Contract Documents
for
Construction of
13th Street Water Extension

March 2015

Bid Proposals must be received no later than 2:00 p.m. May 1, 2015
City of Los Banos City Clerk
520 J Street
Los Banos, CA 93635

City of Los Banos
Public Works Department

Table of Contents

Advertisement for Bids

Information for Bidders

Bid

Bid Bond

Sample Forms

Agreement
Certificate of Contractor
Payment Bond
Performance Bond
Notice of Award
Notice to Proceed
Change Order

General Provisions

1. Terms and Definitions
2. Precedence of Plans, Specifications and Contract Documents
3. Venue
4. Giving Notice
5. Cumulative Remedies
6. Non-Discrimination
7. Non-Discrimination of the Disabled
8. Additional Instructions and Detail Drawings
9. Schedules, Reports and Records
10. Drawings and Specifications
11. Shop Drawings, Product Data and Samples
12. Materials, Services and Facilities
13. Inspection and Testing
14. Substitutions
15. Patents
16. Surveys, Permits and Regulations
17. Protection of Work, Property and Persons
18. Supervision by Contractor
19. Changes in the Work
20. Changes in Contract Price
21. Time for Completion and Liquidated Damages
22. Correction of Work
23. Suspension of Work, Termination and Delay
24. Progress Estimates
25. Progress Payments
26. Prompt Payment
27. Acceptance and Final Payment
28. Quantities and Unit Prices
29. Insurance
30. Contract Security
31. Assignments
32. Indemnification
33. Separate Contracts
34. Subcontracting
35. Employment of Apprentices
36. Payment of Prevailing Wages

37. Registration to Train Apprentices
38. Penalties
39. Engineer's Authority
40. Land and Rights-of-Way
41. Warranty and Guarantee
42. One (1) Year Warranty Period
43. Correction of Defective Work
44. Early Completion
45. Extended Warranties and Guarantees
46. Arbitration
47. Taxes
48. Contractor's Understanding
49. Accidents
50. Safety and Sanitation
51. Climatic Conditions
52. Officials Not to Benefit
53. Clean-Up
54. Notice to Owner
55. Payment of Withheld Funds
56. Storm Water Pollution Prevention Measures

Special Provisions

1. Requirements
2. Description of Work
3. Commencement, Prosecution and Completion of Work
4. Hours of Work
5. City Permits and Business Licenses
6. Testing
7. Responsibility Regarding Existing Utilities and Private Property
8. Obstructions
9. Materials Furnished By Owner
10. Materials Furnished By Contractor
11. Schedule of Values, Material List and Substitutions
12. Request for Extension of Time
13. Rights-of-Way
14. Coordination with Other Work
15. Closure of Streets
16. Construction Signs, Barricades, Lights and Flagmen
17. Traffic Control Plan
18. Disposal of Waste Materials
19. Noise Control
20. Water Supply
21. Notifications
22. Work Not Listed in Proposal
23. Submittals
24. Bid Item Descriptions

Technical Specifications

221113 Facility Water Distribution Piping
321216 Asphalt Paving
311313 Concrete Paving
321723 Pavement Markings

Drawings

Advertisement for Bids

CITY OF LOS BANOS
520 J Street
Los Banos, California 93635

Notice is hereby given that separate sealed bids for the award of contract for the **CONSTRUCTION OF 13TH STREET WATER EXTENSION** will be received by the City of Los Banos at the office of the City Clerk until 2:00 p.m. (Pacific Daylight Savings Time), May 1, 2015 and then at said office publicly opened and read aloud.

The major WORK consists of replacing 329 feet of 6-inch waterline with 10-inch waterline in 13th Street from Pacheco Pass Boulevard to the south end of 13th Street, and installing 520 feet of 10-inch waterline at the south end of the California Dairies Property.

The time for completion shall be sixty (60) working days from Owner's Notice to Proceed.

The Contract Documents, in their entirety, can be viewed and/or obtained from the City of Los Banos website at www.losbanos.org or at the following locations:

Central California Builders Exchange, 1244 N. Mariposa, Fresno, CA 93703 (www.cencalbx.com)

Builders Exchange of Stockton, 7500 N. West Lane, Stockton, CA 95210 (www.besonline.com)

Valley Builders Exchange, Inc., 1118 Kansas Avenue, Modesto, CA 95351 (www.valleybx.com)

Builders Exchange of Merced/Mariposa, 415 West 18th Street, Ste. 7, Merced, CA 95340

Dodge Data & Analytics 1-800-393-6343 (http://dodge.construction.com/Plans/)

A payment bond prepared and executed in accordance with California Civil Code Section 3247 and a bond for faithful performance of the contract will be required of the successful bidder who is awarded the contract.

The successful Bidder must comply with the latest general prevailing rate of per diem wages as determined by the Director of Industrial Relations, State of California, Department of Industrial Relations and is to be paid to the various craftsmen and laborers required to construct said improvements and is made a part of the Specifications and Contract for said work to which reference is hereby made for further particulars.

No contractor or subcontractor may be listed on a bid proposal for a public works project (submitted on or after March 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5.

No contractor or subcontractor may be awarded a contract for public work on a public works project (awarded on or after April 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5.

This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations. Contractor Registration Information can be found at:

http://www.dir.ca.gov/Public-Works/PublicWorks.html

Each Bid shall be accompanied by cashier's or certified check or by a bidder's bond, made payable to the City of Los Banos and executed by a corporate surety licensed to issue surety bonds in the State of California, for an amount equal to at least ten percent (10%) of the amount of said bid and no bid shall be considered unless such cashier's or certified check or bidder's bond is enclosed therewith.

The successful bidder of this project shall have the following current and active California State Contractor's License at the time of the submission of the Bid and throughout the duration of the contract: Class A.

Bidders are solely responsible for the cost of preparing their Bids.

Bidders shall refer to information for Bidders for complete instructions.

The City specifically reserves the right, in its sole discretion, to reject any or all Bids, to re-bid, or to waive inconsequential defects, in bidding not involving time, or quality of the work. The City may reject any and all Bids and waive any minor irregularities in the Bids.

Information for Bidders

Sealed BIDS will be received by the City of Los Banos (herein called the "OWNER"), at the office of the City Clerk until 2:00 p.m. Pacific Daylight Savings Time (PDST), on May 1, 2015, then at said office, publicly opened and read aloud. OWNER shall reject all BIDS received after the specified time and will return such BIDS to BIDDER unopened. BIDDERS must submit BIDS in accordance with these instructions. No emailed or faxed BIDS will be accepted.

The major WORK consists of replacing 329 feet of 6-inch waterline with 10-inch waterline in 13th Street from Pacheco Pass Boulevard to the south end of 13th Street, and installing 520 feet of 10-inch waterline at the south end of the California Dairies Property. The time for completion is sixty (60) working days.

Each BID must be submitted in a sealed envelope and addressed to the City of Los Banos at 520 J Street, Los Banos, CA 93635. Each sealed envelope containing a Bid must be plainly marked on the outside as "**13th Street Water Extension: Attention City Clerk**", and the envelope shall also bear on the outside, the name of the CONTRACTOR, and their address. If forwarded by mail, the sealed envelope containing the BID must be enclosed in another envelope addressed to the City of Los Banos at 520 J Street, Los Banos, CA, 93635, and also clearly state, "**13th Street Water Extension: Attention City Clerk**".

A complete BID includes the Bid Form, List of Subcontractors, Equal Employment Opportunity, Non-Collusion Affidavit, Debarment and Suspension Certification, Bid Schedule, Experience, Bid Bond with surety, and a copy of a current Contractor's License in the State of California. A signed Addendum, if issued, must also be submitted with the sealed BID. The Total Bid Amount must be filled in, in ink or typewritten, and the BID must be fully completed and executed when submitted unless otherwise indicated. Only one set of original BID forms are required to be submitted. Mistakes must be corrected and the correction inserted; correction must be initialed in ink by person or persons signing the BID. No conditional BIDs will be accepted.

The BID shall be signed by a person or persons legally authorized to bind BIDDER to the Contract. The individual or individuals signing each document shall warrant that they are authorized to bind the BIDDER.

The OWNER may waive any informalities or minor defects or reject any and all BIDS. Any BID may be withdrawn prior to the above scheduled time for the opening of BIDS or authorized postponement thereof. Any BID received after the time and date specified shall not be considered. No BIDDER may withdraw a BID within 30 days after the actual date of the opening thereof. Should there be reasons why the Contract cannot be awarded within the specified period, the time may be extended by mutual agreement between the OWNER and the BIDDER.

Each BID must be accompanied by a BID BOND payable to the OWNER for ten percent (10%) of the total amount of the BID. As soon as the BID amounts have been compared, the OWNER will return the bid security of all except the three lowest responsive and responsible BIDDERS. Once a CONTRACTORS BID has been awarded, and the PAYMENT BOND and PERFORMANCE BOND of the successful CONTRACTOR has been received by the OWNER, the bid security of the three remaining lowest responsive and responsible BIDDERS will be returned.

All bonds must be acknowledged before a Notary Public by both the CONTRACTOR and the Surety. Attorneys-in-fact who sign Bid Bonds or Payment Bonds and Performance Bonds must file with each bond a certified and effective dated copy of their power of attorney.

Award and Execution of Contract

The party to whom the Contract is awarded will be required to execute the AGREEMENT, and obtain the PERFORMANCE BOND and PAYMENT BOND along with satisfactory evidence of insurance within ten (10) calendar days from the date when the NOTICE OF AWARD is delivered to the BIDDER. The NOTICE OF AWARD shall be accompanied by the necessary AGREEMENT and BOND forms. In case of failure of the BIDDER to execute the AGREEMENT, the OWNER may, at his option, consider the BIDDER in default, in which case the BID BOND accompanying the BID shall become the property of the OWNER.

A PERFORMANCE BOND and a PAYMENT BOND, each in the amount of 100 percent of the CONTRACT PRICE, with a corporate surety named on the current list of "Surety Companies Acceptable on Federal Bonds" as published in the Treasury Department Circular Number 570, will be required for the faithful performance of the Contract. The PAYMENT BOND must be issued by an admitted surety insurer holding a certificate of authority to transact surety insurance in California issued by the Insurance Commissioner.

All bonds must be acknowledged before a Notary Public by both the CONTRACTOR and the Surety. Attorneys-in-fact who sign Bid Bonds or Payment Bonds and Performance Bonds must file with each bond a certified and effective dated copy of their power of attorney.

The OWNER, within 15 days of receipt of the PERFORMANCE BOND, PAYMENT BOND and AGREEMENT signed by the party to whom the Contract was awarded, shall sign the AGREEMENT and return to such party an executed duplicate of the AGREEMENT. Should the OWNER not execute the AGREEMENT within such period, the BIDDER may, by written notice, withdraw his signed AGREEMENT. Such notice of withdrawal shall be effective upon receipt of the notice by the OWNER.

The NOTICE TO PROCEED shall be issued within 10 days of the execution of the AGREEMENT by the OWNER. Should there be reasons why the NOTICE TO PROCEED has not been issued within such period, the time may be extended by mutually agreed upon, and the CONTRACTOR may terminate the AGREEMENT without further liability on the part of either party.

All applicable laws, ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the PROJECT shall apply to the Contract throughout.

Subcontractors

The SUBCONTRACTORS listed by CONTRACTOR in the BID shall list therein the name and address of each SUBCONTRACTOR to whom the CONTRACTOR proposes to subcontract portions of the WORK in an amount in excess of one-half of one percent of the total BID or $10,000, whichever is greater, in accordance with the Subletting and Subcontracting Fair Practices Act, commencing with Section 4100 of the Public Contract Code. The CONTRACTOR'S attention is invited to other provisions of the Act related to the imposition of penalties for a failure to observe its provisions by using unauthorized SUBCONTRACTORS or by making unauthorized substitutions.

Registration with California Department of Industrial Relations (DIR)

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

such registration with DIR in order to be awarded and to perform on public works projects (regardless of funding source).

Pursuant to Section 1771.4, each CONTRACTOR and SUBCONTRACTOR shall furnish certified payroll records to the Labor Commissioner at least monthly and in a format prescribed by the Labor Commissioner of the DIR. Until such time that the DIR gives awarding agencies direct access to all certified payrolls submitted by CONTRACTORS and SUBCONTRACTORS, CONTRACTOR and his SUBCONTRACTORS are also required to submit copies of payroll records to OWNER on a monthly basis. Information on the above can be found at:
http://www.dir.ca.gov/Public-Works/PublicWorks.html

Prevailing Wage

This WORK is subject to prevailing wage requirements. If there is a difference between the minimum wage rates predetermined by the Secretary of Labor and the prevailing wage rates determined by the Director of the Department of Industrial Relations of the State of California for similar classification of labor, the CONTRACTOR and his SUBCONTRACTOR shall not pay less than the higher wage rate. In accordance with the provisions of Section 1773 of the Labor Code of the State of California, the OWNER has obtained from the Director of the Department of Industrial Relations, the general prevailing rate for each craft, classification, or type of workman required for execution of the AGREEMENT. A copy of said prevailing rate of per diem wages is on file in the office of the OWNER, and available from the California Department of Industrial Relations' Internet web site at **http://www.dir.ca.gov/DLSR/PWD**.

