.

DISPUTED CLAIMS

DESCRIPTION OF CLAIM

AMOUNT CLAIMED

DATE: _____
(Company Name)

By: _____
(Signature) (Title)

UNCONDITIONAL WAIVER AND RELEASE UPON FINAL PAYMENT

The under signed has been paid in full for all labor, services, equipment or material furnished to

_____ on the job of Arvin Community Services District
(Your Customer) (Owner)

located at the Haven Drive Water Line Relocation Project and does
(Job Description)

hereby waive and release any right to a mechanic's lien, stop notice, or any right against a labor and material bond on the job. This release covers the final payment to the undersigned for all labor, services, equipment, or material furnished on the job. Likewise, this release covers rights based upon any work performed or items furnished which the undersigned, or the Contractor, believe should be paid as part of a change order are covered by this release unless specifically reserved by the claimant. This release and waiver has been made voluntarily without any fraud, duress, or undue influence by any person or entity.

DISPUTED CLAIMS

DESCRIPTION OF CLAIM

AMOUNT CLAIMED

DATE: _____
(Company Name)

By: _____
(Signature) (Title)

NOTICE: THIS DOCUMENT WAIVES RIGHTS UNCONDITIONALLY AND STATES THAT YOU HAVE BEEN PAID FOR GIVING UP THOSE RIGHTS. THIS DOCUMENT IS ENFORCEABLE AGAINST YOU IF YOU SIGN IT, EVEN IF YOU HAVE NOT BEEN PAID. IF YOU HAVE NOT BEEN PAID, USE A CONDITIONAL RELEASE FORM.

SECTION T
TECHNICAL SPECIFICATIONS

ARVIN COMMUNITY SERVICES DISTRICT

HAVEN DRIVE STREET IMPROVEMENTS
WATER LINE RELOCATION PROJECT

APRIL 2025

ARVIN COMMUNITY SERVICES DISTRICT

HAVEN DRIVE STREET IMPROVEMENTS
WATER LINE RELOCATION PROJECT

SECTION T – TECHNICAL SPECIFICATIONS

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TECHNICAL SPECIFICATIONS

1.0 GENERAL

The Contractor shall provide all labor, materials, equipment and perform all operations necessary to furnish and construct the Haven Drive Water Line Relocation Project for the Arvin Community Services District (District) in accordance with the Drawings and these Specifications. Contractor shall provide a complete product, ready for operation, and shall include connections to existing structures or those constructed by others. All materials shall be new, free from defects impairing strength, durability, and appearance, shall be of the best commercial quality for the purposes specified and made with structural properties to withstand all stresses and strains to which they normally will be subjected. Items furnished, unless otherwise specified, shall be standard approved products of recognized manufacturers and fabricated in accordance with the best shop methods. All incidental items and accessories not shown on the Drawings or specified herein, but which are required to fully carry out the specified intent of the work, shall be furnished and installed in accordance with the latest revisions of Standards listed herein.

1.1 ABBREVIATIONS

ACI	The American Concrete Institute
AISC	The American Institute of Steel Construction
AISI	The American Iron and Steel Institute
ANSI	The American National Standards Institute
APCD	The local Air Pollution Control District
API	The American Petroleum Institute
ASME	The American Society of Mechanical Engineers
ASCE	The American Society of Civil Engineers
ASTM	The American Society of Testing and Materials
AWS	The American Welding Society
AWWA	The American Water Works Association
CSA	The Canadian Standards Association
EPA	The Environmental Protection Agency
ICBO	The International Conference of Building Officials
IEEE	The Institute of Electronic and Electrical Engineers
NEMA	The National Electrical Manufacturers Association
NFPA	The National Fire Protection Association
NSF	The National Sanitation Foundation
PSIA	Absolute pressure in pounds per square inch
PSI or PSIG	Gage pressure in pounds per square inch
SSPC	The Steel Structures Painting Council

1.2 DESCRIPTION OF WORK

The Contractor shall construct the Haven Drive Water Line Relocation Project as generally described herein. The principle components of the work include the following:

- A. Contractor shall submit completed construction schedule, shop drawings, material detail sheets, and all other items specified in the Contract Specifications for review and approval prior to beginning construction.
- B. Contractor shall perform utility locates, AC and concrete sawcutting as necessary to install underground piping and appurtenances as shown on the Drawings. This includes the removal and disposal of all excavated asphalt and aggregate base material, temporary paving, and concrete improvements. The AC pavement surfacing and other surfaces will be repaired and replaced as specified herein.
- C. Contractor shall furnish and install eight-inch, six-inch, and four-inch PVC distribution piping including trenching, backfilling, and compacting, gate valves with valve boxes, fire hydrants, metered service lines, fittings, appurtenances, film wrapping, thrust blocks, temporary shoring, miscellaneous concrete, disinfecting, pressure testing, and all necessary connections. This includes the connections to the existing piping as shown on the Drawings.
- D. Contractor shall furnish all permits, inspections, traffic control, signage, and flagmen as necessary to complete the project described herein.
- E. Two bid alternatives are included for District consideration. If the District is unable to get a shutdown with existing valves, then a line stop may be required. The bid alternate requests pricing for each line stop installation for up to a quantity of five. These will only be implemented if the District determines it is necessary. The second alternative is a price to slurry fill the old line that is being taken out of service. The slurry fill would involve a flowable fill such as a one or two-sack slurry. The Contractor would be responsible for opening up access points along the old line after it is completely removed from service in order to ensure the slurry fill throughout the line.

1.3 SHOP DRAWINGS

Shop drawings shall be submitted by the Contractor and the Drawings reviewed, approved, and returned to the Contractor prior to commencing any portion of the work. Shop drawings are drawings, diagrams, schedules, and other data which are prepared by the Contractor or any subcontractor, manufacturer, or distributor and which illustrates some portion of the work. Six sets of drawings shall be submitted to the Engineer and be accompanied by a letter of transmittal listing the Drawings submitted. Drawings shall show the name of the project, the name of the Contractor, and, if any, the names of suppliers, manufacturers, and subcontractors.

Shop drawings shall be complete in all respects. If the shop drawings show any deviations from the requirements of the Plans and Specifications because of standard shop

practices or other reasons, the deviations and the reasons therefore shall be set forth in the letter of transmittal. The review by the Engineer is only for determining general conformance with the design concept of the project and general compliance with the Plans and Specifications and shall not be construed as relieving the Contractor of the full responsibility for: providing materials, equipment, and work required by the Contract; the proper fitting and construction of the work; the accuracy and completeness of the shop drawings; selecting fabrication processes and techniques of construction; and performing the work in a safe manner.

Shop drawings shall be submitted for all piping, fittings, valves, fire hydrants, meters, shoring, and other appurtenances. Manufacturer's installation and operation manuals, bulletins, and spare parts list shall be submitted for valves three-inches and larger.

All materials and equipment furnished shall be from a manufacturer who has been regularly engaged in the design and manufacture of the materials and equipment for a period of at least five (5) years. If an alternate manufacturer is proposed, Contractor shall demonstrate to the satisfaction of the Engineer that the quality is equal to the materials and equipment specifically named herein. If required, the Contractor shall test all products as noted herein to establish their conformance with the materials specified herein.

1.3.1 DELIVERABLES

The following is a summary of the items that must be submitted to the Engineer prior to the beginning of construction.

- Injury and Illness Prevention Program - as required by Cal OSHA and copies of all Permits.
- Construction Schedule and Cash-Flow Forecast.
- List of Contact names and numbers.
- Pothole Data.
- Traffic Control Plan
- Signed and stamped drawings for shoring system including calculations.
- Data Sheets for all piping including certifications and test reports.
- Data Sheets for all valves and appurtenances.

1.4 FIELD QUALITY CONTROL

A. The Owner will:

1. Perform pipe inspection as required.
2. Perform regular compaction tests as required.
3. Perform bacteriological testing.

B. The Contractor shall:

1. Obtain and comply with all applicable permits.
2. Provide Traffic Control Plan.
3. Perform pipeline disinfection and hydrostatic leak tests.
4. Pay the costs of additional inspection and retesting resulting from noncompliance.

5. Repair and replace any existing structures, facilities, concrete improvements, fences, landscaping, etc. that is damaged or disturbed by construction operations.
6. Maintain a clean work area in City rights-of-way. Wash and clean paved surfaces upon completion of permanent paving.

1.5 COOPERATION WITH OTHERS

Contractor is hereby notified that work by others may be occurring concurrently with his work. Contractor shall extend full cooperation to others performing work authorized by the City of Arvin. Contractor shall not authorize or permit any act which will interfere with the work of others, including work being done by City employees. Contractor shall coordinate his work with others and the neighborhood so that interference is minimized and the constructed product is that which is required by this Contract and the contracts of others.

1.6 CONNECTION TO EXISTING FACILITIES

Where proposed improvements connect to existing facilities, the Contractor shall, prior to beginning construction verify the location (horizontal and vertical), size and type of the existing facility.

Fabricated pipe and fittings shall be manufactured after field verification of existing facilities by the Contractor. In the event that the actual location, size, or type differs from that shown on the Drawings, the Contractor shall notify the Engineer immediately for resolution of the condition.

All connections to existing District water lines shall be cut-in according to the method established by the District for PVC and Transite pipe. Connections shall be made at each tie-in point as shown on the Drawings and at every cross street water main crossing and shall be witnessed by a representative of the District or the Engineer.

If for any reason the Contractor proceeds with fabrication of the pipe and fittings without verifying actual field conditions and a problem arises with a connection to the existing facilities then the Contractor shall be responsible for making the necessary corrections at his own expense. Any corrective actions taken must receive prior approval from the Engineer.

1.7 EXISTING UTILITIES

There are numerous water lines, gas lines, sewer lines, utility lines, electrical lines, and traffic lines in the vicinity of the work. The Engineer has made a diligent search to locate these utilities however there may be utilities in the area that have not been located and that are not shown on the Drawings. House services (water, sewer, gas, electric, etc.) have not been located. Water services are shown on the Drawings based on meter box locations. It is the Contractor's responsibility to field locate house services prior to trenching. See section 2.3 herein.

Prior to any excavations the Contractor shall notify Underground Service Alert (U.S.A.) as required by law. Notification shall be provided a minimum of 48 hours prior to any

excavation. The Contractor shall exercise care in avoiding damage to any and all utilities as he will be held responsible for their repair and loss-of-use charges if damaged. Contractor shall pothole, locate, and identify all existing utilities as outlined in Section 2.3 “Utility Locating” herein.

(END OF SECTION)

2.0 MOBILIZATION, DEMOBILIZATION AND CLEAN UP

2.1 SCOPE

Mobilization and demobilization shall include all labor, tools, equipment and transportation of personnel, equipment, and operating supplies to and from the site, establishment of portable sanitary facilities, site electrical, and site communications, obtaining an adequate supply of fresh water if necessary, final cleanup work and all bonds, insurance, overhead, permits, and costs of work not specifically included in any other Contract Item.

During the progress of the work, the Contractor shall maintain the project site and related equipment in a clean, orderly condition, free from unsightly accumulation of rubbish. Upon completion of the work and before the final estimate is submitted, the Contractor shall at his own expense remove from the vicinity of the work all weeds, rubbish, uninstalled materials and other like materials, belonging to him or used under his direction during construction. In the event of his failure to do so, the same may be removed by the District after ten days written notice to the Contractor. Such removal shall be at the expense of the Contractor and will be deducted from the final payment due him. Where construction crosses public or private property, it shall be restored by the Contractor to the complete satisfaction of the City and the District, at the Contractor's expense.

The project site at the end of the project shall be immaculate and meet the approval of the City of Arvin and the District. This includes, but is not limited to, the removal of all equipment, supplies, trash and debris as well as washing off paved surfaces within the limits of the project area.

2.2 CONSTRUCTION WATER

The Contractor shall be responsible for bringing water to the site. This includes the following: securing any and all permits if required, providing fees for any meter security deposits and also the paying of costs of the water if applicable. The Contractor shall build and maintain access and haul roads, and furnish, operate, and maintain all pumps, meters, piping, tanks, storage, and other facilities needed to load, transport, store, distribute, and use the water as specified.