The Federal minimum wage rates for this WORK as predetermined by the United States Secretary of Labor may be examined at the offices described above where the Provisions may be seen. Addenda to modify the Federal minimum wage rates, if necessary, will be posted on the internet at **www.losbanos.org**. Future effective general prevailing wage rates, which have been predetermined are on file with the California Department of Industrial Relations and are referenced but not printed in the general prevailing wage rates.

Pre-Bid Meeting

Prior to submitting a sealed BID, BIDDER will attend a mandatory pre-bid meeting at the project site. The date of the mandatory pre-bid meeting is Tuesday, April 14, 2015. This meeting will cover three separate waterline projects in three locations: 13th Street Water Extension, Santa Rita Avenue Water Extension, and M Street Water Extension. BIDDERS shall meet in the parking lot behind SaveMart, 1337 E Pacheco Blvd., in Los Banos, California. The start time for the meeting is 2 p.m., sharp.

BIDS will not be considered from bidders who were not physically in attendance at the mandatory pre-bid meeting.

BIDDERS must satisfy themselves as to the accuracy of the estimated quantities in the Bid Schedule by examination of the site and a review of the DRAWINGS and SPECIFICATIONS including ADDENDA. After BIDS have been submitted, the BIDDER shall not assert that there was misunderstanding concerning the quantities of WORK or the nature of the WORK to be done. The failure or omission of any BIDDER to do any of the foregoing shall not relieve any BIDDER from any obligation with respect to his BID.

The CONTRACT DOCUMENTS contain the provisions required for the construction of the PROJECT. The Owner will not be responsible for, nor be bound by, any oral instructions, interpretations, or explanations issued by the Owner or its representatives. Any request for clarifications or questions of the CONTRACT DOCUMENTS shall be made in writing or email and deliverable to:

City of Los Banos Public Works Department

Attn: Greg Pimentel
greg.pimentel@losbanos.org
411 Madison Avenue
Los Banos, CA 93635

Requests for clarification or questions shall be delivered to the OWNER before 5:00 p.m. PDST on April 22, 2015. Any OWNER response to a request for clarification, questions and answers will be posted to the City's website at www.losbanos.org no later than 5:00 p.m. PDST on April 24, 2015 and if necessary, shall become a part of the BID as an ADDENDUM.

Proposed timeline of events associated with the awarding of BID:

Release of Advertisement for Bid		April 03, 2015
Pre-Bid Meeting – On Site - Mandatory	2:00 p.m.	April 14, 2015
Deadline to Submit Questions/Clarifications	5:00 p.m.	April 22, 2015
Addendum/Questions/Clarifications posted	5:00 p.m.	April 24, 2015
Bid Opening	2:00 p.m.	May 01, 2015
City Council Considers Bid		May 29, 2015 (tentative)
Issuance of a Notice to Proceed	On or before:	June 01, 2015 (tentative)
Construction to Begin	On or before:	June 08, 2015 (tentative)

Qualification of Bidder

The OWNER may make such investigation as it deems necessary to determine the ability of the BIDDER to provide the services requested, and the BIDDER shall furnish to the OWNER all information and data for this purpose as the OWNER may request. The OWNER reserves the right to reject any BID should the evidence submitted by, or investigation of, the BIDDER fail to satisfy the OWNER that such BIDDER is properly qualified to carry out the obligations of the BID and to complete the requirements contemplated therein.

Governing Law and Venue

This BID, or any Contract that may result from the award of this BID, shall be deemed to be made under, and shall be governed by and construed in accordance with, the laws of the State of California. Any action brought to enforce the terms, or provision of this BID or any Contract that may result from the award of this BID, shall have venue in the County of Merced, State of California.

Mandatory BID Protest Procedure

The lack of prompt procedure to resolve disputes regarding the bidding process would impair the OWNER'S ability to carry out its purpose of contracting this project in a timely manner. Therefore, to the maximum extent authorized by law and notwithstanding any other procedures specified in these CONTRACT DOCUMENTS, all disputes and/or protests regarding the bidding process shall be subject to the following procedure. In submitting a BID to the OWNER for this WORK, the BIDDER agrees to comply with and to be bound by this procedure.

Any bid protest must be submitted in writing to the OWNER before 5:00 p.m. on the fifth (5th) business day following bid opening.

1. The initial protest document must contain a complete statement of the basis for the protest, and all supporting documentation. A non-refundable fee of One Thousand Dollars ($1,000.00) made payable to the "City of Los Banos" shall accompany the protest documents and will be used by the OWNER to recover costs in evaluating the bid protest. A bid protest submitted without the requisite fee shall not be considered by the OWNER.

2. The party filing the protest must have actually submitted a BID for the WORK. A SUBCONTRACTOR of a party submitting a BID for the WORK may not submit a bid protest. Only BIDDERS who the OWNER otherwise determines are responsive and responsible are eligible to protest a BID.

3. A party may not rely on the bid protest submitted by another BIDDER, but must timely pursue its own protest.

4. The protest must refer to the specific portion of the CONTRACT DOCUMENTS which forms the basis for the protest.

5. The protest must include the name, address and telephone number of the person representing the protesting party.

6. The party filing the protest must concurrently transmit a copy of the initial protest document and any attached documentation to all other parties with a direct financial interest which may be adversely affected by the outcome of the protest. Such parties shall include all other BIDDERS who appear to have a reasonable prospect of receiving an award depending upon the outcome of the protest.

7. The OWNER will give the protested BIDDER five (5) business days after the receipt of the protest to submit a written response. The responding BIDDER shall transmit the response to the protesting BIDDER concurrent with the delivery to the OWNER.

8. The procedure and time limits set forth in this paragraph are mandatory and are the BIDDERS sole and exclusive remedy in the event of bid protest. The BIDDERS failure to comply with these procedures shall constitute a waiver of any right to further pursue the bid protest, including filing a Government Code Claim or legal proceedings.

If the OWNER determines that a protest is frivolous, the protesting BIDDER may be determined to be non-responsive and/or non-responsible and that BIDDER may be determined to be ineligible for future contract awards.

Cancellation of Contract

The OWNER may terminate any Contract derived from this BID as follows:

- WITHOUT CAUSE at any time by giving thirty (30) calendar days written notice to the successful CONTRACTOR;
- WITH CAUSE (Default) at any time by giving ten (10) calendar days written notice to the successful CONTRACTOR. Cancellation for cause shall be at the discretion of the OWNER and shall be, but is not limited to, failure to supply the items, materials, equipment or services specified within the time allowed or within the terms, conditions or provisions of this BID. The successful CONTRACTOR may not cancel any contract derived from this BID, without prior written consent of the OWNER.

Bid Form

TO: City of Los Banos
520 J Street
Los Banos, CA 93635

In compliance with the Invitation for Sealed Bids the undersigned, as BIDDER, hereby offers to provide to the OWNER, in accordance with the terms and conditions in the Provisions set forth in the CONTRACT DOCUMENTS the stated total bid amount quoted on this Bid Form for the WORK of

13th Street Water Extension

Total Bid Amount: $_____

_____
(Total Bid Amount in Written Form)

The undersigned certifies under penalty of perjury under the laws of the State of California and the United States of America, that the above quotation constitutes a bona-fide offer for the WORK, that undersigned is a duly authorized representative of the company listed, that the quotation is in no way sham or collusive, and that the executed AGREEMENT between the CONTRACTOR and OWNER constitutes acceptance of CONTRACTOR'S total bid for the WORK stated in the CONTRACT DOCUMENTS. The undersigned has read the General Provisions, Special Provisions, and Technical Specifications in these CONTRACT DOCUMENTS. The undersigned further certifies, under penalty of perjury that the Non-Collusion Affidavit required by Title 23 United States Code, Section 112 and Public Contract Code Section 7106; and the Title 49 Code of Federal Regulations, Part 29 Debarment and Suspension Certification are true and correct.

The undersigned acknowledges receipt of the following addenda: _____

_____

Signature: _____ Date:_____

Title: _____

Name of Business: _____

Doing business as: (*Circle One*): An Individual A Partnership A Corporation

Business Address: _____

Telephone No.:_____ Fax No.:_____

E-Mail Address: _____

License Number: _____ Class & Expiration Date: _____

List of Subcontractors

The BIDDER shall herein set forth the name and location of the place of business of each SUBCONTRACTOR who will perform work or labor or render services to the CONTRACTOR in or about the construction of the WORK in an amount in excess of one-half of one percent of the CONTRACTOR'S total BID, and the portion of the WORK which will be done by each SUBCONTRACTOR (see item 34 of the General Provisions). Attach additional sheets, if necessary.

Project: **13th Street Water Extension**

The following WORK will be performed (or provided) by the following SUBCONTRACTORs, and coordinated by CONTRACTOR:

Company Name	Address	License No.	Section of Work

Equal Employment Opportunity

CONTRACTOR hereby certifies that CONTRACTOR and SUBCONTRACTORs

- ☐ Have
- ☐ Have Not

participated in a previous contract or subcontract subject to the equal opportunity clauses, as required by Executive Orders 10925, 11114, or 11246, and that, where required, have filed with the Joint Reporting Committee, the Director of the Office of Federal Contract Compliance, a Federal Government contracting or administering agency, or the former President's Committee on Equal Employment Opportunity, all reports due under the applicable filing requirements.

Note: The above certification is part of the BID. Signing this BID on the signature portion thereof shall also constitute signature of these Certifications.

Non-Collusion Affidavit

PUBLIC CONTRACT CODE 7106

In conformance with Title 23 United States Code Section 112 and Public Contract Code 7106 the bidder declares 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.

Debarment and Suspension Certification

TITLE 49, CODE OF FEDERAL REGULATIONS, PART 29

The Contractor, under penalty of perjury, certifies that, except as noted below, he/she or any other person associated therewith in the capacity of owner, partner, director, officer, and manager:

- Is not currently under suspension, debarment, voluntary exclusion, or determination of ineligibility by any federal agency;
- Has not been suspended, debarred, voluntarily excluded or determined ineligible by any federal agency within the past 3 years;
- Does not have a proposed debarment pending; and
- Has not been indicted, convicted, or had a civil judgment rendered against it by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past 3 years.

If there are any exceptions to this certification, insert the exceptions in the following space.

Exceptions will not necessarily result in denial of award, but will be considered in determining Contractor responsibility. For any exception noted above, indicate below to whom it applies, initiating agency, and dates of action.

Note: The above certifications are part of the BID. Signing this BID on the signature portion thereof shall also constitute signature of these Certifications.

Experience

BIDDER shall identify three (3) most recently completed projects similar to WORK described in these CONTRACT DOCUMENTS.

	1	2	3
Project Title			
Public Agency			
Address			
Telephone No.			
Engineer in Charge			
Project Value ($)			
Date Accepted			
Claims Filed?*			

* If yes, please explain below:

Bid Schedule
For
13th Street Water Extension

BIDDER agrees to perform all the WORK described in the CONTRACT DOCUMENTS for the following unit and lump sum prices and understands that the quantity of WORK shown is approximate only. The schedule shall be completed by the BIDDER with the unit and lump sum prices entered in numerals. The extensions shall be made by the BIDDER. In case of discrepancy between the unit prices and the extension thereof, the unit price shall be considered as correct when evaluating BIDS.

ITEM NO.	ITEM	QUANTITY AND UNIT		UNIT PRICE	AMOUNT
1	Mobilization/Demobilization	1	LS	$ _____	$ _____
2	Pavement/Concrete Removal	1,394	SF	$ _____	$ _____
3	Erosion Control	1	LS	$ _____	$ _____
4	Traffic Control and General Safety	1	LS	$ _____	$ _____
5	Remove/Replace Ex. Sign and Bollards	1	LS	$ _____	$ _____
6	Remove Ex. Waterline	408	LF	$ _____	$ _____
7	Construction Staking	1	LS	$ _____	$ _____
8	2” Water Service Line	73	LF	$ _____	$ _____
9	10” C900 Waterline	849	LF	$ _____	$ _____
10	10” Gate Valve	2	EA	$ _____	$ _____
11	Connect 10”W to Existing	4	EA	$ _____	$ _____
12	Connect 10”W to Existing within Highway 152	1	EA	$ _____	$ _____
13	Connect 2”W to Existing	2	EA	$ _____	$ _____
14	Trench Patch AC Pavement	1,334	SF	$ _____	$ _____
15	Trench Patch Concrete Median	30	SF	$ _____	$ _____
16	Trench Patch Driveway	30	SF	$ _____	$ _____

TOTAL: **$** _____

Note: The representations made herein are made under penalty of perjury. Any information contained in the BID which is proven false shall be considered nonresponsive and this BID shall be rejected.

Bid Bond

We, _____

as CONTRACTOR, and _____

as Surety, jointly and severally, bind ourselves, our heirs, representatives, successors and

assigns, as set forth herein, to the **City of Los Banos** (herein called "OWNER") for payment

of the penal sum of _____

_____Dollars ($_____),

lawful money of the United States. Contractor has submitted the accompanying Bid Proposal

for the construction of: **13th Street Water Extension**

If the CONTRACTOR is awarded the contract and enters into a written Agreement, in the form prescribed by the OWNER, at the price designated by BID Proposal, and files a PAYMENT BOND and PERFORMANCE BOND with the OWNER, or substitute security in lieu thereof, in the time and manner specified by the OWNER, and carries all insurance in type and amount which conforms to the General Provisions, Special Provisions, and Technical Specifications in these 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 OWNER from seeking all other remedies provided by law to cover losses sustained as a result of the CONTRACTOR'S failure to do any of the foregoing.

CONTRACTOR and Surety agree that if the OWNER is required to engage the services of an attorney in connection with the enforcement of this bond, each shall pay OWNER'S reasonable attorney's fees incurred with or without suit.

Executed on _____, 20____

_____
Contractor

(Seal if Corporation)

By: _____

Title _____

[SIGNATURE SHEET CONTINUES ONTO NEXT PAGE]

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)

_____

_____

_____

_____ (phone 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 authorized to do business in and have an agent for service of process in California.

All bond forms must be acknowledged before a Notary Public by both the Contractor and the Surety. Attorneys-in-fact who sign bond forms must file with each bond a certified and effective dated copy of their power of attorney.

Agreement

SAMPLE

Note: Particulars left blank in this sample will be filled with project specific information as outlined in these bid documents.

THIS AGREEMENT is dated as of the _____day of _____in the year 2015 by and between the **City of Los Banos, a California municipal corporation** ("OWNER") and [ENTER NAME AND TYPE OF ENTITY] ("CONTRACTOR").

OWNER and CONTRACTOR, in consideration of the mutual covenants hereinafter set forth, agree as follows:

1. WORK. CONTRACTOR shall complete the WORK indicated in OWNER's Contract Documents entitled "**Construction of 13th Street Water Extension**."

The WORK is generally described as follows:

- Replacing 329 feet of 6-inch waterline with 10-inch waterline in 13th Street from Pacheco Pass Boulevard to the south end of 13th Street, and installing 520 feet of 10-inch waterline at the south end of the California Dairies Property.
- CONTRACTOR shall furnish all of the material, supplies, tools, equipment, labor and other services necessary for the construction and completion of the WORK described herein.

2. CONTRACT TIME. The CONTRACTOR shall commence the WORK required by the CONTRACT DOCUMENTS within 10 calendar days after the date of the NOTICE TO PROCEED and will complete the same within the time period set forth in the BID, unless the period for completion is extended otherwise by the CONTRACT DOCUMENTS.

3. LIQUIDATED DAMAGES. OWNER and CONTRACTOR recognize that time is of the essence of this Agreement and that OWNER will suffer financial loss if the WORK is not completed within the time specified in Paragraph 3 herein, plus any extensions thereof allowed in accordance with Paragraph 21, Time for Completion and Liquidated Damages, of the General Provisions. The parties also recognize the delays, expense and difficulties involved in proving in a legal proceeding the actual loss suffered by OWNER if the WORK is not completed on time. Accordingly, instead of requiring any such proof, OWNER and CONTRACTOR agree that as liquidated damages for delay (but not as a penalty) CONTRACTOR shall pay OWNER Eight Hundred Dollars ($ 800.00) for each day that passes after the time specified in Paragraph 3 herein.

4. CONTRACT PRICE. OWNER shall pay CONTRACTOR for completion of the WORK in accordance with the Contract Documents in current funds the amount set forth in the Bid schedule(s). The CONTRACTOR agrees to perform all of the WORK described in the CONTRACT DOCUMENTS for the unit and lump sum prices set forth in the Bid schedule(s).

5. PAYMENT PROCEDURES. CONTRACTOR shall submit Applications for Payment in accordance with Paragraph 24, Progress Estimates, of the General Provisions. Applications for Payment will be processed by OWNER as provided in the General Provisions.

6. CONTRACT DOCUMENTS. The Contract Documents which comprise the entire agreement between OWNER and CONTRACTOR concerning the WORK consist of this Agreement and the following attachments to this Agreement:

(A) Advertisement for Bids
(B) Information for Bidders
(C) Bid
(D) Bid Bond
(E) Agreement
(F) Payment Bond
(G) Performance Bond
(H) Notice of Award
(I) Notice to Proceed
(J) Change Order
(K) General Provisions
(L) Special Provisions
(M) Technical Specifications prepared or issued by The City of Los Banos entitled **13th Street Water Extension**, dated March 5, 2015.
(N) Drawings prepared or issued by The City of Los Banos numbered 1 through 5.
(O) Addenda

No. _____, dated_____2015

No. _____, dated_____2015

There are no Contract Documents other than those listed in this Paragraph 6. The Contract Documents may only be amended by Change Order as provided in Paragraph 19, Changes in the Work, of the General Provisions.

7. MISCELLANEOUS.

A. Terms used in this Agreement which are defined in Paragraph 1 of the General Provisions will have the meanings indicated in the General Provisions.

B. No assignment by a party hereto of any rights under or interests in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and specifically but without limitation monies that may become due and monies that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

C. OWNER and CONTRACTOR each binds itself, its partners, successors, assigns and legal representatives to the other party hereto, its partners, successors, assigns and legal representatives in respect of all covenants, agreements and obligations contained in the Contract Documents.

D. The Laws of the State of California shall govern this Agreement. Venue is Merced County. The provisions of this paragraph shall survive expiration or other termination of this Agreement regardless of the cause of such termination.

E. All bids become property of the OWNER. All bids, including the accepted bid and any subsequent contract become public records per the requirements of the California Government Code, Sections 6250-6270, “California Public Records Act”. Proprietary material must be clearly marked as such. Pricing and service elements of the successful bid are not consider proprietary information. The OWNER will treat all information submitted in a bid as available for public inspection once the OWNER has selected a contractor. If you believe that you have a legally justifiable basis under the California Public

Records Act (Government Section 6250 et. seq.) for protecting the confidentiality of any information contained within your bid, you must identify any such information, together with the legal basis of your claim in your bid. In order for the OWNER to assess confidentiality of any such information on your behalf, you must request, execute and submit an OWNER-prepared written agreement to defend and indemnify the OWNER for any liability, costs, and expenses incurred in asserting such confidentiality as part of your bid. The final determination as to whether the OWNER will assert your claim of confidentiality on your behalf shall be sole discretion of the OWNER.

F. This Agreement shall not be interpreted in favor of any Party by virtue of said Party not having prepared this Agreement.

G. If any time period provided for in this Agreement ends on the day other than a Business Day, the time period shall be extended to the next Business Day.

IN WITNESS WHEREOF, OWNER and CONTRACTOR have caused this Agreement to be executed the day and year first above written.

_____ By: _____
Date Authorized Representative of OWNER

Title: _____

ATTEST:

_____
Lucille L. Mallonee
City Clerk

APPROVED AS TO FORM:

_____
William A. Vaughn
City Attorney

_____ By: _____
Date Authorized Representative of CONTRACTOR

Title: _____

(Seal if Corporation)

(Attach Acknowledgement for Authorized Representative of Contractor)

Certificate of Contractor

I, _____
(Name)

certify that I am a/the _____
(Title)

designate sole proprietor, partner in partnership, or corporate officer with Contractor License Number _____ in the entity named as CONTRACTOR in the foregoing AGREEMENT. I hereby expressly certify that the name of the entity to which I am associated is

_____
(Company Name)

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 the Agreement on behalf of the above-named entity.

ATTEST:

Signature:_____

This form must be acknowledged before a Notary Public. The acknowledgement must be attached.

Payment Bond

We, _____

as CONTRACTOR, and _____

as Surety, jointly and severally, bind ourselves, our heirs, representatives, successors and

assigns, as set forth herein, to the **City of Los Banos** (herein called "OWNER") for payment

of the penal sum of _____

_____Dollars ($ _____),

lawful money of the United States. OWNER has awarded the Contract and entered into an

Agreement with the CONTRACTOR for the construction of:

13th Street Water Extension

If CONTRACTOR 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 insure 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, or the Provisions shall in any way affect its obligation on this bond, and it does hereby waive notice thereof.

CONTRACTOR and Surety agree that should Owner become a party to any action on this bond that each will also pay Owner's reasonable attorney's fees incurred therein in addition to the above sum.

[SIGNATURE SHEET BEGINS ON NEXT PAGE]

Executed in four original counterparts on: _____, 20_____

_____
Contractor

(Seal if Corporation) By: _____

Title: _____

(Attach Acknowledgment of Authorized Representative of Contractor)

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)

_____

_____

_____

_____ (phone 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 authorized to do business in and have an agent for service of process in California.

All bond forms must be acknowledged before a Notary Public by both the CONTRACTOR and the Surety. Attorneys-in-fact who sign bond forms must file with each bond a certified and effective dated copy of their power of attorney.

Performance Bond

We, _____

as CONTRACTOR, and _____

as Surety, jointly and severally, bind ourselves, our heirs, representatives, successors and

assigns, as set forth herein, to the **City of Los Banos** (herein called "OWNER") for payment

of the penal sum of _____

_____Dollars ($ _____),

lawful money of the United States. OWNER has awarded the Contract and entered into an

Agreement with the CONTRACTOR for the construction of:

13th Street Water Extension

The condition of this obligation is such that if the CONTRACTOR shall in all things abide by and well and truly keep and perform the covenants, and agreements in the said CONTRACT Agreement, 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 OWNER and the OWNER'S Representative, 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.

The PERFORMANCE BOND shall remain in full effect during the one-year guaranty period following the completion of the WORK.

Surety agrees that no change, extension of time, alteration, or addition to the terms of the General Provisions, Special Provisions, and Technical Specifications in these CONTRACT DOCUMENTS shall in anyway affect its obligation in the bond, and it does hereby waive notice thereof.

CONTRACTOR and Surety agree that if the OWNER is required to engage the services of an attorney in connection with the enforcement of this bond, each shall pay OWNER'S reasonable attorney's fees incurred with or without suit, in addition to the above sum.

[SIGNATURE SHEET BEGINS ON NEXT PAGE]

Executed in four original counterparts on : _____, 20_____

_____
Contractor

(Seal if Corporation) By: _____

Title: _____

(Attach Acknowledgment of Authorized Representative of Contractor)

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)

_____

_____

_____

_____ (phone 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 authorized to do business in and have an agent for service of process in California.

All bond forms must be acknowledged before a Notary Public by both the Contractor and the Surety. Attorneys-in-fact who sign bond forms must file with each bond a certified and effective dated copy of their power of attorney.

Notice of Award

To: _____ Date: _____

_____ Project: _____

_____ _____

The OWNER has considered the BID submitted by you for the above described WORK dated_____, 20_____.

You are hereby notified that your BID has been accepted for the unit and lump sum prices set forth in the BID Schedule totaling $_____.

You are required by the Information for Bidders to execute the Agreement and furnish the required CONTRACTOR'S PERFORMANCE BOND and PAYMENT BOND within ten (10) calendar days for the date of this Notice to you.

If you fail to execute said Agreement and to furnish said BONDS within ten days from the date of this Notice, said OWNER will be entitled to consider all your rights arising out of the OWNER'S acceptance of your BID as abandoned and as a forfeiture of your BID BOND. The OWNER will be entitled to such other rights as may be granted by law.

You are required to return an acknowledged copy of this NOTICE OF AWARD to the OWNER.

_____
OWNER

By _____

Title _____

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE OF AWARD
is hereby acknowledged by
_____ (Name of Contractor) _____

this _____ day of _____ ,20_____

By _____

Title _____

Notice To Proceed

To: _____ Date: _____

_____ Project: _____

_____ _____

You are hereby notified to commence WORK in accordance with the Agreement dated _____, 20_____, on or before _____20_____, and you are to complete the Work by _____, 20_____.

You are required to return an acknowledged copy of this NOTICE TO PROCEED to the OWNER.

_____
OWNER

By _____

Title _____

ACCEPTANCE OF NOTICE
Receipt of the above NOTICE TO PROCEED
is hereby acknowledged by
_____ (Name of Contractor) _____

this _____ day of _____ ,20_____

By _____

Title _____

Change Order

Order No._____

Date: _____

Agreement Date:_____

PROJECT: _____

OWNER: _____

CONTRACTOR:_____

The following changes are hereby made to the CONTRACT DOCUMENTS:

Justification:

Change to CONTRACT PRICE:

Original CONTRACT PRICE:	$ _____
Current CONTRACT PRICE adjusted by previous CHANGE ORDER:	$ _____
The CONTRACT PRICE due to this CHANGE ORDER will be (increased) (decreased) by:	$ _____
The new CONTRACT PRICE including this CHANGE ORDER will be:	$ _____

Change to CONTRACT TIME:

The CONTRACT TIME will be (increased) (decreased) by calendar days.	_____
The date for completion of all WORK will be:	_____

The undersigned hereby agrees to the above-described amendment of the Contract.

_____

CONTRACTOR

_____

OWNER

This Change Order shall become a part of the Contract Documents only upon signature of both parties.

General Provisions

1. Terms and Definitions

Wherever used in the Contract Documents, the following terms shall have the meanings indicated, which shall be applicable to both the singular and plural thereof:

Addenda - Written or graphic instruments issued prior to the execution of the Agreement which modify or interpret the Contract Documents, Drawings and Specifications, by additions, deletions, clarifications or corrections.

ANSI – American National Standards Institute, current designation as of the Bid date unless otherwise indicated.

ASME – American Society of Mechanical Engineers, current designation as of the Bid date unless otherwise indicated.

ASTM – American Society for Testing Materials, current designation as of the Bid date unless otherwise indicated.

AWWA – American Water Works Association, current designation as of the Bid date unless otherwise indicated.

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

Bidder - Any person, firm or corporation submitting a Bid for the Work.