These facilities shall be equipped with accurate, dedicated meters, tanks of known volume, or other devices by which the quantity of water supplied can be measured. Meters and backflow preventers shall be installed at a point of delivery into water hauling equipment or application systems. Backflow prevention devices shall be furnished and installed by the Contractor as specified by the District.

Water for dust abatement and road maintenance shall be applied to haul roads and other dust producing areas as needed to prevent air pollution caused by excessive dust. Roads shall be maintained in good condition for safe and efficient operation while they are in use.

Construction water shall be coordinated by the Contractor with the District.

2.3 UTILITY LOCATING

The Contractor, prior to performing any work or providing shop drawings, shall USA Locate the project areas and pothole/locate all existing utilities. The Contractor shall pothole the existing utilities and record utility type, size, depth, and physical location and submit to the Engineer. The Contractor shall notify the Engineer of any potential conflicts. The contractor shall make provisions in his work for supporting, removing, relocating, working around, and otherwise accommodating the existing utilities.

The project pipeline will cross existing sewer laterals, water services, and gas services. The Contractor shall locate these utilities prior to commencing trenching work and endeavor to protect and preserve these during work. Potential conflicts shall be brought to the Engineer's attention prior to commencing work. The Contractor shall not be compensated for repair or replacement of utilities or services damaged by his construction operations when said utilities have been located, potholed, or otherwise identified as to their location and depth prior to commencing work. The Contractor shall be responsible for repairing water services, sewer laterals, or gas services to the existing residences within four (4) hours of damaging such and shall notify the District immediately upon such occurrence.

2.4 TRAFFIC CONTROL

The pipeline installation work under this Contract will be within road rights-of-way and within traffic pattern areas. The Contractor shall furnish, maintain, and be responsible for traffic control, signage, and flaggers all in accordance with the City of Arvin, Public Works "Greenbook", and Caltrans Standard Specifications for Construction of Local Streets and Roads, dated July 2002, or latest edition, Section 7-1.08 "Public Convenience", Section 7-1.09 "Public Safety", and Section 12 "Construction Area Traffic Control Devices".

The Contractor shall be responsible for furnishing a traffic control plan for review and approval by the City of Arvin. Contractor shall be responsible for furnishing flaggers, construction signage, traffic cones, etc. as required for completing the work under this Contract while maintaining traffic and public safety all as approved by the City. The Contractor shall be responsible for all associated costs. Traffic handling equipment and devices damaged from any cause during the progress of work shall be repaired or replaced, including painting as necessary, by the Contractor, and at his sole expense. When traffic control devices furnished by the Contractor are no longer needed for controlling traffic, including at the end of each work day as required by the City, they shall be removed from the site of the work by the Contractor.

2.4.1 FLAGGERS

Flaggers while on duty and assigned to traffic control or to give warning to the public that the road is under construction, and of any dangerous conditions to be encountered thereof, shall perform their duties and shall be provided with the necessary equipment in conformance with the current "Instructions to Flaggers" by the Department of Transportation. The equipment shall be furnished and kept clean and in good repair by the Contractor at the Contractor's sole expense.

While working in traffic areas, a minimum of two (2) flaggers shall be required – one at each end of the work area.

2.4.2 CONSTRUCTION AREA SIGNAGE

Construction area signs shall include all temporary signs required for the direction of public traffic through or around the work area during construction. Construction area signs shall be installed as approved by the City in the Contractor's Traffic Control Plan. Construction area signs shall include barricades, flashing arrow signs, portable delineators, portable flashing beacons, stationary signs, channelizers, K-railing, or portable message signs all as required to complete the work and maintain contractor and public safety and as approved by the City.

All construction area signs shall conform to the dimensions, color, and legend required by the City and the current Manual of Traffic Controls. Sign panels for all construction area signs shall be visible at 500 feet and legible at 300 feet at noon on a cloudless day and at night under illumination of legal low beam headlights.

To properly provide for changing traffic conditions and damage caused by public traffic or otherwise, the Contractor shall be prepared to furnish on short notice additional construction area sign panels, posts, and mounting hardware or portable sign mounts. The Contractor shall maintain an inventory of the commonly required items at the jobsite or shall make arrangements with a supplier who is able, on a daily basis, to furnish the items on short notice.

2.4.3 TRAFFIC CONES

Traffic cones shall be fluorescent and of good commercial quality, flexible material suitable for the purpose intended. The overall height of traffic cones shall be at least twenty-eight inches (28") and the bottom inside diameter not less than ten and one-half inches (10 1/2"). The base shall be of sufficient mass and size or shall be anchored in a manner that the traffic cone will remain in an upright position.

During the hours of darkness traffic cones shall be affixed with retroreflective cone sleeves. The retroreflective sheeting of sleeves on the traffic cones shall be visible at 1,000 feet at night under illumination of legal high beam headlights.

Traffic cones shall be maintained, set out, and picked up by the Contractor as necessary and as required by the City or District.

MEASUREMENT AND PAYMENT

The lump sum price paid for Bid Item No. 1 “Mobilization, Demobilization, and Clean Up” shall be full compensation for the work as described in this section and no additional compensation will be made therefore. Payment for this item shall be made in proportion to payment made on the total of the other items of work contained in the Bid Schedule and shall be subject to the retention requirements as set out in the General Conditions.

The lump sum price paid for Bid Item No. 2 “Utility Locating & Potholing” shall be full compensation for the work as described in this section and no additional compensation will be made therefore. Payment for this item shall be made in proportion to payment made on the total of the other items of work contained in the Bid Schedule and shall be subject to the retention requirements as set out in the General Conditions.

(END OF SECTION)

3.0 ASPHALT CONCRETE PAVING

3.1 GENERAL

The water line relocation piping will be installed in paved areas (City streets). The existing paved areas shall be removed and replaced as specified herein, as shown on the Contract Drawings, and as required by the City of Arvin. The Contractor shall be responsible for obtaining and complying with all road right-of-way encroachment permits.

The work involves sawcutting the existing paving, removing those areas of paving and aggregate base and concrete, and repairing/restoring all concrete where removed or destroyed during the project construction. This work shall include all labor, materials, equipment, tools and services required for the sawcutting, removal, and hauling of existing paving and the placement and compaction of temporary asphalt as required. Materials for paving and surfacing shall conform to the applicable provisions of the State of California, Department of Transportation "Cal Trans" Standard Specifications for local projects, most recent edition.

The City of Arvin is re-building Haven Drive after the water line is relocated. The Contractor shall be responsible for maintaining the temporary asphalt and/or aggregate base over the trench for the full duration of the pipeline project and for 30 days after the complete water line is placed in service.

3.2 PAVEMENT CUTTING

The existing asphalt pavement shall be saw cut (using an asphalt saw) to create a vertical joint to a minimum depth equal to or greater than one-half the thickness thereof in the areas of work and a minimum of one and one-half inches (1 1/2"). The pavement shall be cut back a minimum of six inches on each side of the trench or excavation wall. Any pavement damaged, as determined by the Engineer, outside these lines shall be re-cut and restored at the expense of the Contractor. If voids develop under the existing pavement during construction, the effected pavements shall be neatly saw-cut in straight lines and replaced after the voids have been filled and compacted.

The Contractor may grind the pipeline trench as approved by the City of Arvin. The Contractor shall provide cold mix in the trench areas, wheel rolled, and compacted so as to prevent dislodging or otherwise scattering throughout the project area. If the grinder operation does not produce a neat, straight vertical edge comparable to a sawcut operation, as determined by the City of Arvin, the Contractor shall be required to sawcut the edge of pavement.

The removed asphalt paving and aggregate base shall be disposed of legally by the Contractor at his expense.

3.3 AGGREGATE BASE

Aggregate base shall be a Class II aggregate base conforming to the applicable requirements of Standard Specifications Section 26. The maximum size aggregate shall be 3/4-inch.

3.3.1 PLACEMENT OF AGGREGATE BASE

The subgrade of areas to receive aggregate base shall be watered or dried as required to bring the soil to optimum moisture content and compacted to ninety-five percent (95%) relative compaction in the upper thirty-inches for all trench areas. The aggregate base shall not be placed until the subgrade is approved by the Engineer.

The aggregate base material shall be spread on the prepared subgrade by spreading devices approved by the Engineer. The aggregate base thickness shall be six inches (6") (compacted). The Contractor shall avoid spreading the base materials in a manner that will segregate the large and fine particles of aggregate. It shall be free from pockets of large and fine base material, organic material, etc. The aggregate base shall be compacted to ninety-five percent (95%) relative density. The finished aggregate base surface shall be within 0.05 foot of the planned grade.

3.4 ASPHALT CONCRETE MATERIALS

Asphalt concrete shall conform to the applicable requirements of Section 39 of the Standard Specifications for Type B, 1/2-inch maximum size medium grade. The restoration of permanent paving above the trench section will be required in locations outside of the limits of the City road improvement project for Haven Drive.

Paving grade asphalt PG 64-10, conforming to the requirements in Section 92 shall be used as the asphalt binder in the mix composition as set forth in Section 39 of the Standard Specifications. The PG 64-10 shall be mixed with the aggregate at the rate of five percent (5%) to six percent (6%) by dry weight of the aggregate.

3.4.1 TACK COAT

The paint binder shall be SS-1 or SS-1H grade emulsified asphalt conforming to Section 94 of the Standard Specifications.

3.4.2 SEAL COAT

The seal coat shall be sand slurry seal conforming to the requirements of Section 37 of the Standard Specifications.

3.5 PAVING INSTALLATION

3.5.1 GENERAL

Contractor shall ensure that all pipeline trenches are backfilled and compacted at the end of each day and that temporary trench patches or aggregate base are in place. Temporary trench patches shall be a minimum of three inches (3") thick and be continually maintained. Trench plates will not be allowed, unless approved by the City of Arvin for emergency circumstances.

Once the pipeline segment is tested, disinfected, and accepted as completed by the District, the Contractor shall commence permanent AC paving operations – this applies to the locations outside of the limits of the City road improvement project for Haven Drive. Acceptance as complete by the District will not remove the responsibility of the Contractor to maintain and protect the project area as well as his responsibility to address punch list items at the overall completion of the project.

3.5.2 TACK COAT APPLICATION

In advance of spreading bituminous material upon an existing bituminous or portland cement concrete surface, a tack coat shall be applied to all areas to be surfaced and to all butting existing vertical surfaces. When two or more lifts of asphaltic concrete are required, a tack coat shall be applied between each lift. Immediately before applying the tack coat, the area to be surfaced shall be cleaned of all loose or extraneous material.

The tack coat shall be applied by pressure distributors or hand-spray equipment. The rate of application shall be one gallon per square yard. Emulsified asphalt shall not be applied when the atmospheric temperature is below forty degrees (40°) F.

3.5.3 ASPHALT CONCRETE PLACEMENT

Bituminous mixtures shall be delivered to the site at temperatures specified in the Cal Trans Standard Specifications. Spreading of the mixture shall be in accordance with the said Standard Specifications. All loads shall be covered with tarpaulin or other material during transportation to the site. The tarpaulins shall completely cover the load and be firmly secured. The truck beds used to haul asphalt concrete may be coated with a light film of distillate or light oil before loading. Amounts of oil that form visible pools in the truck bed shall be removed prior to loading. The temperatures of the asphalt concrete discharged into the hauling vehicles shall not vary more than 20°F for successive loads. Asphalt concrete shall be delivered to the site of the work without segregation of the ingredients and within the temperature range specified in Section 39 of the Caltrans Standard Specifications.