Bonds - Bid, Performance and Payment Bonds and other instruments of security, furnished by the Contractor and his surety in accordance with the Contract Documents.

Change Order - A written order to the Contractor authorizing an addition, deletion or revision in the Work within the general scope of the Contract Documents, or authorizing an adjustment in the Contract Price or Contract Time.

Completion - That date as certified by the Engineer when the construction of the Project or a specified part thereof is sufficiently completed, in accordance with the Contract Documents, so that the Project or specified part can be utilized for the purposes for which it is intended.

Contract Documents - the **Contract**, including Advertisement for Bids, Information for Bidders, Bid, including Bid Representations and Certifications, Bid Bond, **Agreement**, Payment Bond, Performance Bond, Notice Of Award, Notice To Proceed, Change Order, General Conditions, Special Conditions, Specifications, Drawings, and Addenda.

Contract Price – The total monies payable to the Contractor under the terms and conditions of the Contract Documents.

Contract Time – The number of calendar days stated in the Contract Documents for the completion of the Work.

Contractor – The person, firm or corporation with whom the Owner has executed the Agreement.

Drawings – The part of the Contract Documents which shows the characteristics and scope of the Work to be performed and which have been prepared or approved by the Engineer.

Engineer – City Engineer of the City of Los Banos, acting either directly or through properly authorized agents, such agents, acting within the scope of the particular duties entrusted to them.

Field Order – A written order effecting a change in the Work not involving an adjustment in the Contract Price or an extension of the Contract Time, issued by the Engineer to the Contractor during construction.

IEEE – Institute of Electrical and Electronics Engineers, current designation as of the Bid date unless otherwise indicated.

NEMA – National Electrical Manufacturers Association, current designation as of the Bid date unless

otherwise indicated.

Notice of Award – The written notice of the acceptance of the Bid from the Owner to the successful Bidder.

Notice to Proceed – Written communication issued by the Owner to the Contractor authorizing him to proceed with the Work and establishing the date of commencement of the Work.

Owner – City of Los Banos.

Production Data – All illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate a material, product or system for some portion of the Work.

Project – The undertaking to be performed as provided in the Contract Documents.

REA – Rural Electrification Association, current designation as of the Bid date unless otherwise indicated.

Samples – Physical examples which illustrate materials, equipment or workmanship, and establish standards by which the Work will be judged.

Shop Drawings – All drawings, diagrams, schedules and other data which are specifically prepared for the Work by the Contractor, a SUBCONTRACTOR, manufacturer, supplier or distributor, to illustrate some portion of the Work.

Specifications – A part of the Contract Documents consisting of written descriptions of a technical nature of materials, equipment, construction systems, standards and workmanship.

Standards - City of Los Banos Standard Specifications, The Standard Specifications of the Department of Transportation of the State of California (Caltrans) dated 2010 and subsequent updates to that 2010 edition, and The Standard Plans of the Department of Transportation of the State of California (Caltrans) dated 2010 and subsequent updates to this 2010 edition.

Subcontractor – An individual, firm or corporation having a direct contract with the Contractor or with any other Subcontractor for the performance of a part of the WORK at the site.

Supplier – Any person or organization who supplies materials or equipment for the Work, including that fabricated to a special design, but who does not perform labor at the site.

Work – All labor necessary to produce the construction required by the Contract Documents, and all materials and equipment incorporated or to be incorporated in the Project.

Written Notice – Any notice to any party of the Agreement relative to any part of this Agreement in writing and considered delivered and the service thereof completed, when posted by certified or registered mail to the said party at his last given address, or delivered in person to said party or his authorized representative on the WORK.

2. Order of Precedence of Contract Documents

In resolving conflicts resulting from errors or discrepancies in any of the CONTRACT DOCUMENTS, the order of precedence shall be as follows:

1. Permits from other agencies as may be required by law
2. Change orders
3. Agreement
4. Addenda
5. Contractor's Bid (Bid Form)
6. Notice Inviting Bids
7. Instructions to Bidders
8. Supplementary General Conditions
9. General Conditions
10. Special Provisions
11. Drawings
12. Referenced Standard Specifications

If the conflicts cannot be resolved by the precedence prescribed above, the most stringent requirements shall prevail.

3. Venue

CONTRACTOR, and any Subcontractor, Supplier and any other person or organization performing any part of WORK, agree that each of them will waive jurisdiction and venue and shall submit to the jurisdiction of the courts of the State of California in the County of Merced, regardless of residence or domicile, with respect to any actions or suits at law or in equity arising under or related to the bidding, award or performance of the WORK or with regard to any matter whatsoever arising out of or relating to the validity, construction, interpretation or reinforcement of the AGREEMENT as against OWNER or any of their consultants, and/or any of their respective directors, officers, employees, representatives or agents.

4. Giving Notice

Whenever any provision of the CONTRACT DOCUMENTS requires the giving of written notice, it will be deemed to have been validly given if delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or if delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

5. Cumulative Remedies

The duties and obligations imposed by these General Provisions and the rights and remedies available hereunder to the parties hereto, and, in particular but without limitation, the warranties, guarantees and obligations imposed upon CONTRACTOR by the General Provisions and all of the rights and remedies available to OWNER thereunder are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by laws or regulations, by special warranty or guarantee or by other provisions of the CONTRACT DOCUMENTS, and the provisions of this paragraph will be as effective as if repeated specifically in the CONTRACT DOCUMENTS in connection with each particular duty, obligation, right and remedy to which they apply.

6. Non-discrimination

During the performance of the PROJECT, CONTRACTOR and SUBCONTRACTORs shall not unlawfully

discriminate against any employee or applicant for employment because of race, color, ancestry, religion, sex, national origin, marital status, age, medical condition (cancer related), physical handicap (including AIDS), or sexual orientation. Equal employment extends, but is not limited to recruitment, compensation, benefits, layoff, termination, and all other conditions of employment. CONTRACTOR and SUBCONTRACTORs shall ensure that the evaluation/treatment of their employees and applicants for employment are free of such discrimination. CONTRACTOR and Sub-contractors shall comply with the provisions of the Fair Employment and Housing Act (Government Code, Section 12900 et seq.) and the applicable regulations promulgated there under (California Administrative Code, Title 2, Section 7285.0 et seq.). The applicable regulations of the Fair Employment and Housing Commission implementing Government Code, Section 12900, set forth in Chapter 5 of Division 4 of Title 2 of the California Administrative Code and incorporated into this Contract Agreement by reference and made a part hereof as if set forth in full.

CONTRACTOR and any SUBCONTRACTORs shall give written notice of their obligations under this clause to labor organizations with which they have a collective bargaining or other agreement.

CONTRACTOR shall include the nondiscrimination and compliance provisions of the clause in all subcontracts to perform WORK under the Contract.

CONTRACTOR shall grant access by representative of the Department of Fair Employment and Housing and the OWNER upon reasonable notice at any time during normal business hours, but in no case less than twenty-four (24) hours notice, to such of its books, records, accounts, other sources of information and its facilities as said Owner shall require to ascertain compliance with this clause.

7. Non-discrimination of the Disabled

The OWNER will not aid or perpetuate discrimination against a qualified disabled individual by funding as an agency, organization, or person that discriminates on the basis of handicap in providing aid, benefit, or service to beneficiaries of the program or activity. The OWNER is committed to provide access to all OWNER services, programs, and meetings open to the public for people with disabilities. In this regard the OWNER and all of its vendors and CONTRACTOR will take all reasonable steps to ensure that disabled individuals have the maximum opportunity for the same level of aid, benefit, or service as any other individual.

8. Additional Instructions and Detail Drawings

The CONTRACTOR may be furnished additional instructions and detail drawings by the Engineer, as necessary to carry out the WORK required by the CONTRACT DOCUMENTS. The additional drawings and instructions thus supplied will become a part of the CONTRACT DOCUMENTS. The CONTRACTOR shall carry out the WORK in accordance with the additional detail drawings and instructions.

9. Schedules, Reports and Records

The CONTRACTOR shall submit to the OWNER such schedules, reports, records and other data as the OWNER may request concerning WORK performed or to be performed.

Prior to the first partial payment estimate, the CONTRACTOR shall submit schedules showing the order in which he proposed to carry on the WORK, including dates at which he will start the various parts of the WORK, estimated date of completion of each part and, as applicable:

A. A detailed cost breakdown of the WORK under each bid item awarded. The breakdown, after receiving favorable review by the ENGINEER, will become the basis for partial payment determination. Elements of WORK shall be grouped by building, structure, pipeline, system, etc. Within each grouping, work shall be itemized by readily measurable quantities of work completed in place. For example, concrete should be in units of cubic yard including form work and reinforcing steel. Mobilization costs, bond and insurance costs, and overhead costs shall not be prorated over items of WORK. In the event the cost breakdown is not favorably reviewed by the ENGINEER, another cost breakdown

shall be submitted that is mutually acceptable to the CONTRACTOR and the ENGINEER.

B. The dates at which special detail drawings will be required; and respective dates for submission of SHOP DRAWINGS, the beginning of manufacture, the testing and the installation of materials, supplies and equipment. The CONTRACTOR shall also submit a schedule of payments that he anticipates he will earn during the course of the WORK.

10. Drawings and Specifications

The intent of the DRAWINGS and SPECIFICATIONS is that the CONTRACTOR shall furnish all labor, materials, tools, equipment, and transportation necessary to complete the PROJECT in an acceptable manner, ready for use, occupancy or operation by the OWNER.

In case of conflict between the DRAWINGS and SPECIFICATIONS, the SPECIFICATIONS shall govern. Figure dimensions on DRAWINGS shall govern over scale dimensions and detailed DRAWINGS shall govern over general DRAWINGS.

Any discrepancies found between the DRAWINGS and SPECIFICATIONS and site condition or any inconsistencies or ambiguities in the DRAWINGS or SPECIFICATIONS shall be immediately reported to the ENGINEER, in writing, who shall promptly correct such inconsistencies or ambiguities in writing. Work done by the CONTRACTOR after his discovery of such discrepancies, inconsistencies or ambiguities shall be done at the CONTRACTOR's risk.

The OWNER will furnish to the CONTRACTOR, free of charge, six copies of DRAWINGS and SPECIFICATIONS for the WORK. The CONTRACTOR shall keep one copy of all current DRAWINGS and SPECIFICATIONS on the job site, in good order, available to the ENGINEER and his representatives.

All DRAWINGS, SPECIFICATIONS, and copies thereof furnished by the OWNER are the property of the OWNER. They are not to be used on other work, and, with the exception of the signed Contract set, are to be returned to the OWNER on request, at the completion of the WORK.

11. Shop Drawings, Production Data and Samples

The CONTRACTOR shall review, approve and submit to the ENGINEER all SHOP DRAWINGS, PRODUCTION DATA and SAMPLES as may be necessary for prosecution of the WORK and as required by the CONTRACT DOCUMENTS. The CONTRACTOR shall review and approve all SHOP DRAWINGS, PRODUCTION DATA and SAMPLES prior to submitting them to the ENGINEER. By approving and submitting SHOP DRAWINGS, PRODUCTION DATA and SAMPLES, the CONTRACTOR represents that he has determined and verified all materials, measurements and criteria related thereto, and that he has checked and coordinated the information contained within such submittals with the requirements of the CONTRACT DOCUMENTS. Any SHOP DRAWING, PRODUCTION DATA or SAMPLE submitted to the ENGINEER without having been approved by the CONTRACTOR will be returned unreviewed to the CONTRACTOR.

For each item where SHOP DRAWINGS, PRODUCTION DATA or SAMPLES are required, the CONTRACTOR shall submit a minimum of six approved sets. The ENGINEER shall review all SHOP DRAWINGS, PRODUCTION DATA and SAMPLES and retain three sets after his review. The remaining sets shall be returned to the CONTRACTOR with actions defined as follows:

A. NO EXCEPTIONS TAKEN – Accepted subject to its compatibility with future submissions and additional partial submissions for portions of the WORK not covered in this submission.

B. MAKE CORRECTIONS NOTED – Same as NO EXCEPTIONS TAKEN except that minor corrections as noted shall be made by the CONTRACTOR.

C. REVISE AND RESUBMIT – Rejected because of major inconsistencies or errors which shall be resolved by the CONTRACTOR prior to subsequent review by the Engineer.

D. REJECTED – Submitted material does not conform to CONTRACT DOCUMENTS in

major respect.

The ENGINEER'S review is only for general conformance with the design concept of the project and general compliance with the information given in the CONTRACT DOCUMENTS. It shall not include review of quantities, dimensions, weights or gauges, fabrications processes, construction methods, coordination with other trades, or construction safety precautions, all of which are the responsibility of the CONTRACTOR.

The ENGINEER shall not be responsible for any deviations from the CONTRACT DOCUMENTS not brought to the attention of the ENGINEER in writing by the CONTRACTOR and acknowledged in writing by the ENGINEER.

Portions of the WORK requiring SHOP DRAWINGS, PRODUCTION DATA and SAMPLES shall not begin until the submission has been favorably reviewed by the ENGINEER. A copy of each favorably reviewed SHOP DRAWING, PRODUCT DATA and SAMPLE shall be kept in good order by the CONTRACTOR at the site and shall be available to the ENGINEER.