The pavement thickness shall be three inches (3") thick. The maximum lift shall be two-inches. The asphaltic concrete shall be compacted by rolling methods in accordance with Section 39 of said Standard Specifications. The compaction shall start at the lower edge and progress toward the centerline or higher point. Compaction by vehicular traffic is not permitted. A rolling pattern for the specific rolling equipment to be used shall meet the requirements of Section 39. The pattern shall not be modified without the approval of the Engineer. If the rolling pattern established by the Contractor fails to achieve the specified compaction and/or surface, it shall be recompacted as directed or modified by the City or District. The joints between old and new pavements or between successive days of work shall be carefully made in such a manner as to ensure a continuous bond between old and new sections of the course. Edges of existing pavement shall be exposed, cleaned, and edges cut to straight, vertical surfaces. All joints shall be painted with a fresh, uniform tack coat before the asphalt concrete is

applied. The amount of material spread in one day shall not exceed that which can be compacted in the same day. The completed surfacing shall be thoroughly compacted to a minimum of ninety-five percent (95%) of the laboratory maximum as determined by California Test Method 366, and shall be free from ruts, humps, depressions, or irregularities. The surface shall not vary more than 0.02 feet when checked with a twelve-foot (12') straight edge. The completed surfacing shall have trimmed, uniform edges of the required width. Flowlines shall be left clean and unrestricted. Excess material shall be removed from the project site. All temperature requirements and restrictions for the AC pavement installation specified in the CalTrans Standard Specifications shall be strictly followed by the Contractor.

Any damaged or removed AC curbing shall be replaced to match existing. The asphalt concrete curbing shall be extruded to match the existing asphalt concrete curbing.

After final rolling, no vehicular traffic of any kind shall be permitted on the pavement until it has cooled, hardened, and a minimum of six-hours have passed. This work shall be coordinated so as not to impact the neighborhood.

Permanent roadway striping and pavement markings shall be replaced no later than 72 hours after the completion of re-surfacing on any block or roadway, however the asphalt concrete pavement shall be adequately cured.

3.5.4 SEAL COAT APPLICATION

A seal coat shall be applied to the upper surface of all installed asphalt concrete. Place seal coat after installation of asphalt concrete and after the asphalt concrete surface is sufficiently dried. It is estimated that the seal coat shall be applied after approximately two (2) months from completion of project paving. It shall be applied in accordance with the applicable requirements of Section 37, Bituminous Seals, of the Standard Specifications.

3.6 TEMPORARY PAVEMENT

Installation of all temporary asphalt pavement or aggregate base shall be installed at the end of each work day for the portion of trench that is backfilled and compacted. Contractor shall ensure that all pipeline trenches are backfilled and compacted at the end of each day and that temporary trench patches or aggregate base are in place. It is anticipated that a 6-inch thick layer of compacted Class II aggregate base surfacing will suffice for the temporary trench repair. The Contractor shall be responsible for maintaining this temporary trench patch and for keeping those areas clean. If the Contractor, deems it is more efficient to install temporary asphalt patches he may do so at his discretion. Temporary trench patches shall be a minimum of two inches (2") thick and be continually maintained until thirty-days after acceptance of the project (Notice of Completion). Asphalt concrete or SC 3000 cold mix shall be the material used for temporary trench patching. Trench plates may be used for the last twenty feet of open trench at the close of each day. Contractor shall ensure that all open holes are backfilled or adequately covered at the end of each work day as his work will take place in an

existing neighborhood where children are present. Trench plates, if used, shall have a cold mix ramp around the perimeter.

MEASUREMENT AND PAYMENT

Measurement and payment for the AC paving work shall include the cost of all work and materials necessary for sawcutting, removal, disposal, temporary trench patches, compaction, moisture conditioning, placement of aggregate base, and other repairs. Such payment shall constitute full compensation for all labor, tools, equipment, and other items necessary and incidental to the completion of work. Payment for AC pavement sawcutting and removal shall be on a lineal footage basis along the project pipeline centerline as stated in the Bid Schedule for Bid Item “Pavement Sawcutting” – Bid Item No. 12.

Payment for compaction, moisture conditioning, temporary placement of aggregate base, and other miscellaneous pavement work shall be on a square footage basis along the project pipeline centerline as stated in the Bid Schedule for the Bid Item “Class II Aggregate Base for Pipe Trench” – Bid Item No. 13.

Payment for compaction, moisture conditioning, temporary paving and removal, placement of aggregate base, permanent asphalt concrete paving, paint striping, tack and seal coats, and other miscellaneous pavement work shall be on a square footage basis along the project pipeline centerline as stated in the Bid Schedule for the Bid Item “Permanent Pavement Repair” – Bid Item No. 14.

(END OF SECTION)

4.0 VALVES AND APPURTENANCES

4.1 GENERAL

The Contractor shall be responsible for furnishing and installing connections to existing mains, isolation valves, valve boxes, miscellaneous concrete, air release valves, air release valve cans, fire hydrants, blow-off assemblies, fittings, appurtenances, film wrapping, and thrust blocks as specified herein and detailed on the Contract Drawings. All pipe and materials shall be NSF-61 approved.

4.2 FLANGES

See Drawings for working pressure requirements.

Carbon steel ring flanges shall conform to AWWA C207, Class D for 150-175 psi. Bolt holes shall straddle the vertical center line of the pipe. Facing and drilling shall conform to Section 3 of said Standard. Welded flanges shall be attached to pipe, fittings, or other appurtenances by means of two fillet welds of thickness equal to the pipe thickness.

Bolts, nuts, and washers shall be carbon steel ASTM 307, grades A or B unless stainless steel is specified. Bolts and nuts shall have regular hexagonal heads in accordance with ANSI B18.2.1 for wrench head bolts and nuts and wrench opening. All bolts shall be threaded in accordance with ANSI B1.1 for screw threads, coarse-threaded series, Class 2A and 2B fit. Minimum bolt lengths shall be the sum of the mating flange thicknesses, the gasket, the washer thicknesses and the depth of the nut plus 1/8 inch before torquing.

Gaskets shall extend from the inside diameter of the flange to the least inside edge of the bolt holes or may extend beyond the bolt circle to the outside diameter of the flange. Gaskets shall be 1/16 inch thick. Gaskets between flanges shall be constructed of non-asbestos type material. All gaskets shall be chloroprene unless specified otherwise.

Bolts

Unless specified otherwise herein, flange bolts, washers, and nuts, coupling bolts and nuts, and other hardware shall be as follows:

- A. Exposed: Electroplated zinc or cadmium steel.
- B. Concrete Encased: Steel
- C. Underground: Type 316 stainless steel, minimum tensile strength = 60ksi, and film wrapped.

Note: Apply an anti-seize lubricating compound to the threads of stainless steel bolts.

4.3 WELDED JOINTS

Welding and welded joints shall be done in accordance with AWWA C206. Welding shall be performed by any welding process that will produce a joint meeting the minimum strength requirements of the base metals and meet the welding prequalification procedures outlined in AWS D1.1. **All welds shall be full penetration welds** unless specified otherwise. All joint welding procedures to be used for work shall comply with Section 3, AWWA C206.

Surfaces to be welded shall be free from scale, slag, heavy rust, grease, paint, cement, or any other foreign material. Joint surfaces shall be smooth, uniform, and free from defects that adversely affect proper welding. All pipe joints shall be accurately aligned and retained in position during the welding operation.

All work performed under this specification shall be subject to rigid inspection, including visual inspection and non-destructive testing, at Owner's option. Inspection or a lack of inspection shall not relieve the Contractor of the responsibility for performing work in accordance with the standards listed herein.

Testing for joint leaks shall be performed unless otherwise specified by the Engineer. Defects in welds or defective welds shall be removed, and that section of the joint shall be rewelded.

4.4 DUCTILE IRON FITTINGS

All elbows, tees, crosses, reducers, adapters, and special fittings used with PVC pipe shall be manufactured of ductile iron. Stainless steel fittings shall be installed where noted on the Drawings. Ductile iron fittings shall be designed for a minimum 250 psig working pressure and conform to AWWA C110, C111, and C153. Mechanical joint fittings shall be installed with joint restraints and concrete thrust blocks as shown on the Drawings. Fittings shall be cement mortar lined in accordance with AWWA C104. The inside and outside of the fittings shall be bituminous coated. All underground fittings shall be furnished and installed with stainless steel bolts, nuts, and washers with anti-seize lubricating compound and be film wrapped. Fittings shall be rubber ring, hub end, suitable for direct connection to the mating pipe except when connecting to a valve. Where valves and fittings are directly connected, the fitting shall be flanged. Flanged connections shall be 150 lb rating meeting the requirements of ANSI B16.1. Gaskets for flanged joints shall be full face, cut from 1/16-inch thick rubber with cloth insert and bolt holes pre-punched.

4.5 NOT USED

4.6 GATE VALVES

Gate valves shall be designed for 150 psig working pressure with cast iron body and bonnet, non-rising stem and shall meet the requirements of AWWA C509. All gate valves shall be epoxy lined on the interior of the body in accordance with AWWA C550. The valve body, housings, and extensions shall be coated at the place of the manufacturer. Gate valves shall open

in the counter-clockwise direction. All buried gate valves shall be equipped with a two-inch square wrench nut. The valve body, flanges, nuts, and bolts shall be film wrapped. All buried gate valves shall have a Christy "G5" utility box (or equal) placed over the valve stem and a concrete pad placed at ground surface around the valve box in accordance with District Standards.

The Contractor shall be responsible for returning after the City work to improve Haven Drive and provide the necessary raise-to-grades for the gate valve boxes. This shall include pavement sawcutting, installing valve boxes, and placement of the concrete collar.

Three-inch (3") and smaller gate valves shall have a valve body with Grade I (ASTM B62) material, interior working parts of low zinc bronze, and include a handwheel.

Gate valves shall be the following listed gate valves, or approved equal.

MUELLER COMPANY: MUELLER "SUPER SEAL RESILIENT SEAT GATE VALVES"

4.7 AIR RELEASE VALVES

Combination air release valves shall be installed at the locations shown on the Drawings. Air valves shall be furnished and installed in accordance with AWWA Standard C512-04 and AWWA Manual M51 dated 2001 or the latest version thereof. The inlet to the valve shall be provided with a gate valve to provide a positive closure between the pipeline and the valve. The air valves shall release air during pipeline charging procedures, shall automatically release air from the pipeline when under pressure, and shall allow air to enter the pipeline when the internal pressure drops below atmospheric. Air valves shall be designed for 150 psig minimum working pressure and have seating pressures for 0-150 psig. Normal operating pressures shall be 20 psig to 70 psig. Internal parts such as guides, bushings, and screws shall be stainless steel. Floats shall be stainless steel. Air release valves shall be internally lined with fusion bonded epoxy, 3M Scotchkote 134. Air valves shall be furnished and installed with galvanized street elbows, turned down with a threaded stainless steel mesh screen, for the discharge of air and water. Air valves where shown shall be furnished with concrete pad and valve cover.

Air release valves shall be the following listed air valves, or approved equal:

APCO VALVE & PRIMER CORP: 2" APCO SERIES 145C

4.8 FILM WRAP

Polyethylene plastic film wrap shall be placed around all buried ductile iron, cast iron, or steel valves, flanges, bolts, nuts, and fittings. The polyethylene film shall be of virgin polyethylene and shall meet the requirements of ASTM D-1248 for Type 1, Class A, Grade E-1, and ASTM D1238. The polyethylene film shall be 10 mils thickness. The film area shall be large enough to firmly attach to the pipe with Polyken 900. Any seams or openings shall be sealed using a two-inch (2") wide adhesive tape such as Polyken 900 (Polyethylene) or approved equal.

4.9 THRUST BLOCKS

Concrete thrust blocks shall be constructed at all changes in direction, dead ends, fire hydrants, and locations where there are push-on, mechanical joint fittings, or dresser style fittings where thrust may be developed. Thrust blocks shall be constructed per “Thrust Block Schedule” on the Drawings. All pipe fittings shall also be restrained with pipe restraints for bell and spigot joints consisting of a split restraint ring with a series of serrations (not “lugs” or “point loads”) on the inside diameter to provide positive restraint, exact fit, and three hundred and sixty degree (360°) contact and support of the pipe wall. Restraint devices shall be FORD Uni-Flange Block Buster 1300, 1350, and 1390 Series, or approved equal.

4.10 NOT USED

4.11 FIRE HYDRANTS

Fire hydrants shall be installed at the locations shown on the Drawings and as detailed thereon. Fire hydrants in the District shall be Mueller Centurion, Model 423, with two (2) two and one-half inch (2-1/2") hose nozzles and one (1) four-inch (4") power nozzle. The color shall be John Deere yellow. Install in accordance with details as shown on the Drawings.

4.12 WATER SERVICES

The water service lines shall be replaced and new services installed from the new main to the existing meter where shown on the Drawings. The service lines shall be Type K copper tubing and include a corporation stop at the main line saddle and an angle meter stop at the service meter. The services include the following:

- 1” Bronze Saddle – James Jones J-996 or approved equal
- 1” Corporation Stop – James Jones E3401-SG or approved equal
- 1” Type K Copper Tubing
- 5/8”x3/4”x1” Angle Meter Stop – James Jones E-1963WSG or approved equal
- Meter – By District

The District will provide new meters where an existing meter is necessary to be replaced. The Contractor shall be responsible for sawcutting and removing concrete, pavement, and landscaping where necessary. The Contractor shall be responsible for all necessary restoration work to restore concrete, pavement, landscaping, fencing, and other items to their original conditions and the satisfaction of the property owner and the District. Where existing concrete is removed, the repair/replacement shall extend to the nearest construction or control joint on all sides and as approved by the Engineer.

4.13 INSTALLATION

Place or erect all piping to the accurate line and grade and backfill, support, hang, or brace against movement as shown on the Drawings, or as required for proper installation.

Remove all dirt and foreign matter from the pipe interior prior to installation and thoroughly clean all joints before joining. The Contractor shall furnish and install temporary shoring where specified and as necessary. Contractor shall be responsible for any dewatering required and shall be responsible for protecting his work from the elements including potential hazards in the area of his work.

4.14 SUBMITTALS

Shop Drawings shall possess, at a minimum, detailed installation drawings of all piping including pipe support locations and types, fittings, valves, and other appurtenances. Data sheets shall be submitted for pipe, fittings, appurtenances, supports, couplings, valves, and flexible pipe pieces to verify that those items conform to the specification requirements. Certified test reports shall be submitted as required herein.

Prior to the preparation of the Shop Drawings, the Contractor shall verify by excavation, inspection, and measurement all installation conditions for buried pipe. Contractor shall submit field measurements and photos with the Shop Drawings where exposed conditions are significantly different than indicated on the Drawings.

MEASUREMENT AND PAYMENT

Measurement and payment for the distribution system piping, valves, fittings, and appurtenances shall include the cost of all work and materials required for furnishing and installing all piping, coatings and linings, fittings, valves, valve boxes, meters, water services, fire hydrants, miscellaneous concrete, disinfection, pressure testing, appurtenances, and all necessary connections. Such payment shall constitute full compensation for all labor, equipment, tools and all other items necessary and incidental to the completion of the work. Payment for valves and appurtenances shall be per the Contract Unit Price as stated in the Bid Schedule for Bid Items “Furnish and Install 8” Gate Valve and Valve Box Assembly” – Bid Item No. 6, “Furnish and Install 6” Gate Valve and Valve Box Assembly” – Bid Item No. 7, “Furnish and Install 4” Gate Valve and Valve Box Assembly” – Bid Item No. 8, “Fire Hydrant Assembly” – Bid Item No. 9, “Blow-Off Assembly” – Bid Item No. 10, “Water Service Line Replacement” – Bid Item No. 11, and “Connections to Existing System” – Bid Item No. 15.

Any item not specifically mentioned on the bid form such as fittings, joint restraints, thrust blocks, film wrap, valve boxes, miscellaneous concrete, etc. but required by the Contract Documents, shall be included in the appropriate bid item.

(END OF SECTION)

5.0 PVC PIPELINE INSTALLATION

5.1 GENERAL

All underground pipelines shall be installed at the locations, lines and grades as shown on the Drawings. Underground piping covered in this section consists of PVC pipe with sizes ranging from four-inch (4") to eight-inch (8") diameter. Polyvinyl Chloride Pipe (PVC) shall meet the requirements of AWWA C900-07 or the latest version thereof and have elastomeric gasket joints, either gasket bell or spigot type or plain end with gasket coupling type. All pipe shall have cast iron equivalent outside diameters and be rated for a minimum working pressure as specified herein. Distribution system PVC pipe shall be DR 18 pipe or DR 14 pipe as shown on the Drawings.

Each length of pipe shall be marked with the applicable ASTM, DR, pressure classification, nominal pipe size, and Manufacturer's name or trademark. PVC pipe shall have factory attached bells. PVC pipe shall be covered to protect it from ultraviolet light (the sun's rays). PVC pipe with noticeable color changes resulting from exposure to ultraviolet light shall be rejected. All distribution system piping and appurtenances shall be disinfected and pressure tested as outlined in the Contract Documents.

Where pipeline installation requires the removal of landscaping, concrete curb and gutter, concrete sidewalk, or other structures and improvements, the Contractor shall restore these areas to match existing, in materials and appearance, to the complete satisfaction of the City, District, and the Owner.

5.2 TRENCH EXCAVATION FOR PIPELINES

The Contractor shall perform all necessary excavation for pipelines to the required lines, grades, and depths, all in conformance with these Specifications and details shown on the Drawings or as directed. All trench widths shall be of adequate width for proper pipe installation and, at all times, the minimum trench width to be excavated shall be twice the width of the pipe's outer diameter and that shown on the Drawings. Trench excavation shall include removal and disposal of all materials of whatever nature encountered, including all obstructions that would interfere with the proper construction and completion of the work, and shall include furnishing, placing, and maintaining all shoring necessary to safely support the sides of the excavation and comply with OSHA regulations. The work shall also include all pumping, ditching, and other required measures for the removal or exclusion of water. Subject to the determination of the Engineer, if any of the following conditions are encountered in pipe trench excavation, separate payment will be made in conformance with the general conditions for required additional work authorized or directed by the Engineer.

1. If the bottom of the pipe trench is in soft, unstable material, it shall be excavated below grade for the full width of the trench as directed and the below-grade excavation subsequently refilled with approved compacted materials.
2. If the pipe trench is excavated in rock, hardpan or other similar hard and unyielding material, the bottom of the trench shall be overexcavated six inches

(6") below grade, and said overexcavation refilled with approved compacted material.

If natural foundation or subgrade material is disturbed or loosened during the excavation process or overexcavation performed by the Contractor for any purpose or reason, except as may be authorized in writing by the Engineer, it shall be compacted to a degree satisfactory to the Engineer or, where directed, it shall be removed and replaced with approved material and compacted, all at no additional cost to the District.

Insofar as practicable, material excavated shall be used for backfill; otherwise, it shall be wasted as directed. When water is encountered in the trench, it shall be removed by pumping or draining.

Excavations which will have personnel working in the trench and will have depths greater than five feet (5') shall have side slopes of $\frac{3}{4} : 1$ (horizontal : vertical) or have protective mechanical shoring. The Contractor shall be aware that slope height, slope inclination, or excavation depths shall in no case exceed those specified in local, state, or federal regulations, e.g. OSHA Health and Safety Standards for Excavations, 29 CFR, Part 1926, or successor regulations. Contractor shall independently verify safety of slopes by consulting his own geotechnical engineer, prior to commencing work, and if material changes are encountered during the progress of work.

Earthwork trenching and compaction costs shall be included in the bid amount per lineal foot of pipe installation.

5.3 HANDLING AND SHIPMENT

Pipe and special fittings shall be handled carefully and blocking and hold-downs used during shipment to prevent movement or shifting. The leading ends of fittings on trucks or rail cars shall be bulkheaded or covered. While shipping, storing, and placing pipe, it shall be uniformly supported and handled to avoid scratching, deforming, or damaging the pipe wall. The pipe shall not be stacked any higher than four-feet (4') with weight on bells. During storage it shall be covered for protection from ultraviolet damage.

Pipe shall be hoisted with mechanical equipment using a cloth belt sling or a continuous fiber rope which avoids scratching the pipe. Using a chain or metal strap is not permitted.

5.4 GENERAL PIPELINE INSTALLATION

5.4.1 CLEARING AND GRUBBING

All trees, brush, roots and other perishable and objectionable material including clumps of base material, asphalt and concrete shall be cleared and removed from the project area and disposed of at a County or City approved dump site. AC paving shall be removed and repaired in accordance with Section 3.0 "Asphalt Concrete Paving". Under no conditions shall material from clearing and grubbing be incorporated into the earthwork backfill.

5.4.2 TEMPORARY SHORING

Temporary shoring shall be furnished and installed for the underground pipeline work as specified and as necessary for the Contractor to be OSHA compliant and protect his work area, employees, and those passing by the work area.

5.4.3 EMBEDMENT AND BEDDING MATERIALS

Embedment materials (Class I, II, and III) shall conform to paragraphs 6.1.1, 6.1.2, and 6.1.3 of ASTM D2321 modified as follows:

Class I Angular, one-quarter inch to one-inch (1/4" to 1") graded stones, including a number of fill materials that have regional significance such as coral, slag, cinders, crushed stone, crushed gravel, and crushed shells. Soil types GW and GP are required. Particle size shall be no greater than one-inch.

Class II Coarse sands and gravels with maximum particle size of one-inch including variously graded sands and gravels containing small percentage of fines, generally granular and non-cohesive, either wet or dry. Soil type GW, SW and SP are included in this class. Maximum particle size is one-inch.

Class III Fine sand, silty sand and gravels. Soil types SW, SP, SM, and GM are included in this class. Maximum particle size is one-inch.

Soil classification is in conformance with unified soil classification system ASTM designation D2487 and D 2488. Native soils meeting the requirements for Classes I, II, and III material may be accepted by the Engineer as suitable bedding and backfill. However, native soils not conforming to Classes I, II, and III shall be removed and replaced by materials conforming to the requirements of Classes I, II, and III.

5.4.4 BEDDING/TRENCH BOTTOM

The trench bottom shall be constructed to provide a firm, stable and uniform support for the full length of the pipe. Bell holes shall be provided at each joint where applicable. Any portion of the trench bottom excavated below grade shall be backfilled to grade and compacted as required to provide firm pipe support. When an unstable subgrade condition is encountered which will provide inadequate pipe support, or when ledge rock, boulders, or large stones are encountered, additional trench depth shall be excavated and refilled with suitable foundation material and compacted. The bottom of trench shall be scarified to a minimum depth of six inches (6") below the bottom of the pipe and uniformly graded to produce a firm but yielding subgrade which will provide uniform support of the pipe along the full length of each section. Hand excavations beneath bell holes shall be made to prevent the pipe from being weight bearing on the pipe bells.

Bedding procedure shall conform to the following:

- A. Imported bedding material, if required, shall be placed and compacted for all pipelines as shown on the Drawings. The trench bottom shall be clean and free of all trash, debris, earth clumps and rocks. Care shall be taken to place the haunching material so that it provides adequate support for the pipe haunches.
- B. Materials used for haunching shall be the same class as that used for bedding.
- C. Prior to placement and compaction of pipe zone backfill, the Engineer shall inspect the placement of the pipeline, haunching, and compaction.
- D. Care shall be exercised in placing haunching material to prevent damage to or displacement of the pipeline.
- E. Initial backfill shall be placed as required to secure the pipe prior to any testing.
- F. Flooding or jetting is not allowed.

5.4.5 DEWATERING

There shall be provided and maintained at all times during construction ample means and devices to promptly remove and properly dispose of all water from any source entering the excavations or other part of work. The Contractor shall be responsible for all costs associated with dewatering, for preventing water infiltration to the work area, and for any necessary repairs. Dewatering shall be accomplished by methods which will ensure a dry excavation and preservation of the final lines and grades of the bottoms of the excavations. Said methods shall include but are not limited to well points, sump pumps, suitable rock or gravel placed below the required bedding for drainage and pumping purposes. Methods used, if not specifically detailed herein or on the Drawings shall receive prior approval by the Engineer.

Groundwater is not anticipated as static water levels in the area of the project are below twenty feet (20').

5.4.6 PIPE INSTALLATION

All pipe shall be inspected and accepted by the Engineer prior to the placement of the pipe by the Contractor and shall conform to the Contract Specifications and Drawings. Water pipelines shall be installed with a minimum ten-foot (10') separation distance to parallel sewer or storm drain pipelines except for areas shown in Drawings wherein DR 14 PVC pipe shall be used. At perpendicular crossings, water mains shall be installed above said lines with a minimum twelve inches (12") clearance. If due to conflict and lack of cover, the water main is installed beneath the said pipelines, it shall

have a minimum twelve inches (12") clearance, be installed with no joints within ten feet (10') of the crossing pipeline, and be DR 14 PVC pipe to a minimum twenty-foot (20') on each side of the crossing.