12. Materials, Services and Facilities

It is understood that, except as otherwise specifically stated in the CONTRACT DOCUMENTS, the CONTRACTOR shall provide and pay for all materials, labor, tools, equipment, water, light, power, transportation, supervision, and all other services and facilities of any nature whatsoever necessary to execute, complete, and deliver the WORK within the specified time.

Materials and equipment shall be so stored as to insure the preservation of their quality and fitness for the WORK. Stored materials and equipment to be incorporated in the WORK shall be located so as to facilitate prompt inspection.

Manufactured articles, materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned as directed by the manufacturer.

Materials, supplies and equipment shall be in accordance with samples submitted by the CONTRACTOR and reviewed by the ENGINEER.

Materials, supplies or equipment to be incorporated into the WORK shall not be purchased by the CONTRACTOR or any SUBCONTRACTOR subject to a chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller.

13. Inspection and Testing

All materials and equipment used in the construction of the PROJECT shall be subject to adequate inspection and testing in accordance with generally accepted standards, as required and defined in the CONTRACT DOCUMENTS.

The CONTRACTOR shall provide, at his expense, the necessary testing and inspection services required by the CONTRACT DOCUMENTS, unless otherwise provided.

The OWNER shall provide all other inspections and testing services not required by the CONTRACT DOCUMENTS. If the CONTRACT DOCUMENTS, laws, ordinances, rules, regulations or orders of any public authority having jurisdiction specifically require any WORK to be inspected, tested, approved by someone other than the CONTRACTOR, the CONTRACTOR will give the ENGINEER timely notice of readiness. The CONTRACTOR will then furnish the ENGINEER the required certificates of inspection, testing or approval.

Neither observations by the ENGINEER nor inspections, tests or approvals by persons other than the CONTRACTOR shall relieve the CONTRACTOR from his obligations to perform the WORK in accordance with the requirements of the CONTRACT DOCUMENTS.

The ENGINEER and his representatives will at all times have access to the WORK. In addition, authorized representatives and agents of the OWNER and appropriate Federal or State agencies shall be permitted to inspect all work, material, payrolls, records of personnel, invoices of materials, and other relevant data and records. The CONTRACTOR will provide proper facilities for such access and

observation of the WORK and also for any inspection or testing thereof.

If any WORK is covered contrary to the written request of the ENGINEER, it must, if requested by the ENGINEER be uncovered of his observation and replaced at the CONTRACTOR's expense.

If any WORK has been covered which the ENGINEER has not specifically requested to observe prior to it being covered, or if the ENGINEER considers it necessary or advisable that covered WORK be inspected or tested by others, the CONTRACTOR, at the ENGINEER'S request, will uncover expose or otherwise make available for observation, inspection or testing as the ENGINEER may require, that portion of the WORK in question, furnishing all necessary labor, materials, tools, and equipment. If it is found that such WORK is not found to be defective, the CONTRACTOR will be allowed an increase in the CONTRACT PRICE of an extension of the CONTRACT TIME, or both, directly attributable to such uncovering, exposure, observation, inspection, testing and reconstruction and an appropriate Change Order shall be issued.

14. Substitutions

Whenever a material, article or piece of equipment is identified on the DRAWINGS or SPECIFICATIONS by reference to brand name or catalogue number, it shall be understood that this is referenced for the purpose of defining the performance of other salient requirements and that other products of equal capacities, quality and function shall be considered. The CONTRACTOR may recommend the substitution of a material, article or piece of equipment of equal substance and function for those referred to in the CONTRACT DOCUMENTS by reference to brand name or catalogue number, and if, in the opinion of the ENGINEER, such material, article, or piece of equipment is of equal substance and function to that specified, the ENGINEER may approve its substitution and use by the CONTRACTOR. The CONTRACTOR warrants that if substitutes are approved, no major changes in the function or general design of the PROJECT will result. Incidental changes or extra component parts required to accommodate the substitute will be made by the CONTRACTOR without a change in the CONTRACT PRICE or CONTRACT TIME.

15. Patents

The CONTRACTOR shall pay all applicable royalties and license fees. He shall defend all suits or claims for infringement of any patent rights and save the OWNER harmless from loss on account thereof, except that the OWNER shall be responsible for any such loss when a particular process, design, or the product of a particular manufacturer or manufacturers is specified, but if the CONTRACTOR has reason to believe that the design, process or product specified is an infringement of a patent, he shall be responsible for such loss unless he promptly gives such information to the ENGINEER.

16. Surveys, Permits and Regulations

The CONTRACTOR will furnish lines and grades as required for the construction of the WORK. The CONTRACTOR shall make a general check of all lines, dimensions and elevations and shall make all necessary rechecks during the progress of the WORK to avoid errors in construction. The CONTRACTOR shall be responsible for proper dimensions and fittings of all items of WORK being performed by him. Should any discrepancy be found in lines, dimensions or elevations, they shall be reported to the ENGINEER immediately. Staking shall be bid, measured and paid on a per-lump-sum basis.

The CONTRACTOR shall protect all existing property and survey monuments, including survey control monuments for this WORK. Where it is necessary to disturb existing property, survey of control monuments in order to permit the prosecution to the WORK within the permanent and construction of right-of-way, such monuments shall be reset by the OWNER. Such monuments shall not be disturbed during the prosecution of the WORK unless the CONTRACTOR has given the OWNER a minimum of 72 hours notice of the CONTRACTOR'S intent to disturb such monuments during the prosecution of his WORK.

The CONTRACTOR shall carefully preserve benchmarks, reference points and stakes and, in case of willful or careless destruction, he shall be charged with the resulting expense and shall be responsible for

any mistakes that may be caused by their unnecessary loss or disturbance.

Permits and licenses of a temporary nature necessary for the prosecution of the WORK shall be secured and paid for by the CONTRACTOR. Permits, licenses and easements for permanent structures or permanent changes in existing facilities shall be secured and paid for by the OWNER, unless otherwise specified. The CONTRACTOR shall give all notices and comply with all laws, ordinances, rules and regulations bearing on the conduct of the WORK as drawn and specified. If the CONTRACTOR observes that the CONTRACT DOCUMENTS are at variance therewith, he shall promptly notify the ENGINEER in writing, and any necessary changes shall be adjusted as provided in Paragraph 19 of these General Provisions, Changes in the Work.

17. Protection of Work, Property and Persons

The CONTRACTOR shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the WORK. He will take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to all employees on the WORK and other persons who may be affected thereby, all the WORK and all materials or equipment to be incorporated therein, whether in storage on or off the site, and other property at the site or adjacent thereto, including trees, shrubs, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

The CONTRACTOR shall comply with all applicable laws, ordinances, rules, regulations and orders of any public body having jurisdiction. He shall erect and maintain, as required by the conditions and progress of the WORK, all necessary safeguards for safety and protection. He shall notify owners of adjacent utilities when prosecution of the WORK may affect them. The CONTRACTOR shall remedy all damages, injury or loss to any property caused, directly or indirectly, in whole or in part, by the CONTRACTOR, any SUBCONTRACTOR or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, except damage or loss attributable to the fault of the CONTRACT DOCUMENTS or to the acts or omissions of the OWNER or the ENGINEER or anyone employed by either of them or anyone for whose acts either of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of the CONTRACTOR.

In emergencies affecting the safety of persons or the WORK or property at the site or adjacent thereto, the CONTRACTOR, without special instruction or authorization from the ENGINEER or OWNER, shall act to prevent threatened damage, injury or loss. He will give the ENGINEER prompt WRITTEN NOTICE of any significant changes in the WORK or deviations from the CONTRACT DOCUMENTS caused thereby, and a CHANGE ORDER shall thereupon be issued covering the changes and deviations involved.

18. Supervision by Contractor

The CONTRACTOR shall supervise and direct the WORK. He shall be solely responsible for the means, methods, techniques, sequences and procedures of construction. The CONTRACTOR shall employ and maintain on the WORK, a qualified supervisor or superintendent who shall have been designated in writing by the CONTRACTOR as the CONTRACTOR'S representative at the site. The supervisor shall be present on the site at all times as required to perform adequate supervision and coordination of the WORK.

19. Changes in the Work

The OWNER may at any time, as the need arises, order changes within the scope of the WORK without invalidating the AGREEMENT. If such changes increase or decrease the amount due under the CONTRACT DOCUMENTS, or in the time required for performance of the WORK, an equitable adjustment shall be authorized by written CHANGE ORDER.

The ENGINEER may also, at any time, by issuing a FIELD ORDER, make changes in the details of the WORK. The CONTRACTOR shall proceed with the performance of any changes in the WORK so ordered by the ENGINEER unless the CONTRACTOR believes that such FIELD ORDER entitles him to a change in CONTRACT PRICE or CONTRACT TIME, or both, in which event he shall give the

ENGINEER WRITTEN NOTICE thereof within seven (7) days after the receipt of the ordered change, and the CONTRACTOR shall not execute such changes pending the receipt of an executed CHANGE ORDER or further instruction from the OWNER.

20. Changes in Contract Price

The CONTRACT PRICE may be changed only by a written CHANGE ORDER. The value of any WORK covered by a CHANGE ORDER or of any claim for increase or decrease in the CONTRACT PRICE shall be determined by one or more of the following methods in the order of precedence listed below:

A. Unit prices previously approved.

B. An agreed lump sum.

C. If a lump sum or unit price cannot be mutually agreed upon, the CONTRACTOR shall be entitled to the sum of the following costs of doing the extra work:

1. Direct Labor Costs. Charges for cost of all the labor furnished and used by the CONTRACTOR shall be made for manual classifications up to and including general foreman. It will not include charges for Assistant Superintendents, Superintendents, Office Personnel, Timekeepers, and Maintenance and 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 so designated in the Advertisement for Bids. No time or charges will be allowed, except when the men are actually engaged in the proper, efficient, and diligent performance or completion of the extra work as authorized. Overtime shall not be worked without prior approval by the ENGINEER.

2. Equipment Costs. 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 will not include charges for equipment or tools with a new cost of $1,000.00 or less. Equipment time charges must be subject to the daily approval submitted with the billing. The equipment rental and operation rates used shall be those agreed upon by the ENGINEER and the CONTRACTOR prior to commencement of the extra work. No time or charges will be allowed except when equipment is actually being used for the proper and efficient performance or completion of the extra work as authorized.

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

4. Tools, Supplies, Overhead, Supervision and Profit. A charge for tools, supplies, overhead, supervision and profit will be allowed in the amount of 15% of the total Direct labor Costs, and Material Costs, as defined above.

Any extra work performed hereunder shall be subject to all of the provisions of the Contract and the CONTRACTOR'S sureties shall be bound with reference thereto as under the Contract.

21. Time for Completion and Liquidated Damages

The date of beginning and the time for completion of the WORK are essential conditions of the CONTRACT DOCUMENTS and the WORK embraced shall be commenced on a date specified in the NOTICE TO PROCEED.

Time is of the essence in this agreement. The CONTRACTOR shall proceed with the WORK at such a rate of progress to ensure full completion within the CONTRACT TIME. It is expressly understood and agreed, by and between the CONTRACTOR and the OWNER, that the CONTRACT TIME for the completion of the WORK described herein is a reasonable time.

The parties hereto agree that it is extremely difficult and impractical in this case to determine the actual damages the OWNER will suffer if the CONTRACTOR fails to complete the WORK within the CONTRACT TIME and for said reason, if the CONTRACTOR shall fail to complete the WORK within the CONTRACT TIME, or extension of time granted by the OWNER, then the CONTRACTOR will pay to the OWNER the amount for liquidated damages as specified in the AGREEMENT for each calendar day that the CONTRACTOR shall be in default after the time stipulated in the CONTRACT DOCUMENTS. The time for completion of the WORK shall be extended, and the CONTRACTOR shall not be charged with liquidated damages or any excess cost when the delay in completion of the WORK is due to the following, and the CONTRACTOR has promptly given WRITTEN NOTICE of such delay to the ENGINEER:

A. To any preference, priority or allocation order duly issued by the OWNER.

B. To unforeseeable caused beyond the control and without the fault or negligence of the CONTRACTOR, including but not restricted to, acts of God or of the public enemy, acts of the OWNER, acts of another CONTRACTOR in the performance of a contract with the OWNER, fires, floods, epidemics quarantine restrictions, strikes, freight embargoes, and climatic conditions which, in the opinion of the ENGINEER, make prosecution of the WORK unreasonably difficult.

C. To any delays of SUBCONTACTORS occasioned by any of the causes specified in the above paragraphs.

22. Correction of Work

The CONTRACTOR shall promptly remove from the premises all WORK rejected by the ENGINEER for failure to comply with the CONTRACT DOCUMENTS, whether incorporated in the construction or not, and the CONTRACTOR shall promptly replace and re-execute the WORK in accordance with the CONTRACT DOCUMENTS and without expense to the OWNER and shall bear the expense of making good all WORK of other contractors destroyed or damaged by such removal or replacement.

23. Suspension of Work, Termination and Delay

The OWNER may, at any time and without cause, suspend the WORK or any portion thereof for a period of not more than ninety days, or such further time as agreed upon by the CONTRACTOR, by WRITTEN NOTICE to the CONTRACTOR and the ENGINEER, which notice shall fix the date on which WORK shall be resumed. The CONTRACTOR will resume that WORK on the date so fixed. The CONTRACTOR will be allowed an increase in the CONTRACT PRICE or an extension of the CONTRACT TIME, or both, directly attributable to any such suspension.