The pipe spigot and bell ends must slide together without the rubber gasket being displaced. The joint must be dirt free and the spigot properly lubricated over the taper and up to the full insertion mark. If the lubricated area gets dirty or contaminated it shall be cleaned and re-lubricated. The proper method to use in laying each pipe joint is for the bell coupling to face in the direction which the pipe is being laid. The pipe shall be inserted slowly and completely into the bell end, however it shall be done by a means that does not damage or harm the pipe ends.

Proper implements, tools and equipment shall be used for the placement of pipe in the trench to prevent damage. The pipe shall never be dropped, dragged or impacted by handlers or equipment at any time during the Contract. All foreign matter of dirt shall be removed from the pipe interior. Pipeline ends left open during any pause in construction shall be promptly sealed to prevent the entrance of animals, insects, or foreign matter.

The pipe shall be laid straight, with ends squared and joined within the end clearance of three-eighths inch (3/8"). PVC pipe shall not deviate from straight by more than 1/16-inch per foot (camber) when the maximum offset is measured from the concave side of the pipe. Polyvinyl Chloride pipe joints or collars that contain hairline cracks or damaged ends will be rejected and they shall be removed immediately from the work site. Upon completion of all pipe backfill, the PVC pipe shall be round, true, and not exceed a maximum pipe wall deflection of three percent (3%) in any direction.

The pipeline backfill and compaction shall be performed in shallow lifts. The pipe zone backfill shall be placed in eight to twelve-inch thick loose lifts and compacted to ninety percent (90%) relative compaction with hand equipment (mechanical tampers) to a minimum of twenty-four inches above the top of pipe. Contractor shall take special care to effectively compact material under the extreme pipe haunch. In all cases the material shall be moisture conditioned to plus or minus three percent (3%) of optimum, compacted to ninety percent (90%) relative compaction as determined by ASTM D-1557, and each lift tested for compaction. The fill shall be placed and compacted with equipment approved by the Engineer. In no case shall equipment come in direct contact with the pipe. Contractor shall be responsible for any pipe damage and all associated repairs at his sole cost. No heavy equipment shall be placed above the pipe until the pipe has a minimum of twenty-four inches of compacted cover.

The Contractor shall be responsible for coordinating with and scheduling City inspections under his encroachment permit. The Contractor shall dig, lay, backfill and compact in order to ensure that there are no open trenches within the road right-of-way at the end of the work day and temporary patches installed as required by the City of Arvin.

5.4.7 PIPE ZONE

Pipe zone backfill shall conform to the following:

- A. After placement and inspection of haunching, pipe zone backfill placement shall be completed and compacted for all pipelines as shown on the Drawings.
- B. Materials used for pipe zone backfill shall be the same class as that used for haunching.
- C. Prior to placement and compaction of trench backfill, the Engineer shall inspect the pipe zone backfill and compaction.
- D. Care shall be exercised in placing pipe zone backfill material to prevent damage to or displacement of the pipe.
- E. Flooding or jetting the pipe zone backfill will not be allowed.
- F. Pipe zone material shall be free of any foreign material. Maximum size shall be one-inch (1").
- G. Testing of pipe zone material shall be done for this installation, three tests per one-hundred feet (100') of pipe installed shall be performed. The tests will be at the haunch, springline, and top of pipe intervals. Pipe zone material not meeting compaction requirements shall be recompacted. Cost of retesting shall be paid by Contractor.

5.4.8 BACKFILL

The remainder of the trench backfill shall conform with State of California Specifications and as follows:

- A. Backfill material shall be free of all rocks or lumps exceeding six inches (6") maximum diameter. No rock or lump exceeding one-inch (1") diameter shall be allowed within twelve inches of the pipe.
- B. Compaction of backfill material shall be required for all pipelines.
- C. Flooding or jetting will not be allowed.
- D. Top thirty-inches of the backfill under paved areas or in City road rights-of-way shall be compacted to ninety-five percent (95%) relative compaction.

5.4.9 COMPACTION TESTING

The District shall provide soil compaction tests for pipeline installation work. Pipeline compaction shall be tested every one-hundred linear feet (100') at three different depth intervals or as directed by the Engineer. If the Contractor fails to meet the compaction requirements as tested in the field, the Contractor shall pay for additional testing until tested area passes compaction requirements. The Engineer shall at his discretion determine the number and location of retesting should a test fail to meet the compaction requirements described herein and on the Drawings.

All tests shall be performed as a percent relative compaction as determined by the percent of maximum dry density as determined by ASTM D-1557 (5 layer). Failed test shall require rework and cost of retesting shall be paid by Contractor.

5.5 CONNECTION TO EXISTING PIPELINES

The anticipated sequencing of placing the new line in service, moving water services to the new line, and making each connection is:

1. Install only the 8” portion of Connection No. 15 and place cap with thrust block on the existing 8” pipeline just west of Connection No. 15 to allow the existing 8” line to remain in service. The shutdown period for this tie-in shall be coordinated with Burger Time to minimize disturbance to their operation.
2. Disinfect and flush the new pipeline. Flush new pipeline to gutters on the north and south sides of Haven. Water will flow east to existing storm drain catch basin at Santa Rosa Street. Contractor shall be responsible for removing all debris from the gutters prior to flushing to allow water to freely flow in the gutters.
3. Obtain passing bacteriological samples in accordance with Section 6.4 of these Specification.
4. Begin installing new metered services from the new pipeline to the existing meter.
5. Install Connections No. 2-14 & 16. (1 connection per day per crew).
6. Install Connection No. 1 and abandon existing 8”/10” pipeline in place.
7. Install 4” portion of Connection No. 15 and abandon existing 4” pipeline in place.

Shutdown periods shall be no longer than 4 hours and be timed to minimize disruption to customers’ routine. Typical shutdown periods will be 9 am to 1 pm unless otherwise noted.

MEASUREMENT AND PAYMENT

Measurement and payment for the distribution system pipelines shall include the cost of all work and materials required for the furnishing and installing of the pipelines, fittings, restraints, film wrapping, valves, thrust blocks, appurtenances, trenching, backfill, compaction, and necessary connections. Such payment shall constitute full compensation for all labor, equipment, tools, and other items necessary and incidental to the completion of the work. Payment shall be per the Contract Unit Price as stated in the Bid Schedule for Bid Items “Furnish and Install 8” DR18 C900 PVC Pipe and Appurtenances” – Bid Item No. 3; “Furnish and Install 6” DR18 C900 PVC Pipe and Appurtenances – Bid Item No. 4; “Furnish and Install 4” DR18 C900 PVC Pipe and Appurtenances” – Bid Item No. 5; and “Connections to Existing System” – Bid Item No. 15.

Any item(s) not specifically mentioned on the bid form such as fittings, joint restraints, thrust blocks, film wrap, tracer wire, detectable tape, valve boxes, miscellaneous concrete, existing landscape and improvement repairs/replacement, etc. but required by the Contract Documents, shall be included in the appropriate bid item.

(END OF SECTION)

6.0 ACCEPTANCE TESTING AND DISINFECTION

6.1 GENERAL

The Contractor shall conduct all of the tests hereinafter specified in the presence of the Engineer. Final testing shall be performed with all specified appurtenances for the system in place and subject to the test requirements. All defects discovered shall be corrected by the Contractor at his cost and the items re-tested before final acceptance of the project. All necessary equipment, materials, and labor for these tests shall be provided by the Contractor.

6.2 PREPARATION

The Contractor, at his own expense, shall furnish and install all necessary bulkheads such as dished heads or blind flanges for purposes of pressure testing. All work shall be coordinated with and approved by the District and the Engineer. After completion of the tests he shall remove the bulkheads or blind flanges and properly restore the ends or shall provide other satisfactory means for making the required tests, subject to the approval of the Engineer. The Contractor shall assume all responsibility for any damage to the pipe as a result of pressure imposed during the operations of filling the line with water and conducting tests.

The required hydrostatic testing shall be conducted for distribution system piping as required by the District and prior to permanent paving. The completed reach shall be filled with water by the Contractor as soon as practicable. After the reach has been filled, it shall be allowed to stand under pressure for a sufficient time to allow the escape of all air before the test period is commenced.

The Contractor shall obtain water necessary for the pipeline testing from the District as directed and approved by the District and Engineer. The Contractor shall furnish and install all necessary fittings for making connections and shall furnish and install hoses, piping, pumps, and all other materials as required to convey water to the test reaches. Upon completion of testing the Contractor shall remove all special appurtenances and restore the pipeline to its designed condition.

6.3 HYDROSTATIC TESTING

Following completion of construction, the Contractor shall perform hydrostatic tests on the improvements prior to their physical connection to any existing system. In addition to any tests required by any standard specifications referred to in these Specifications and in addition to any specified hydrostatic shop or plant tests for pipe specified herein, hydrostatic field tests shall be required for piping furnished and installed under this Contract.

Such hydrostatic tests shall be performed in the presence of a representative from the District and must conform to these Specifications.

6.3.1 TEST REQUIREMENTS

The leakage test for buried piping shall be made after the pipe is installed and backfilled. However, the Contractor may conduct preliminary tests prior to backfill. If the Contractor elects to conduct preliminary tests, he shall provide any necessary temporary thrust restraint. It shall be the responsibility of the Contractor to block off or remove equipment, valves, gauges, etc., which are not designed to withstand the full test pressure.

The Contractor shall provide pipe taps, nozzles, blind flanges and connections as necessary in the piping to permit testing including valves to isolate the new system, addition of test media, and draining lines and disposal of water, as is necessary. These openings shall be plugged in a manner favorably reviewed by the Engineer after use. Contractor shall provide all required temporary bulkheads at his expense.

The Contractor shall keep record of each piping test, including:

- A. Description and identification of piping tested.
- B. Test pressure.
- C. Date of test.
- D. Witnessing by Contractor and Engineer.
- E. Test evaluation.
- F. Remarks, to include such items as:
Leaks (type, location)
Repairs made on leaks by Contractor
- G. Test reports shall be submitted to the Engineer.

Minimum test duration shall be four (4) hours and minimum test pressure shall be 150 psi or as directed by the Engineer. The allowable leakage rates shall be as published in AWWA C600 for PVC pipelines.

Disinfection shall be accomplished after completion of leakage testing as described herein.

6.4 DISINFECTION

After completion of the work all piping and appurtenances shall be cleaned, flushed with water at a minimum pipe velocity of 3 fps, and disinfected in accordance with the District Standards. The work shall be performed after pressure testing and prior to acceptance of the project. The entire pipeline including all valves, fittings and other appurtenances shall be disinfected as specified by the District.

Chlorine residual shall be determined in accordance with one of the methods specified in AWWA C651 with amounts of applied chlorine to produce a dosage greater than 100 ppm and a residual of not less than 25 ppm in all parts of the line after a twenty-four (24) hour period has elapsed.

Forty-eight (48) hours after the flushing of the line the Contractor shall coordinate with District Staff to perform a bacteriological test. A representative shall take the water sample and deliver to the same. Such test shall meet the State Department of Public Health requirements for domestic water purposes prior to acceptance of the pipeline by the District. The cost of the test shall be covered by the Contractor. Re-test costs, if necessary due to a failing test, will be borne by the Contractor.

MEASUREMENT AND PAYMENT

Measurement and payment for acceptance testing shall include the cost of all work and materials required for the furnishing and installing the connections, appurtenances, water supply, pressure testing, flushing, disinfection, and laboratory testing. Such payment shall constitute full compensation for all labor, equipment, tools, and other items necessary and incidental to the completion of the work. Payment shall be per the Contract Unit Price as stated in the Bid Schedule for the Bid Item "Perform Testing and Disinfection" - Bid Item No. 16.

(END OF SECTION)

7.0 MISCELLANEOUS CONCRETE

7.1 GENERAL

This section shall apply to all concrete work including, but not limited to, concrete slabs for valve covers, concrete encasements, and concrete thrust blocks.

7.2 CONCRETE

The Contractor shall provide all labor, materials and equipment, and perform all operations required to furnish, install, and complete, all concrete and mortar work as shown on the Drawings and specified herein. Included under this section of the Specifications is the following work:

1. Provide all required concrete and mortar materials, including cement, aggregates, reinforcing steel, curing compound, and all specified and approved mixtures.
2. Perform all required placement and installation of miscellaneous steel components and appurtenances as shown on the Drawings.
3. Perform all mixing, forming, placing, and finishing operations required to provide concrete of the strength and mix design as specified herein. Included is placement of reinforcement steel.
4. Perform all operations required for repairing, curing, protecting, and maintaining concrete work until final acceptance.
5. All other miscellaneous work that is required to complete the work specified under this section of the Specifications.

7.2.1 CONSTRUCTION REQUIREMENTS

All poured-in-place concrete work shall be constructed in conformance with details shown on the Drawings or as directed. At all times, the construction of poured-in-place concrete work shall be coordinated with other affected trades. Concrete work shall be properly formed and prepared to allow utilities and metalwork to pass through or to be embedded in concrete work in conformance with details shown on the Drawings. The exact sequence of construction of concrete work shall be as determined by the Contractor, subject to the approval of the Engineer. Location and dimensions of poured-in-place concrete work and formed openings therein may be subject to such modifications as deemed necessary by the Engineer in order to meet unforeseen conditions. Unless otherwise shown or directed, all anchor bolts and dowels shall be cast in concrete; where shown or directed, anchor bolts and dowels shall be installed in preformed or drilled holes. Unless otherwise shown, specified or directed, approved cast-iron sleeves or flanged castings shall be furnished and installed to sheath openings for pipes and ducts passing through concrete work.

7.2.2 COMPOSITION

- A. General - Concrete shall be composed of cement, aggregates, water, and any specified admixtures of the qualities and proportions specified herein, all well mixed and brought to the proper consistency. Mortar and grout, unless otherwise specified herein, shall consist of cement, water and sand, and any required admixtures, all mixed in proportions as directed or approved by the Engineer. All fine or coarse aggregate to be used in preparation of any concrete or mortar mix shall be in a saturated, surface dry condition.

The concrete supplier shall provide certification that their aggregate has been tested for ASR (Alkali Silica Reactivity) and will not deleteriously affect the concrete. In addition a Rapid Mortar-Bar Expansion Test (RMBET) shall be performed in accordance with ASTM C1260 (Limit = 0.10%). If the test results are unfavorable, the issue must be addressed by the concrete supplier. The Contractor shall add twenty-five percent (25%) of Class F fly ash replacement to mitigate possible ASR and his mix design shall indicate such. The Contractor shall perform testing in accordance with ASTM C1567 and submit results to the Engineer with his concrete mix design. Testing shall be performed within ninety (90) calendar days of placing concrete.

- B. Maximum Size of Aggregate - The maximum size of coarse aggregate in concrete for any part of the work shall be the largest of the specified sizes that is practicable from the standpoint of satisfactory concrete placement. Aggregate size shall be as follows:

Sections eight-inches (8") or less in thickness shall be three-quarter (3/4") inch maximum.

Sections greater than eight-inches (8") shall be one and one-half inches (1 1/2") maximum.

- C. Concrete Mix Proportions - The mix designs shall be prepared at the Contractor's expense by an independent inspection and testing laboratory, acceptable to the Engineer, and shall show the expected strength and corresponding slump and all ingredient weights and other physical properties necessary to check each design mix. Mix design shall be submitted for review to the Engineer at least fifteen (15) days before placing of any concrete. Mix design for pumped concrete shall produce a plastic and workable mix. The percentage of sand in the mix shall be based on the void content of the coarse aggregate.
- D. Mortar Mix Proportions - Unless otherwise specified, shown on the Drawings or directed, mortar shall be mixed in proportions of not less than one part by volume of cement to two parts by volume of clean, well-

graded sand. Mortar shall contain sufficient water to obtain the proper, approved consistency for the type of mortar used. To improve mortar workability, the Contractor may use an approved admixture.

- E. Concrete Mix Design - No concrete slump shall exceed four inches (4") when tested in conformance with ASTM C143. For a given type of work, the minimum twenty-eight (28) day compressive strength as determined by the Engineer in accordance with ASTM C39 and other mix design requirements shall be as shown in the following tabulation:

<u>Concrete Class</u>	<u>Type of Work</u>	<u>Requirements</u>
1.	All pads, slabs, and encasements	Minimum 28-day strength: 3,000 psi; water-cement ratio: 0.55 +/- 0.02; minimum 6 sacks of Type II cement per C.Y. of concrete: 5½ sacks with air entrainment.

7.2.3 CONCRETE MATERIALS

- A. Cement - All cement shall be furnished by the Contractor and shall be Portland Cement Type II for all concrete and mortar in conformance with ASTM C150. Cement shall be tested by the manufacturer for false set in accordance with the latest revisions of Bureau of Reclamation Test for False Set in Cement. Initial penetration shall be 35 mm □□□ 2 mm. For any cement samples tested for false set, no intermediate or final remix penetration shall be less than fifty percent (50%) of the initial penetration. Any cement sample having intermediate or final penetration(s) less than fifty percent (50%) of the original penetration shall be considered to have false set, and any or all lots of cement from which the sample was taken shall be subject to retest or rejection and replacement, as determined by the Engineer. The Contractor shall obtain from the cement company a certificate stating that the cement delivered to the work complies with the above-requirements, including those for freedom from false set. Two (2) copies of the certificate shall be furnished to the Engineer.
- B. Water - Water used in mixing concrete, mortar or grout shall be clean and free from injurious quantities of silt, organic matter, sulfates, alkali, salts, and other impurities.
- C. Aggregates - Fine and coarse aggregates shall conform to requirements of ASTM C33. Aggregates shall be free from deleterious coatings, clay balls, roots, bark, sticks, rags, and other extraneous materials. All natural aggregates shall be thoroughly and uniformly washed before use.

- D. Air-Entrainment Agent - Unless otherwise directed, the Contractor shall use an approved air-entraining agent in all concrete; said agent shall be in conformance with ASTM C260. The amount of air-entraining agent added shall be such as to effect the entrainment of from four percent (4%) to five percent (5%) of air, as required.
- E. Other Admixtures - Except for the use of an air-entraining agent, no admixture shall be added to any concrete mix without the written authorized approval of the Engineer. All admixtures shall be batched accurately by means of reliable, approved mechanical dispensers. In no case shall the Contractor add any admixture containing chlorides as CL in excess of one percent (1%) by weight.
- F. Special Grouts and Bonding Agents - Where shown on the Drawings or required, a special nonshrink grout shall be placed as bedding for structural framing. Grout shall consist of an approved mixture of cement, sand, and water. Non-shrink grout shall conform to ASTM C1107, Grade B Post-Hardening Volume-Adjusting with no shrinkage as measured by ASTM C827. Furnish a premixed product, consisting of properly proportioned amounts of non-metallic, dimensionally stable material to which water is added. Mix design shall ensure workability for hand packing or poured placement as required and shall be in conformance with the manufacturer's recommendations, subject to the approval of the Engineer. Nonshrink grout shall have a minimum twenty-eight (28) day compressive strength of 8,000 psi when tested by the Engineer in conformance with ASTM C109. All anchor bolts installed in preformed or drilled holes shall be grouted in anchorage holes by means of an approved two-component polymer/epoxy resin bonding agent. The bonding agent shall be 713 Dowel Bar and Anchor Bolt Adhesive as manufactured by Epoxy Systems, Inc. or Sikadur Hi-Mod or approved equal.

7.2.4 MIXING

Concrete may be mixed at the site of the work or by transit-mix methods as defined and specified in ASTM C94. Provisions of ASTM C94 shall govern mixing and transporting concrete from a central plant to the jobsite. The maximum time between introducing cement to the aggregates and discharging concrete shall be ninety (90) minutes, or before 250 revolutions of the mixing drum, whichever comes first. Each load of transit-mixed concrete that is delivered to the jobsite shall be accompanied by a ticket showing the volume of concrete, the concrete mix identification number, the total amount of water added, together with the amount of cement aggregates, and admixtures. The ticket shall also show the time of day that materials were batched and the initial reading of the revolution counter at the time the truck mixer was charged. Any waivers of provisions of said Specifications shall be obtained in writing from the Engineer.

7.2.5 HANDLING AND PLACING

- A. General - No concrete shall be placed until all form work, installation of parts to be embedded, and preparation of surfaces involved in placing have been inspected and approved by the Engineer. All surfaces of foundations upon or against which concrete is to be placed shall be free from standing water, mud, and debris. The surfaces of absorptive foundations against which concrete is to be placed shall be moistened thoroughly so that moisture will not be drawn from the freshly placed concrete.

Construction joints shall be cleaned of all laitance, loose or defective surface concrete and foreign materials by sandblasting and shall be thoroughly moist before concrete is placed against them.

Concrete shall not be deposited around any metal reinforcement until the Engineer has approved the reinforcement placed in the forms. The concrete in each integral part of a structure shall be placed continuously. The Contractor will not be allowed to commence work on any monolithic part of a structure unless the inspected and approved materials on hand are sufficient to complete the part without interruption in placing of the concrete. The concrete shall be placed as nearly as possible in its final position by means that avoid segregation of the materials and displacement of reinforcement. No concrete shall be dropped freely into place from a greater height than six feet (6') in unexposed work and four feet (4') in exposed work. Tremies shall be used where the drop exceeds these limits. The Engineer shall be notified at least two working days in advance of concrete placement for inspection and approval of steel reinforcement.

- B. Required Temperatures for Concrete - The temperature of concrete as mixed and placed shall be not less than 55° F nor greater than 90° F. If, during day or night, the ambient temperature falls below or is predicted to fall below 40° F, concrete shall be protected from freezing during placement and curing by means of heating of materials and other approved methods, as directed by the Engineer. The concrete mix for cold weather placement shall be maintained at a minimum temperature of 55° F during placement, and this minimum temperature shall be maintained for the first seventy-two (72) hours of curing, minimum. At all times, the maximum temperature of concrete as placed shall be less than 90° F. When the temperature of concrete as placed may be 90° F or higher, as may be reasonably foretold from current temperatures of materials and the likelihood of rises in weather temperatures, the Contractor shall employ effective means, as necessary, to maintain the temperature of concrete as placed below ninety degrees (90°) F.
- C. Pumping Concrete - Pump size shall be based on rate of concrete placement, length of delivery pipe or hose, aggregate size, mix

proportions, vertical lift, and slump of concrete. Aluminum pipes shall not be used for delivery and installation of concrete. Minimum inside diameter of pipe or hose shall be based on the maximum aggregate size as follows:

3/4-inch maximum aggregate	2-inch minimum ID
1 1/2-inch maximum aggregate	4-inch minimum ID

Before pumping is started, the delivery pipe or hose shall be primed by pumping mortar through the line using five (5) gallons of mortar for each fifty feet (50') of delivery line. Final lengths of pipe or hose shall be inclined upwards to prevent segregation of the concrete.

- D. Vibration - All concrete placed in forms shall be placed in layers not over twenty-four inches (24") deep, and each layer shall be vibrated into place to its maximum practicable density, free from pockets of coarse aggregate, and in such a manner that surfaces shall be smooth and free from voids. Vibrators shall not be used to move concrete horizontally. Approved internal vibrators shall be used for all sections which are sufficiently large and shall be supplemented by platform or screed-type vibrators in the event that satisfactory top surfaces cannot be obtained solely with the internal type; or internal vibrators shall be supplemented with vibrators operated against the outside of forms to improve vertical surfaces, as required. Form vibrators shall be used when sections are too small for the internal type. Vibrators shall be adequately powered and capable of transmitting to the concrete not less than 5,000 impulses per minute when operating under load. The vibration shall be sufficiently intense to visibly affect the concrete over a radius of at least eighteen inches (18"). A sufficient number of vibrators shall be used so that the required rate of placement vibration is achieved uniformly throughout the entire volume of each layer of concrete and maximum consolidation of concrete is secured. With form or internal vibrators, vibration shall be such that concrete becomes uniformly plastic and there shall be at least twenty (20) seconds of vibration per square foot of surface of each layer of concrete, computed on the basis of the visibly affected radius and taking overlapping into consideration; however, over vibration will not be allowed. At all times, the Contractor shall have available at least one spare, workable vibrator of each type used. Either over-vibrated or under-vibrated concrete is subject to test and rejection.