If the CONTRACTOR is adjudged as bankrupt or insolvent, or if he makes a general assignment for the benefit of his creditors, or if a trustee or receiver if appointed for the CONTRACTOR or for any of his property, or if he files a petition to take advantage of any debtor's act or to reorganize under the bankruptcy or applicable laws, or if he repeatedly fails to supply sufficient skilled workmen or suitable materials or equipment, or if he fails to make prompt payments to SUBCONTRACTORS or for labor, materials or equipment or if he disregards laws, ordinances, rules, regulations or orders of any public body having jurisdiction over the WORK or if he disregards the authority of the ENGINEER, or if he otherwise violates any provision of the CONTRACT DOCUMENTS, then the OWNER may, without prejudice to any other right or remedy and after giving the CONTRACTOR and his surety a minimum of ten (10) days from delivery of a WRITTEN NOTICE, terminate the services of the CONTRACTOR, and finish the WORK by whatever method he may deem expedient. In such case the CONTRACTOR shall not be entitled to receive any further payment until the WORK is finished. If the unpaid balance, the CONTRACTOR shall pay the difference to the OWNER. Such costs incurred by the OWNER will be determined by the ENGINEER and incorporated in a CHANGE ORDER.

Where the CONTRACTOR'S services have been so terminated by the OWNER, said termination shall not affect any right of the OWNER against the CONTRACTORS then existing or which may thereafter accrue. Any retention or payment of monies by the OWNER due the CONTRACTOR will not release the CONTRACTOR from compliance with the CONTRACT DOCUMENTS.

After ten (10) days from delivery of a WRITTEN NOTICE to the CONTRACTOR and the ENGINEER, the OWNER may without cause and without prejudice to any other right or remedy, elect to abandon the PROJECT and terminate the CONTRACT. In such case, the CONTRACTOR shall be paid for all WORK executed and any expense sustained plus reasonable profit.

If, through on act or fault of the CONTRACTOR, the WORK is suspended for a period of more than ninety (90) days by the OWNER or under an order of court or other public authority, or the ENGINEER fails to act on any request for payment within thirty (30) days after it is submitted, or the OWNER fails to pay the CONTRACTOR substantially the sum approved by the ENGINEER or awarded by arbitrators within thirty (30) days of its approval and presentation, then the CONTRACTOR may, after the (10) days from delivery of a WRITTEN NOTICE to the OWNER and the ENGINEER stop the WORK until he has been paid all amounts then due, in which event and upon resumption of the WORK, CHANGE ORDERS shall be issued for adjusting the CONTRACT PRICE or extending the CONTRACT TIME or both to compensate for the costs and delays attributable to the stoppage of the WORK.

24. Progress Estimates

On or about the last day of the calendar month, the CONTRACTOR will, except as hereinafter provided, make in writing and certify to the Owner an estimate which, in his opinion, is just and fair of the amount and value of the work completed by the CONTRACTOR up to that time in the performance of the Contract. In case of work for which unit prices are named in the Contract, the estimate shall be computed on the basis of said unit prices. In the case of work for which a lump sum is named in the Contract, the ENGINEER may use a breakdown of the lump sum price submitted by the CONTRACTOR, provided that such breakdown is submitted within 15 calendar days after the execution of the Agreement in a form acceptable to the ENGINEER. No payment will be made to the CONTRACTOR until such schedule has been submitted to and reviewed by the Engineer. To the figure thus arrived at shall be added any amounts due the CONTRACTOR for extra work and the amount of any approved claims for extra costs to the date of the Progress Estimate the retained percentage hereinafter provided for shall be deducted from the total thus computed; and from the remainder, there shall be further deducted any amounts due the OWNER from the CONTRACTOR for supplies or materials furnished or services rendered and any other amounts that may be due the OWNER under the terms of the Contract. In preparing estimates for partial payment, consideration shall be given to delivery on the site of pipe, and fittings which will become a part of the finished construction work and for which payment in full has been made by the CONTRACTOR, but no consideration will be given to preparatory work done or other materials on hand. From the balance thus determined shall be deducted the amount of all previous payments and the remainder shall constitute the partial estimate for that month. Such partial estimates shall not be required to be made by strict measurement, but may be made by measurement or by estimation or partly by one method and partly by the other and it shall be sufficient if they are approximate only. Partial estimates may be withheld or reduced if, in the opinion of the ENGINEER, the CONTRACTOR is not diligently and efficiently endeavoring to comply with the intent of the Contract.

25. Progress Payments

The OWNER will make payments on account of the Contract as follows: Not later than the 30th day of the month following the month in which the Contract is awarded, and the 30th day of each calendar month thereafter, the OWNER will pay to the CONTRACTOR 95% of the amount earned by the CONTRACTOR during the preceding month at the rate of prices set forth in the Contract, based on the estimate of the ENGINEER.

The retention will be held by the OWNER until 35 days following filing of the Notice of Completion.

26. Prompt Payment

The CONTRACTOR shall promptly pay all SUBCONTRACTORs and suppliers within ten (10) days of receipt of any progress payment, final payment or retention paid by the OWNER to the CONTRACTOR. CONTRACTOR shall advise all SUBCONTRACTORS and suppliers that all second-tier

SUBCONTRACTORs and suppliers must be paid within then (10) days of their receipt of payment from the CONTRACTOR.

27. Acceptance and Final Payment

Upon receipt of WRITTEN NOTICE from the CONTRACTOR that the WORK is ready for final inspection and acceptance, the ENGINEER will promptly make such inspection, and when he finds the WORK acceptable under the Contract, and the Contract fully performed, he will promptly issue a final certificate, over his own signature, stating that the WORK required by this Contract has been completed. The OWNER then shall issue a formal Notice of Completion, and the entire balance found to be due shall be paid to the CONTRACTOR by the OWNER 35 days from the date of recording by the OWNER of the Notice of Completion of all WORK covered by this Contract.

Before issuance of the Notice of Completion, the CONTRACTOR shall submit evidence satisfactory to the OWNER that all payrolls, material bills, and other indebtedness connected with the WORK have been paid, or if not paid, then the CONTRACTOR shall submit evidence of the status of any unpaid indebtedness.

The making and acceptance of the final payment shall constitute a waiver of all claims by the OWNER except the following:

A. those arising from unsettled liens;

B. those arising from faulty work appearing within 12 months after the date of filing of the Notice of Completion;

C. those arising from failure to meet the requirements of the CONTRACT DOCUMENTS or the SPECIFICATIONS; or,

D. those arising from manufacturers' guarantees.

The acceptance by CONTRACTOR of the final payment referred to in this paragraph 27 herein, shall be a release of OWNER from all claims of liability to CONTRACTOR for anything done or furnished for, or relating to, the WORK or for any act or neglect of OWNER or of any person relating to or affecting the WORK, except demands against OWNER for the remainder, if any, of the amounts kept or retained under the provisions of Paragraph 25, Progress Payments, herein; and excepting pending, unresolved claims.

28. Quantities and Unit Prices

The quantities noted in the schedule are approximation for comparing BIDS, and no claim shall be made against the OWNER for excess or deficiency therein. Payment at the unit prices set forth in the schedule will constitute payment in full for the completed WORK and will include materials, supplies, labor, tools, machinery, and all other expenditures incident to satisfactory compliance with the Contract, unless otherwise specifically provided.

The quantities of WORK performed will be computed for payment by the ENGINEER on the basis of measurements taken by the ENGINEER, and these measurements shall be final and binding.

29. Insurance

The CONTRACTOR shall not commence Work under this Contract Agreement until he has obtained all the insurance required under this section and such insurance has been approved by the Owner, nor shall the CONTRACTOR allow any SUBCONTRACTOR to commence Work on his subcontract until the insurance required of the SUBCONTRACTOR has been so obtained and approved. All insurance required under this section shall be maintained at the expense of the CONTRACTOR continuously during the life of the Contract up to the date of acceptance of the Work by the Owner.

<u>Commercial General Liability and Automobile Liability Insurance</u> – The CONTRACTOR shall provide and maintain the following commercial general liability and automobile liability insurance:

A. Coverage – Coverage for commercial general liability and automobile liability insurance

shall be at least as broad as the following:

1. Insurance Services Office Commercial General Liability coverage (Occurrence Form CG 0001)

2. Insurance Service Office Form Number CA 0001 (ed. 1/87) covering Automobile Liability, Code 1 (any auto)

B. Limits – The CONTRACTOR shall maintain limits no less than the following:

1. General Liability – Two million dollars ($2,000,000) per occurrence for bodily injury, personal injury and property damage. If Commercial General Liability Insurance or other form with a general aggregate limit is used, either the general aggregate limit shall apply separately to the project/location (with the ISO CG 2501 or insurer's equivalent endorsement provided to the Owner) or the general aggregate limit shall be twice the required occurrence limit.

2. Automobile Liability – One million dollars ($1,000,000) per accident for bodily injury and property damage combine single limit.

C. Required provisions – The general liability and automobile liability policies are to contain, to be endorsed to contain the following provisions:

1. The Owner and its directors, officers, employees, agents and volunteers are to be covered as insured as respects: liability arising out of activities performed by or on behalf of the CONTRACTOR, products and completed operations of the CONTRACTOR, premises owned, occupied or used by the CONTRACTOR, or automobiles owned, leased, hired or borrowed by the CONTRACTOR. The coverage shall contain no special limitations on the scope of protection afforded to the Owner and its directors, officers, employees, agents, and volunteers.

2. For any claims related to this Work, the CONTRACTOR's insurance shall be the primary insurance as respects the Owner and its directors, officers, employees, agents and volunteers. Any insurance, pooled coverage or self-insurance maintained by the Owner and its directors, officers, employees, agents and volunteers shall not contribute to it.

3. Any failure to comply with reporting or other provisions of the policies including breaches of warranties shall not affect coverage provided to the Owner and their directors, officers, employees, agents and volunteers.

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

5. Each insurance policy required by this clause shall be endorsed to state that coverage shall not be suspended, voided, canceled by either party, reduced in coverage or in limits except after thirty (30) days prior written notice by certified mail, return receipt requested, has been given to the Owner.

D. Deductibles and Self-Insured Retentions – Any deductible or self-insured retention must be declared to and approved by the Owner. At the option of the Owner, either the insurer shall reduce or eliminate such deductibles or self-insured retentions.

E. Acceptability of Insurers – Insurance is to be placed with insurers having a current A.M. Best's rating of no less than A-: VII or equivalent.

Workers' Compensation and Employer's Liability Insurance – The CONTRACTOR and all SUBCONTRACTORs shall cover or insure under the applicable laws relating to workers' compensation insurance, all of their employees working on or about the construction site, regardless of whether such coverage or insurance is mandatory or merely elective under law, and the CONTRACTOR shall defend, protect and save harmless the Owner and its directors, officers, employees, agents and volunteers from and against all claims, suits, and actions arising from any failure of the CONTRACTOR or any SUBCONTRACTOR to maintain such insurance. Before beginning Work, CONTRACTOR shall furnish to the Owner satisfactory proof that CONTRACTOR has taken out for the period covered by the Work under this Contract, full compensation insurance for all persons employed directly by CONTRACTOR or through SUBCONTRACTORs in carrying out the Work contemplated under this Contract, all in accordance with the "Workers' Compensation and Insurance Act," Division IV of the Labor Code of the State of California and any Acts amendatory thereof.

The CONTRACTOR shall provide employer's liability insurance in the amount of, at least, $1,000,000 per accident for bodily injury and disease.

The CONTRACTOR shall provide the Owner with a certificate of Workers' Compensation and Employers liability insurance coverage.

In signing the Agreement, CONTRACTOR makes the following certification required by Section 1861 of the Labor Code:

"I am aware of the provisions of Section 3700 of the Labor Code which requires each employer to be insured against liability for workmen's 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."

Evidences and Cancellation of Insurance – Prior to execution of the Agreement, the CONTRACTOR shall file with the Owner evidence of insurance from an insurer or insurers certifying to the coverage of all insurance required herein. Such evidence shall include original copies of the ISO CG 2010 (or insurer's equivalent) signed by the insurer's representative and certificate of insurance (Accord Form 25-S or equivalent). All evidence of shall be certified by a properly authorized officer, agent or qualified representative of the insurer and shall certify the names of the insured, any additional primary insurers, where appropriate, the type and amount of the insurance, the location and operations to which the insurance applies, the expiration date, and that the insurer will give by certified mail, written notice to the Owner at least thirty (30) days prior to the effective date of any cancellation, lapse or material change in the policy.

The CONTRACTOR shall, upon demand of the Owner, deliver to the Owner all such policy or policies of insurance and the receipts for payment of premiums thereon; and should the CONTRACTOR neglect to obtain and maintain in force any such insurance or deliver such policy or policies and receipts to the Owner, then it shall be lawful for the Owner to obtain and maintain such insurance, and the CONTRACTOR hereby appoints the Owner the true and lawful attorney-in-fact to do all things necessary for this purpose. All money paid by the Owner for insurance premiums under the provisions of this article shall be charged to the CONTRACTOR.