7.2.6 FORMS

All forms shall be true in every respect to the required shape and size, shall conform to the established alignment and grades, and shall be of sufficient strength and rigidity to maintain their position and shape under the loads and operations incident to placing and vibrating the concrete.

Suitable and effective means shall be provided on all forms of holding adjacent edges and ends of panels and sections tightly together and in accurate alignment so as to prevent the formation of ridges, fins, offsets or similar surface defects in the finished concrete. The forms shall be tight in order to prevent the loss of water, cement, and fins during placing and vibration of the concrete.

Adequate cleanout and inspection openings shall be provided at the bottom of each lift of forms in locations that will not mar the architectural finish. The size, number, and location of such openings shall be approved by the Engineer.

Exterior corners in concrete members shall be provided with three-quarter inch (3/4") chamfers. Re-entrant corners in concrete members shall not have fillets unless otherwise shown on the Drawings.

Adequate and suitable means shall be provided for removing all forms without injury to the surface of the finished concrete. A sufficient number of forms of each kind shall be provided to permit the required rate of progress to be maintained. Wherever, in the opinion of the Engineer, additional forms are required to maintain the necessary progress, such additional forms shall be provided by the Contractor at his own expense.

Where metal rods extending through the concrete are used to support or to strengthen forms, the rods shall remain embedded and shall terminate not less than one inch (1") back from the formed face or faces of concrete. The maximum diameter of removable cones for rod ties shall not exceed 1-inch, and all such fasteners shall be such as to leave holes of conical shape for reaming. Wire ties for holding forms will not be permitted. No form-tying device or part thereof other than metal shall be left embedded in the concrete, nor shall any be removed in such a manner as to leave a hole extending through the interior of the concrete member. The use of form-tying methods which cause spalling of the concrete upon form stripping or tie removal will not be permitted. Form ties shall be provided with integral waterstops.

All vertical surfaces of concrete members shall be formed, except where placement of the concrete against the ground is called for on the Drawings or explicitly authorized by the Engineer. The dimensions of concrete members shown on the Drawings apply to formed surfaces, except where otherwise indicated, not less than one inch (1") of concrete shall be added where concrete is permitted to be placed against trimmed ground in lieu of forms. Such permission will be granted only for members of comparatively limited height and where the character of the ground is such that it can be trimmed to the required lines and will stand securely without caving or sloughing until the concrete has been placed.

Forms shall be maintained at all times in good condition, particularly as to size, shape, strength, rigidity, tightness, and smoothness of surface. Forms, when in place, shall conform to the established alignment and grades. Before concrete is placed, the forms shall be thoroughly cleaned. The surfaces of all forms shall be treated with a bond breaker, nonstaining mineral oil or other lubricant approved by the Engineer. Any excess lubricant shall be satisfactorily removed before placing the concrete. In addition, all

plywood not treated with the bond breaker specified above shall be given a preliminary oil treatment by the form manufacturer or shall be oiled by the Contractor at least two weeks in advance of its use as forms. Care shall be exercised to keep form oil off the surface of steel reinforcement and other metal items to be embedded in the concrete.

Forms may be reused if they are in good condition and if they are approved by the Engineer. In determining the extent to which forms may be reused, particular attention shall be given to maintaining a uniform surface texture on all exposed concrete surfaces. Light sanding between uses will be required wherever necessary in the opinion of the Engineer to obtain such uniform texture. Unused tie rod holes shall be plugged with corks, shaved flush, and sandpapered on the concrete surface side. Patching of forms, other than filling tie rod holes, will not be permitted. The use of metal discs on plywood forms will not be permitted.

Forms may be stripped from concrete in accordance with the following schedule, except in the case the concrete has been placed at outside air temperature under 50° F, it must be first determined that the concrete has properly set:

<u>Formwork</u>	<u>Removal with Moderate Temperatures</u>
Sides of footings	24 hours
Walls and columns not yet supporting load	48 hours
Vertical sides of beams, girders, and similar members	48 hours
Slabs, beams, and girders	10 days
Shoring for slab, beams, and girders	21 days

7.2.7 REINFORCEMENT

The Contractor shall furnish and place steel reinforcement for poured-in-place concrete as shown on the Drawings or as directed. Reinforcing steel shall conform to ASTM A615, Grade 40 or Grade 60, as specified, for billet steel bars for concrete enforcement, intermediate grade, and shall have deformations conforming to ASTM A615. Welded wire fabric shall conform to ASTM A185. Before the reinforcing bars are placed, the surfaces of the bars and the surfaces of any metal supports for the bars shall be cleaned of heavy flaky rust, loose mill scale, dirt, grease or other foreign substances. After being placed, the reinforcing bars shall be maintained in a clean condition until they are completely embedded in concrete. Reinforcing bars shall be accurately spaced and secured in position so that they will not be displaced during the placing of the concrete, and special care shall be taken to prevent any disturbance of the

reinforcing bars in the concrete that has already been placed. Length of splices shall be a minimum of 36 bar diameters or twenty-four inches (24"), whichever is longer. All splices shall be staggered unless otherwise indicated. Contractor shall furnish to the Engineer a certified mill copy of mill tests on each heat showing physical and chemical analysis. Reinforcing steel placement shall be inspected by the Engineer prior to placing concrete. Reinforcing steel shall have a minimum coverage of two-inches (2") measured from the surface of concrete, EXCEPT that where concrete is placed against earth. The minimum coverage shall then be three-inches (3").

7.2.8 CURING

All concrete shall be cured for not less than fourteen (14) days after placing in accordance with the methods specified herein for the different parts of work and described in detail in the following paragraphs:

<u>Surface to be Cured</u>	<u>Method</u>
Unstripped wooden forms	1
Vertical and horizontal construction joints and walls	2
Surfaces requiring architectural finish, or which are to be plastered or tiled, or upon which concrete topping is to be placed	3
<u>Surface to be Cured</u>	<u>Method</u>
All concrete surfaces not specifically provided for elsewhere in this subsection	4

Method 1 - Wooden forms shall be wetted immediately after concrete has been poured and shall be kept wet with water until removed. The exposed concrete surfaces shall then be cured by Methods 2 or 3.

Method 2 - The surface shall be covered with burlap mats which shall be kept wet with water for the duration of the curing period or until the new concrete in the adjacent section is placed.

Method 3 - The surface shall be kept wet with water for the duration of the curing period. This shall be accomplished by keeping the forms wet prior to stripping and by means of an approved combination of fog nozzles, soaker-type hoses, hand sprinkling, and burlap or other types of mats. **NO CURING COMPOUND MAY BE APPLIED TO SURFACES CURED UNDER METHOD 3.**

Method 4 - The surface shall be sprayed with a liquid curing compound which will not affect the bond of paint to the concrete surface. It shall be applied in accordance with the manufacturer's instructions at a maximum coverage rate of 300 square feet per gallon in

such a manner as to cover the surface with a uniform film which will seal thoroughly. The exterior surfaces of buried portions or partially buried walls shall be given two additional coats of curing compound at the specified coverage rate, making three coats in all. Curing compound shall be white-pigmented liquid membrane forming compound conforming to ASTM C309. The pigment shall be in a thoroughly mixed condition at the time of use.

Where the curing compound method is used, care shall be exercised to avoid damage to the seal during the curing period. Should the seal be damaged or broken before the expiration of the curing period, the break shall be repaired immediately by the application of additional curing compound over the damaged portion.

Wherever curing compound may have been applied by mistake to surfaces against which concrete subsequently is to be placed and to which it is to adhere, the said compound shall be entirely removed by wet sandblasting just prior to the placing of new concrete.

Where curing compound is specified, it shall be applied immediately after completion of the finish or unformed surfaces, and within two hours after removal of forms on formed surfaces. Repairs required to be made to formed surfaces shall be made within the said two-hour period; provided, however, that any such repairs which cannot be made within the said two-hour period shall be delayed until after the curing compound has been applied. When repairs are to be made to an area on which curing compound has been applied, the area involved shall first be wet-sandblasted to remove the curing compound, following which repairs shall be made as specified hereinafter.

7.2.9 REPAIR OF DEFECTIVE CONCRETE

As soon as forms are removed, all surfaces shall be carefully examined and all rough sections, rock pockets, and defective areas shall be removed and replaced.

The material used for repair purposes shall consist of cement mortar composed of one part cement well mixed with three parts of sand by volume and just enough water so that the mortar will stick together on being molded into a ball with slight pressure of the hands; and it shall be thoroughly compacted into place. Sand shall pass a No. 16 sieve.

Defective surfaces to be repaired shall be cut back from true line to a minimum depth of one inch (1") over the entire area. Feathered edges shall be avoided. Where chipping or cutting tools are not required in order to deepen the area properly, the surface shall be prepared for bonding by the removal of all laitance or soft material, and not less than 1/32-inch depth of the surface film from all hard portions by means of an efficient sandblast.

Dry pack mortar shall be placed and packed in layers having a compacted thickness of about 3/8-inch. Surface of each layer shall be scratched to promote bonding of next layer. Before the mortar is applied, the surface of the sandblasted concrete shall be coated with an epoxy bonding compound.

Major repairs shall be made for the following defined defective areas:

Areas of more than one-foot square (1'²) and deeper than the reinforcing steel.

Major repair areas shall be filled with pneumatically applied concrete after prepared surfaces have been sandblasted.

For major repairs, the filling shall be reinforced and doweled securely to the old concrete. The exposed surface shall be neatly finished to match the surface and texture of the adjacent concrete. All patches shall be cured.

Holes left by tie rod cones shall be reamed with suitable toothed reamers so as to leave the surfaces of the holes clean and rough. These holes then shall be repaired in an approved manner with mortar and epoxy and cured in accordance with the requirements of the curing section of these Specifications. Other imperfections having a depth greater than their last surface dimension shall not be reamed but shall be repaired in an approved manner with epoxy bonding compound and dry-packed mortar.

All repairs shall be built up and shaped in such a manner that the completed work will conform to the finish requirements of this Specification using approved methods which will not disturb the bond or cause sagging or horizontal fractures. Surfaces of said repairs shall receive the same kind and amount of curing treatment as required for the concrete in the repaired section.

7.2.10 CONCRETE FINISHES

Finished concrete surfaces shall be straight, flat, and free from rock pockets and voids. There shall be no measurable deflection or distortion. Concrete surface finishes shall be in accordance with the following concrete finish schedule and concrete finish definitions:

A. Concrete Finish Schedule

<u>Finish</u>	<u>Areas</u>
F1	Exterior walls below grade not exposed to water.
F2	Exterior and interior walls exposed to water.
F3	Walls of structures or buildings exposed to view. Underside of formed floors or slabs.
S1	Slabs and floors to be covered with concrete.
S2	Slabs and floors not water bearing.

- S3 Slabs and floors which are water bearing.
- S4 Slabs and floors of structures or buildings exposed to view.
- E1 Exposed edges of slabs, floors, and wall tops.

B. Definition of Finishes for Vertical Concrete Surfaces and for Underside of Formed Slabs

Finish F1 - No special treatment other than repair of defective concrete and filling depressions deeper than ½-inch and filling tie holes.

Finish F2 - No special treatment other than repair of defective concrete and removal of fins, filling depressions deeper than 1/4-inch, and filling tie holes.

Finish F2 shall be a preparation finish for surfaces receiving Finish F3.

Finish F3 - Upon completion of Finish F2, fill all depressions and air holes with mortar. Predampen surfaces and then spread a slurry consisting of one part cement (including an appropriate quantity of white cement) and one and one-half parts sand passing the No. 16 sieve, by damp loose volume, over the surface with clean burlap pads or sponge rubber floats. Any surplus shall be removed by scraping and then rubbing with clean burlap.

C. Definition of Finishes for Horizontal Concrete Surfaces

Finish S1 - Screed to grade and leave without special finish.

Finish S2 - Smooth steel trowel finish.

Finish S3 - Steel trowel finish free from trowel marks. The finish shall be smooth and free of all irregularities.

Finish S4 - Steel trowel finish without local depressions or high points, and in addition, shall be given a light hair-broom finish. Stiff bristle brooms or brushes shall not be used. Brooming shall be parallel to slab drainage.