30. Contract Security

The CONTRACTOR shall, within ten (10) days after the receipt of the NOTICE OF AWARD, furnish the OWNER with a Performance Bond and a Payment Bond in penal sums equal to 100% of the CONTRACT PRICE, conditioned upon the performance by the CONTRACTOR of all undertakings, covenants, terms, conditions and agreements of the CONTRACT DOCUMENTS, and upon the prompt payment by the CONTRACTOR to all persons supplying labor and materials in the prosecution of the WORK provided by the CONTRACT DOCUMENTS. Such bonds shall be executed by the CONTRACTOR and corporate bonding company licensed to transact such business in the state in which the WORK is to be performed and named on the current list of "Surety Companies Acceptable Federal Bonds" as published in the Treasury Department Circular Number 570. The expense of these bonds shall be borne by the CONTRACTOR. If at any time a surety on any such bond is declared a bankrupt or

loses its right to do business in the state in which the WORK is to be performed or is removed from the list of Surety Companies accepted on Federal bonds, CONTRACTOR shall within ten (10) days after notice from the OWNER to do so, substitute an acceptable bond (or bonds) in such form and sum and signed by such other surety or sureties as may be satisfactory to the OWNER. The premiums on such bond (s) shall be paid by CONTRACTOR. No further payments shall be deemed due nor shall be made until the new surety or sureties shall have furnished an acceptable bond to the OWNER.

Attached to the bonds shall be the original, or a certified copy, of the unrevoked appointment, power of attorney, bylaws or other instrument which entitles and authorizes the person to execute the bond to do so, a certified copy of the certificate of authority or the insurer issued by the Insurance Commissioner of the county in which the OWNER is located which would state that the certificate of authority of the insurer (the bonding company) has not been surrendered, revoked, cancelled, annulled, or suspended.

The Performance Bond shall remain in full force and effect during the Warranty period of 12 months from the date of acceptance of the work by the Owner.

If requested by the OWNER or ENGINEER, copies of the insurer's most recent annual statement and quarterly statement filed with the Department of Insurance pursuant to Article 10 (commencing with Section 900) of Chapter 1 of Part 2 of Division 1 of the Insurance Code, shall be provided to the OWNER or ENGINEER within 10 calendar days of the insurer's receipt of the request to submit the statements.

31. Assignments

Neither the CONTRACTOR nor the OWNER shall sell, transfer, assign or otherwise dispose of the Contract or any portion thereof, or of his right, title or interest therein, or his obligation thereunder, without written consent of the other party.

32. Indemnification

CONTRACTOR shall indemnify and hold harmless and defend the OWNER and the ENGINEER and their directors, officers, employees, agents or volunteers, and each of them from and against:

A. Any and all claims, demands, causes of action, damages, costs, expenses, losses or liabilities, in law or in equity, of every kind and nature whatsoever for, but not limited to, injury to or death of any person including OWNER and/or ENGINEER and/or CONTRACTOR, or any directors, officers, employees, agents volunteers of the OWNER, ENGINEER or CONTRACTOR, and damages to or destruction of property of any person, including but not limited to, OWNER, ENGINEER and/or CONTRACTOR and their directors, officers, employees, agents or volunteers arising out of or in any manner directly or indirectly connected with the work to be performed under this agreement, however caused regardless of any negligence of the OWNER of the ENGINEER of their directors, officers, employees, agents, or volunteers, except the sole negligence of willful misconduct or active negligence of the OWNER or the ENGINEER or their directors, officers, employees, agents or volunteers:

B. Any and all actions, proceedings, damages, costs, expenses, penalties or liabilities in law or equity, of every kind or nature whatsoever, arising out of , resulting from or on account of the violation of any governmental law or regulation, compliance with which is the responsibility of CONTRACTOR.

CONTRACTOR shall defend, at CONTRACTOR'S own cost, expense and risk, any and all such aforesaid suits, actions or other legal proceedings of every kind that may be brought or instituted against the OWNER and the ENGINEER or their directors, officers, employees, agents or volunteers.

CONTRACTOR shall pay and satisfy any judgment, award or decree that may be rendered against the OWNER and their directors, officers, employees, agents, or volunteers in any such suit, action or other legal proceedings.

CONTRACTOR shall reimburse the OWNER and their directors, officers, employees, agents and/or volunteers, for any and all legal expenses and costs incurred by them in connection therewith or in

enforcing the indemnity herein provided.

CONTRACTOR agrees to carry insurance for this purpose as set out in the specifications. See Paragraph 29 of these General Provisions for insurance specifications and coverage. CONTRACTOR'S obligation to indemnify shall not be restricted to insurance proceeds, if any, received by the OWNER and the ENGINEER or their directors, officers, employees, agents and/or volunteers.

33. Separate Contracts

The OWNER reserves the right to let other contracts in connection with this PROJECT. The CONTRACTOR shall afford other contractors reasonable opportunity for the introduction and storage of their materials and the execution of their WORK, and shall properly connect and coordinate his WORK with theirs. If the proper execution or results of any part of the CONTRACTOR'S work depend upon the work of any other contractor, the CONTRACTOR shall inspect and promptly report to the ENGINEER any defects in such WORK that render it unsuitable for such proper execution and results.

The OWNER may perform additional WORK related to the PROJECT by himself, or he may let other contracts containing provisions similar to these. The CONTRACTOR will afford the CONTRACTORs who are parties to such contracts (or the OWNER, if he is performing the additional WORK himself), reasonable opportunity for the introduction and storage of materials and equipment and the execution of WORK, and shall properly connect and coordinate his WORK with theirs.

In the performance of additional WORK by other contractors or the OWNER is not noted in the CONTRACT DOCUMENTS prior to the execution of the Agreement, written notice thereof shall be given to the CONTRACTOR prior to starting any such additional WORK. If the CONTRACTOR believes that the performance of such additional expense or entitles him to an extension of the CONTRACT TIME, he may make a claim therefore as provided in Items 16 and 17 of these General Provisions.

34. Subcontracting

The CONTRACTOR may utilize the services of specialty SUBCONTRACTORS on those parts of the WORK which, under normal contracting practices, are performed by specialty SUBCONTRACTORS.

The CONTRACTOR shall be fully responsible to the OWNER for the acts and omissions of his SUBCONTRACTORS, and of persons either directly or indirectly employed by them, as he is of the acts and omissions of persons directly employed by him.

The CONTRACTOR shall cause appropriate provisions to be inserted in all contracts relative to the WORK to bind SUBCONTRACTORS to the CONTRACTOR by the terms of the CONTRACT DOCUMENTS in so far as applicable to the WORK of SUBCONTRACTORS and to give the CONTRACTOR the same power as regards terminating any subcontract that the OWNER may exercise over the CONTRACTOR under any provision of the CONTRACT DOCUMENTS.

Nothing contained in this CONTRACT shall create any contractual relation between any SUBCONTRACTOR and the OWNER.

CONTRACTOR shall include all SUBCONTRACTORS as insured under its policies or shall furnish separate certificates and endorsements for each SUBCONTRACTOR. All coverage for SUBCONTRACTORS shall be subject to all of the requirements stated herein.

35. Employment of Apprentices

The CONTRACTOR and any SUBCONTRACTOR under him shall comply with the requirements of Sections 1777.5 and 1777.6 of the Labor Code in the employment of apprentices. The responsibility for compliance with the provisions of said Section 1777.5 for all apprenticeship occupations shall rest with the CONTRACTOR. Information relative to apprenticeship standards, wage schedules and other requirements may be obtained from the Division of Apprenticeship Standards, 455 Golden Gate Avenue, San Francisco, California, or from its branch offices.

36. Payment of Prevailing Wages

The CONTRACTOR and all SUBCONTRACTORs under him shall pay all laborers, workmen and mechanics on all work included in this contract no less than the general prevailing rate of per diem wages for work performed, (to-wit, within the limits of the City), and no less than the general prevailing rate of per diem wages for legal holiday and overtime work in said locality, which per diem wages shall not be less than the stipulated rate contained in a schedule thereof which has been ascertained and determined by the Council to be the general prevailing rate of per diem wages for each craft or type of workman or mechanic needed to execute this contract, and which is now on file with the City Clerk, as set forth in the Information for Bidders, and by reference it is incorporated herein and made a part hereof.

The CONTRACTOR shall forfeit, as a penalty to the OWNER, two hundred dollars ($200.00) for each laborer, workman or mechanic employed for each calendar day or portion thereof such laborer, workman or mechanic is paid less than the said stipulated rates for any work done under this contract by him or by any SUBCONTRACTOR under him in violation of Articles 1 and 2 of Chapter 1 Part 7 of Division 11 of the Labor Code of the State of California, and said sums and amounts which shall have been so forfeited pursuant to the herein paragraph and the said terms of said Labor Code shall be withheld and retained from payments due to the CONTRACTOR under said contract, pursuant to this contract and the said terms of said Labor Code; but no sum shall be so withheld, retained or forfeited except from the final payment without a full investigation by either the Division of Labor law Enforcement of the State Department of Industrial Relations or by said Council.

The difference between such stipulated prevailing wage rates and the amount paid to each workman for each calendar day, or a portion thereof, for which each workman was paid less than the stipulated prevailing wage rate shall be paid to each workman by the CONTRACTOR. The CONTRACTOR shall comply with the provisions of Section 1775 of the Labor Code of the State of California.

The CONTRACTOR and his SUBCONTRACTORS shall submit certified payroll information electronically to the Department of Industrial Relations as well as a hard copy of said certified payrolls to the OWNER on a monthly basis.

37. Registration to Train Apprentices

Pursuant to Labor Code Section 1777.5, all CONTRACTORs shall file with the appropriate Joint Apprenticeship Training Committee, a DAS-140 form registering to train apprentices. This requirement to register to train apprentices is mandated by Section 1777.5 whether or not you are signatory to or a party of any approved training program. Only those programs approved by the California Apprenticeship Council are applicable to accept DAS-140 registration forms.

If the CONTRACTOR is approved to train apprentices, then apprentices must be called in a ratio not less than one apprentice hour for each five journeyman hours.

However, if the entire contract may be completed within 20 working days or the entire contract (nor subcontracts) is less than thirty thousand ($30,000), then the CONTRACTOR is exempt from requesting apprentices under Labor Code Section 1777.5.

In addition, all CONTRACTORs are required to make appropriate training contributions as set forth in the prevailing wage determination to each appropriate JATC, or in the alternative, to the California Apprenticeship Council. Payments shall be made not less than monthly, calculated and paid by the fifteenth of each month, for work performed that prior month.

The address for the applicable Joint Apprenticeship Training Committee and for the California Apprenticeship Council can be obtained by calling the Division of Apprenticeship Standards.

38. Penalties

Failure to pay the appropriate prevailing wage can result in penalties being assessed as follows:

A. Up to $50.00 per day per worker for each and every violation; and,

B. debarment from future public works for a period not to exceed three years.

C. $50.00 per day per worker for each failure to comply with the payment of overtime for all hours worked in excess of 8 in one day or 40 in one week.

Failure to register to train apprentices or failure to pay the appropriate training contribution can result in penalties being assessed as follows:

A. $100.00 per day for each day of violation; and,

B. debarment from future public works for a period not to exceed three years.

39. Engineers Authority

The ENGINEER shall act as the OWNER'S representative. He shall decide questions which may arise as to quality and acceptability of materials furnished and WORK performed. He shall interpret the intent of the CONTRACT DOCUMENTS in a fair and unbiased manner. The ENGINEER will make visits to the site and determine if the WORK is proceeding in accordance with the CONTRACT DOCUMENTS.

The CONTRACTOR will be held strictly to the intent of the CONTRACT DOCUMENTS in regard to the quality of materials, workmanship and execution of the WORK. Inspections may be made at the factory or fabrication plant of the source of material supply.

The ENGINEER will not be responsible for the construction means, controls, techniques, sequences, procedures, or construction safety.

40. Land and Rights-of-Way

Prior to issuance of the NOTICE TO PROCEED, the OWNER shall obtain all land and rights-of-way necessary for carrying out and for the completion of the WORK to be performed pursuant to the CONTRACT DOCUMENTS, unless otherwise mutually agreed.

The OWNER shall provide to the CONTRACTOR information which delineates and describes the lands owned and rights-of-way acquired.

The CONTRACTOR shall provide, at his own expense and without liability to the OWNER, any additional land and access thereto that the CONTRACTOR may desire for temporary construction facilities, or for storage of materials.

41. Warranty and Guarantee

CONTRACTOR warrants and guarantees to OWNER that all work will be in accordance with the Contract Documents and will not be defective. Prompt notice of defects known to OWNER shall be given to CONTRACTOR. All defective work, whether or not in place, may be rejected, corrected or accepted as provided in Paragraph 19, Changes in the Work, of these General Provisions. Defective work may be rejected even if approved by prior inspection.

42. One (1) Year Warranty Period

The warranty period shall commence when the Notice of Completion is issued, at notice of beneficial occupancy or at notice of partial utilization of the work to be warranted has been issued, or a later date if so specified in the AGREEMENT, or mutually agreed to, and extend until one (1) year after that date or whatever longer period may be prescribed by laws or regulations or by the terms of any applicable special guarantee or specific provision of the CONTRACT DOCUMENTS.