Finish E1 - Edges of all slabs, floors, and wall tops exposed to view shall be edged with a 1/4-inch radius edger or chamfered as shown on the Drawings.

7.2.11 JOINTS AND WATERSTOPS

Unless otherwise specified, all details as to location, spacing, and construction of joints shall be shown on the Drawings or as specified by the Engineer. All joint surfaces shall be clean and free from water, foreign material, laitance, and loose or defective surface concrete during all phases of joint construction. Waterstops shall be installed in joints where shown on the Drawings and shall be of the type and size specified herein unless otherwise shown on the Drawings. Waterstops shall be placed at all construction joints that will be exposed to water or as specified by the Engineer.

Waterstops shall be polyvinyl material. The material shall be resistant to chemical action with portland cement, shall be resistant to alkalis, and shall not be affected by mildew or fungi. It shall show no affect when immersed for ten (10) days in a ten percent (10%) solution of sulphuric or hydrochloric acids, saturated lime solution or salt water. All waterstops shall be such that any cross-section will be dense, homogeneous, and free from porosity and other imperfections. They shall be symmetrical in shape and have bulbed ends or otherwise approved by the Engineer. When tested in accordance with applicable test methods of Federal Standard No. 601, the material shall meet the following requirements:

Tensile strength, psi, minimum	2,000
Elongation, ultimate, percent, minimum	250
Water absorption, percent by weight, maximum	5
Compression set, percent, maximum	30
Tensile strength after accelerated aging (48 hr, 70° C 300 psi) percent minimum	80
Durometer hardness, Shore A	60-70

Field splices for polyvinyl material shall be performed by heat sealing adjacent surfaces in accordance with the manufacturer's specifications.

7.2.12 JOINT SEALANT

The joint sealant shall be a two-part, self-leveling or gun grade, non-staining, polyurethane sealant which cures at ambient temperature to a firm, flexible, tear-resistant rubber. The sealer shall be resilient and have excellent recovery characteristics after extended periods of compression or elongation.

Technical Requirements

Consistency:	Gun Grade
Tack Free Time:	8 hours at 77° F and 50% R.H
Pot Life:	1 - hour
Hardness:	25 Shore A □□□ 5
Elongation:	800%
Shrinkage:	Negligible
Tensile Strength, ASTM D412:	80 psi
Peel Strength on Concrete:	18 P.L.I. Cohesive
Temperature Service Range:	-40° F to +175° F

Joint backup material shall be closed cell polyethylene rod, three-quarter inch (3/4") in diameter or bond breaker polyethylene tape. All joint materials shall be compatible.

7.2.13 TOLERANCES FOR CONCRETE CONSTRUCTION

Deviations from established lines, grades, and dimensions will be permitted to the extent set forth in the following list of tolerances:

Elevation of top of structures	± ¼-inch
Elevation of bottom of structures	± 1-inch
Variation of structures from specified grades, alignment or plumb in vertical members or concrete lining surface irregularities	½-inch in 10 feet
Departure from cross-section dimensions of structure members	± ¼-inch

7.2.14 TESTING

- A. General - All field tests as specified or required herein to ensure quality control of concrete materials and mix design will be performed by the Agency at no cost to the Contractor. Materials not meeting specified requirements will be rejected and replaced with suitable materials and the Contractor may be charged the cost of all such retesting as is required

because of previously rejected concrete materials or mix designs. The Contractor shall provide such facilities as required for procurement and handling of representative test samples. For each shipment of reinforcing steel arriving at the jobsite, the Contractor shall furnish the Engineer with two certified copies of manufacturer's certification of conformance with designated governing reference specifications.

- B. Compressive Strength - Compressive strength shall be determined at the end of twenty-eight (28) days on standard six-inch by twelve-inch (6" by 12") test cylinders in accordance with ASTM C39. The compressive strength shall not be less than 3,000 psi.
- C. Concrete Cylinders - The District will take four concrete cylinders for each fifty (50) cubic yards of concrete and each day's pour. The Contractor shall furnish the concrete for such tests. Cylinders will be cured under job conditions.

7.2.15 ENFORCEMENT OF CONCRETE STRENGTH REQUIREMENTS

Cylinder Tests - If any cylinders fail to meet the strength requirements for the portion of the structure in which the concrete is used, core tests will be taken at the Contractor's expense to demonstrate the adequacy of the concrete in place.

If both core tests and cylinder tests fail to meet the Specification, the concrete shall be considered defective and shall be replaced or adequately strengthened in a manner satisfactory to the Engineer.

7.2.16 NON-SHRINK GROUT

Non-shrink grout shall conform to ASTM C1107, Grade B Post-Hardening Volume-Adjusting with no shrinkage as measured by ASTM C827. Furnish a premixed product, consisting of properly proportioned amounts of non-metallic, dimensionally stable material to which water is added.

MEASUREMENT AND PAYMENT

Measurement and payment for the miscellaneous concrete shall include the cost of all work and materials required for the furnishing and installing of concrete as required for the completion of the work and detailed on the Drawings. Such payment shall constitute full compensation for all labor, equipment, tools and other items necessary and incidental to the completion to the work. Payment for miscellaneous concrete shall be included in the appropriate Bid Item and no further payment will be made.

(END OF SECTION)

8.0 PAINTING SYSTEM

8.1 GENERAL

The Contractor shall furnish all labor, materials, equipment, and incidentals necessary to prepare and paint all exterior surfaces of above bollards, fire hydrants, valve cans, and appurtenances. All work shall be performed by skilled craftsmen qualified to perform the required work in a manner comparable with the best standards of practice.

All paints shall be compatible with existing painted surfaces. The Contractor shall be responsible for good housekeeping cleanup and disposal before, during, and after painting.

8.2 SURFACE PREPARATION

The latest version of the Steel Structures Painting Council Standards shall regulate the process of surface preparation. Initially all surfaces to be painted shall be prepared in a workmanlike manner with the objective of obtaining a clean, dry and proper substrate. No painting shall begin before the prepared surfaces, or the manner of preparation is approved by the District or its Engineer. All surfaces shall be prepared in accordance with the painting manufacturer's current Product Data Sheets.

All oil and grease shall be removed from surfaces with a surface cleaner compatible with the painting system in accordance with SSPC-SP1. All sharp edges and welds shall be ground smooth to a round contour and all weld spatter shall be removed prior to abrasive blasting. All steel surfaces to be lined shall be abrasive blasted to a Near White Metal Finish in accordance with Steel Structures Painting Council Specifications SSPC-SP10. No streaks, stains, rust or any other contaminants shall be allowed.

All nameplates, equipment, etc., shall be taped off and protected so as not to paint these surfaces or overspray them.

8.3 APPLICATION

All paint shall be applied in a workmanlike manner in accordance with the most recent written Product Data Sheet from the paint manufacturer, by conventional or airless spray whenever possible. The applications shall have no sags, brush marks, pinholes, or other defects. Drying time between coats shall adhere to the coating manufacturer's recommendations with conditions of temperature, humidity and ventilation taken into account. Cleaning and painting shall be scheduled so that dust and other contaminants from the cleaning process will not fall on wet, newly painted surfaces. Whenever required, imperfections and holes in surfaces to be coated shall be cleaned and filled in an approved manner.

Exterior color to be selected by the District. Paint shall not be applied to wet or damp surfaces. Final coat shall be applied after start-up and troubleshooting is completed.

8.4 PROTECTION, CLEANING AND COMPLETION

Protect finish by suitable covering or other method as job progresses. Check work of this Section at completion of project. Touch-up or refinish marred or damaged surfaces. Replace glass damaged by operations under this Section. Leave entire area with finish free from imperfections.

8.5 EXTERIOR PAINTING SYSTEM

Metal Coating: The following Carboline painting system shall be used:

1. Cleaner: Carboline # 3
2. Prime Coat: Prime areas prepared with Carboguard 890 EF Epoxy 6 mils dft.
3. Factory Finished Surfaces to be Coated: Prime with Rust Bond Penetrating sealer as a barrier coat 1-2 mils dft.(as needed)
4. Finish Coat: Top coat areas mentioned above with Carbothane 134HG 2.0-3.0 mils dft.

Color shall be selected by the District.

Total Painting System shall be 10 mils minimum dry film thickness.

8.5.1 WARNING

The Contractor is advised that application of paint and finishing material may be hazardous. The Contractor shall take all necessary precautions to ensure the safety of workers and property.

8.5.2 DELIVERY, STORAGE AND HANDLING

Deliver all materials in unopened containers with manufacturer's label. Label shall state VOC content. Store in assigned area. Maintain storage area in a clean and fire safe manner. Dispose of used rags and clean buckets daily. Store solvents in closed approved storage containers. Submerge solvent soaked rags in water.

8.5.3 PROJECT CONDITIONS

1. Environmental Requirements:
 - a. Provide ambient temperatures recommended by manufacturer of material to be applied.
 - b. Provide adequate ventilation.
 - c. Provide forty-foot to fifty-foot (40' to 50') candles of illumination on all surfaces in areas to be painted including floors, walls and ceiling even though they do not require painting.

- d. Use temporary dust barrier to close off areas being painted from areas where other work is being performed.

8.5.4 COLORS AND COLOR SAMPLES

Before starting to work, the Contractor shall provide the District or its Engineer with color samples. Colors are to be factory or machine mixed, using light-fast colorants proportioned by accurate measurements into a proper tinting base. The color formula for each color shall be submitted to facilitate future color matching. Coatings used shall be "top of the line" and of the type recommended by the manufacturer for the intended use and substrate. Applicable Air Quality Management District regulations prohibit the manufacture, sale or application of Architectural Coatings and Specialty Coatings having greater than stipulated levels of volatile organic compounds. The Contractor shall base his bid on using the products specified. If the products specified are not available in formulations that meet applicable Air Quality District regulations on maximum VOC levels, the Contractor shall submit products of equivalent quality and function that comply with regulations in effect at that time. The Contractor shall not submit or use any material containing Trichloroethylene III because of its potential cancer causing properties. If any material specified in this Section contain trichloroethylene, they shall be consider deleted from this Specification.

8.5.5 INSPECTION

Visual inspection for pinholes, holidays, dry spray, sags and other flaws shall be performed after each coat is applied. All such flaws shall be corrected before the next coat is applied. Particular attention shall be paid to weld seam, stiffeners or any irregular surfaces where cleaning and film thickness may be a problem. Any paint not conforming to the Specifications detailed herein shall be removed as directed by the District or its Engineer and repainted.

8.6 SUBMITTALS

1. Submit in accordance with these Specifications.
2. Contractor Qualifications: Submit a list of at least five projects completed in the past five years where High Performance Coating similar to those required for this project were applied by the Specialty Painting Contractor proposed for this project.
3. Product Data:
 - a. Submit complete technical data on all materials to be used on the project for review prior to ordering material. Include manufacturer's brand name and type of material for each system to be used.

- b. If a paint product manufactured by a company other than that specified herein is submitted, Contractor shall submit supporting performance test results prepared by an independent paint testing laboratory for comparison with the performance of the specified product.
 - c. If the Contractor's second submittal of a proposed equivalent material is not favorably reviewed the Contractor will be back-charged by the District for the cost of subsequent reviews.
- 4. Manufacturer's Certification: That products furnished meet applicable Air Quality Management District regulations as to allowable VOC content for the place of application and use intended.
 - 5. Samples: For paints submit two eight and one-half inches (8-1/2") by eleven-inch (11") brush-outs of each paint system and each color on cardboard.

MEASUREMENT AND PAYMENT

Measurement and payment for the exterior painting shall include the cost of all work and materials required for the painting of the above ground steel piping, vault piping, valves, valve cans, fire hydrants, bollards, and other appurtenances. Such payment shall constitute full compensation for all labor, equipment, tools and all other items necessary and incidental to the completion of the work. Payment for miscellaneous painting shall be included in the appropriate Bid Item and no further payment will be made.

(END OF SECTION)

CONTRACT DRAWINGS

ARVIN COMMUNITY SERVICES DISTRICT

**HAVEN DRIVE STREET IMPROVEMENTS
WATER LINE RELOCATION PROJECT**

APRIL 2025