43. Correction of Defective Work

If within the designated warranty period, or such longer period as may be required by Laws or Regulations, the WORK, or any part of the WORK, is discovered to be defective, CONTRACTOR shall promptly, without an adjustment in CONTRACT PRICE and in accordance with OWNER's written instructions, either correct that defective WORK, or if it has been rejected by OWNER, remove it from the site and replace it with non-defective WORK. If circumstances warrant it, including but not limited to, in an

emergency, OWNER may have the defective WORK corrected or the rejected WORK removed and replaced. In that event, CONTRACTOR shall not be allowed to recover any associated costs, and he shall reimburse OWNER for all direct, indirect and consequential costs of OWNER, and OWNER shall be entitled to an appropriate decrease in CONTRACT PRICE, to withhold a set-off against amount recommended for payment, or make a claim on CONTRACTOR's bond if CONTRACTOR has been paid in full. Where defective WORK (and damage to other WORK resulting therefrom) has been corrected, removed or replaced during the warranty period, the one (1) year warranty period with respect to such WORK will be extended for an additional period of one (1) year after such correction or removal and replacement has been satisfactorily completed.

44. Early Completion

The one (1) year warranty period will not begin until the Notice of Completion is filed. If CONTRACTOR completes the WORK or portions thereof prior to this time, he shall preserve the equipment and/or facilities by developing and implementing a preventive maintenance program in compliance with manufacturer's recommendations to maintain the equipment and/or facilities unless OWNER has issued a notice of beneficial occupancy or notice of partial utilization for the warranted WORK. At start up, CONTRACTOR will be required to get his equipment and/or facilities ready to put into service.

45. Extended Warranties and Guarantees

OWNER may at its sole discretion extend the one (1) year warranty period up to twenty-four (24) months, in which case CONTRACTOR shall maintain the warranties and guarantees. If such extension of the one (1) year warranty period causes an increase in the cost of the warranties and guarantees provided by CONTRACTOR, an adjustment in Contract Price shall be made as provided by the CONTRACT DOCUMENTS.

46. Arbitration

With the prior approval of the OWNER and the CONTRACTOR, all claims, disputes and other matters in question arising out of, or relation to, the CONTRACT DOCUMENTS or the breach thereof, except for claims which have been waived by the making and acceptance of final payment as provided by Item 24 of these General Provisions, may be decided by arbitration in accordance with the Arbitration Rules of the American Arbitration Association. If entered into, the agreement to arbitrate shall be specifically enforceable under the prevailing arbitration law. The award rendered by the arbitrators shall be final, and judgment may be entered upon it in any court having jurisdiction thereof.

Notice of the request for arbitration shall be filed in writing with the other party to the CONTRACT DOCUMENTS and with the American Arbitration Association, and a copy shall be filed with the ENGINEER. The request for arbitration shall set forth specifically the dispute to be arbitrated. Acceptance by the other party of the request to arbitrate shall constitute the agreement to arbitrate and arbitration shall proceed forthwith. No legal proceedings other that to enforce arbitration shall be commenced on any issue covered by the arbitration agreement.

The CONTRACTOR shall carry on the WORK and maintain the progress schedule during any arbitration proceedings, unless otherwise mutually agreed in writing.

47. Taxes

The CONTRACTOR shall pay all sales, consumer, use and other similar taxes required by the law of the place where the WORK is performed.

48. Contractor's Understanding

It is understood and agreed that the CONTRACTOR has, by careful examination, satisfied himself as to the nature and extent of the WORK, the character, quality, and quantity of the materials to be encountered, the character of the equipment and facilities needed preliminary to and during the prosecution of the WORK, the general and local conditions, and all other matters which can in any way affect the WORK under this Contract. No verbal agreement or conversation with any officer, agent or

employee of the ENGINEER or the OWNER, either before or after the execution of this Agreement, shall affect or modify any of the terms or obligations herein contained.

49. Accidents

The CONTRACTOR shall provide, at the site, such equipment and medical facilities as are necessary to supply first-aid service to anyone who may be injured in connection with the WORK. 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 which causes death, personal injury, or property damages, giving full details and statements of witnesses. In addition, if death or serious injuries or serious damages are caused, the accident shall be reported immediately by telephone or messenger to both the ENGINEER and the OWNER. 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.

50. Safety and Sanitation

The CONTRACTOR shall provide adequate safety and sanitation facilities according to State laws and local ordinances.

The CONTRACTOR will assume sole and complete responsibility for job site conditions during the course of construction of the project, including safety of all persons and equipment. This responsibility shall apply continuously and not be limited to normal working hours.

51. Climatic Conditions

The ENGINEER may order the CONTRACTOR to suspend any WORK that may be subject to damage by climatic conditions. The CONTRACTOR may suspend WORK if climatic conditions are such that the CONTRACTOR is unable to work. In such case, the CONTRACTOR, within seven days, shall request in writing a CHANGE ORDER to extend the CONTRACT TIME.

52. Officials Not To Benefit

No official of the OWNER shall receive any benefit that may arise by reason of this Contract.

53. Clean-Up

During the progress of the WORK, the CONTRACTOR shall maintain the site and related structures and equipment in a clean, orderly condition and free from unsightly accumulations of rubbish. Upon completion of the WORK, the CONTRACTOR shall remove from the vicinity of the WORK all plants, buildings, rubbish, unused materials, concrete forms, temporary bridging, and other like material, belonging to him or used under his direction during construction, and in the event of his failure to do so, the same may be removed by the OWNER after 10 calendar days notice to the CONTRACTOR at the expense of the CONTRACTOR, and his surety or sureties shall be liable therefore.

As part of the final clean-up, the CONTRACTOR shall dress up and grade the right-of-way to match existing ground surfaces, and shall remove therefrom all weeds and other growth. Where the construction has crossed yards or driveways, they shall be restored to a condition equivalent to the condition existing prior to the construction as determined by the ENGINEER.

No direct payment will be made to the CONTRACTOR for any clean-up work, but all compensation therefore shall be included in the prices bid in the schedule for the various items of work.

54. Notice to Owner

In the event this contract involves digging trenches or excavations that extend deeper that four feet below the surface, the CONTRACTOR shall promptly, and before the following conditions are disturbed, notify OWNER, in writing, of any:

A. Material that the CONTRACTOR believes may be material that is hazardous waste, as

defined in Section 25117 of the Health 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;

B. Subsurface or latent physical conditions at the site differing from those indicated;

C. 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.

OWNER shall promptly investigate the conditions. If OWNER 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 the time required for, performance of any part of the WORK, OWNER shall issue a CHANGE ORDER under the procedures described in the contract.

In the event a dispute arises between OWNER and CONTRACTOR whether the conditions materially differ, or involve hazardous waste, or cause a 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 CONTRACTOR and OWNER.

55. Payment of Withheld Funds

The Owner shall retain 5**%** of each payment from CONTRACTOR and shall make prompt and regular incremental acceptances of portions, as determined by the Owner, of the Contract Agreement Work, and pay retention to the CONTRACTOR based on these acceptances. The CONTRACTOR, or SUBCONTRACTOR, shall return all monies withheld in retention from a SUBCONTRACTOR within 30 days after receiving payment for Work satisfactorily completed and accepted including incremental acceptances of portions of the Contract Agreement Work by the Owner. Federal law (49CFR26.29) requires that any delay or postponement of payment over 30 days may take place only for good cause and with the Owner's prior written approval. Any violation of this provision shall subject the violating CONTRACTOR or SUBCONTRACTOR to the penalties, sanctions and other remedies specified in Section 7108.5 of the Business and Professions Code. These requirements shall not be construed to limit or impair any contractual, administrative, or judicial remedies otherwise available to the CONTRACTOR or SUBCONTRACTOR in the event of a dispute involving late payment or nonpayment by the CONTRACTOR, deficient subcontract performance, or noncompliance. When the Work is complete, the Owner will issue a Notice of Completion to the County. The Owner will pay all retention funds to the CONTRACTOR thirty-five (35) Days after Notice of Completion has been recorded.

56. Storm Water Pollution Prevention Measures

Storm Water Pollution Prevention Measures shall be performed in accordance with the provisions in Section 13-3, "Storm Water Pollution Prevention Plan," of the Standard Specifications.

A. <u>GENERAL</u>

In compliance with the State and Federal regulations regarding storm water management during construction, the CONTRACTOR shall not allow any debris, waste materials or pollutants, originating from the CONTRACTOR's operations, to enter the storm drainage system, which leads to contamination of local creeks and ponding basins.

The CONTRACTOR shall properly dispose of all wastes and excess materials in a legal manner to the satisfaction of the Owner.

B. <u>SELECTIVE BMPS FOR STORM WATER POLLUTION PREVENTION</u>

As applicable to the project or directed by the Engineer, the CONTRACTOR shall implement any or all of the following Best Management Practices (BMPs):

1. Material Handling and Storage

a. Nonhazardous Materials

i. Designated Delivery and Storage Area

The CONTRACTOR shall propose areas in the vicinity of or within the project site or within the CONTRACTOR's staging site, which are suitable for material delivery and storage. To the maximum extent practicable, these areas shall be away from gutters, catch basins, drainage courses or creeks. The CONTRACTOR shall submit the proposed areas to and shall obtain the approval from the Engineer in writing prior to bringing in materials.

ii. Storage of Granular Materials

The CONTRACTOR shall store granular materials at least ten feet (10') away from any inlet or curb return and shall prevent the granular materials from entering the storm drain system, drainage courses or creeks. During wet weather or when rain is forecast within 24 hours, the CONTRACTOR shall cover granular materials with a tarpaulin and surround the material with sandbags or other approved heavy objects.

b. Hazardous Materials

i. Hazardous materials include, but are not limited to, petroleum products, antifreeze, paints, thinners, solvents, pesticides, herbicides and various other toxic chemicals.

ii. The CONTRACTOR shall propose, within the project site or the CONTRACTOR's staging site, an area that is suitable for hazardous material delivery and storage. To the maximum extent practicable, the area shall be away from inlets, gutters, drainage courses or creeks. The CONTRACTOR shall submit the proposed area to and shall obtain approval from the Engineer in writing prior to bringing in hazardous materials.

iii. The CONTRACTOR shall label and store all hazardous materials and hazardous wastes in accordance with secondary containment regulations, the City of Los Banos Hazardous Materials Storage Ordinance and all applicable Merced County, State and Federal laws and regulations.

iv. The CONTRACTOR shall keep all hazardous materials or waste in containers and fully covered to avoid contamination of storm runoff.

v. The CONTRACTOR shall keep an accurate, up-to-date inventory, including Materials Safety Data Sheets (MSDSs), of hazardous materials and hazardous wastes stored on-site to assist emergency response personnel in the event of a hazardous material incident.

2. Hazardous Material Usage

a. The CONTRACTOR shall follow all local, State and Federal policies, laws and regulations governing the use of hazardous materials.

b. The CONTRACTOR shall use only Category III pesticides for pest control. If Category III pesticides are unavailable, have been tried but proven ineffective, or when it is necessary to prevent a pest outbreak that poses an immediate threat to public health or signifi- cant economic loss, the City may consider allowing the use of Category II pesticides with a dose of up to LD50 (a dose that kills 50 percent of the targeted pest population in the laboratory)

provided that the risk to the applicator and impact to the environment can be justified. Use of Category I pesticides is prohibited.

c. Apply pesticides at the appropriate time to maximize their effectiveness and minimize the likelihood of discharging nondegraded pesticides into storm water system, drainage courses and creeks.

d. Mix only as much material as is necessary for treatment. Calibrate application equipment prior to and during use to ensure desired application rate. Do not mix or load pesticides adjacent to storm drain system, drainage courses or creeks.

e. The CONTRACTOR shall not overapply herbicides, pesticides or fertilizers and shall follow the manufacturer's instructions regarding uses, protective equipment, ventilation, flammability and mixing of chemicals. Over-application of a pesticide is a "label violation" subject to an enforcement action by the Merced County Agriculture Department.

f. When rain is forecast within 24 hours or during wet weather, the CONTRACTOR shall not apply chemicals in outside areas unless otherwise allowed by the Engineer in writing.

3. Integrated Pest Management Methods

The CONTRACTOR shall employ, in place of pesticides, integrated pest management methods including:

a. No control

b. Physical or mechanical methods

c. Least toxic chemicals (insecticidal soaps and oil, etc.)

4. Vehicle and Equipment Cleaning, Maintenance and Fueling

a. Cleaning

The CONTRACTOR shall not clean or wash vehicles or equipment on- site or in the streets. If allowed by the Engineer in writing, cleaning and washing shall be performed in a designated and bermed area approved by the Engineer using water only. No soaps, solvents, degreasers, steam cleaning equipment or similar methods are permitted. The CONTRACTOR shall not allow wash water to flow into streets, gutters, storm drain system, drainage courses or creeks.

b. Maintenance and Fueling

i. The CONTRACTOR shall perform maintenance and fueling of vehicles or equipment in a designated, bermed area or over a drip pan that will prevent waste, leaks or spills from entering streets, gutters, storm drain system, drainage courses or creeks.

ii. The CONTRACTOR shall inspect all vehicles and equipment arriving on-site for leaking fluids and shall promptly repair leaking vehicles and equipment. Drip pans shall be used to catch leaks until repairs can be made. Shut-off valves on equipment must be working properly.

5. Spill Prevention and Control

a. If hazardous materials are used on the project, the CONTRACTOR shall keep a stockpile of spill clean-up materials, such as rags or absorbents, readily accessible on-site.

b. Above-ground storage tanks and their installations shall comply with

City, State and Federal requirements.

c. The CONTRACTOR shall immediately contain and prevent spills or leaks from entering storm drain system, drainage courses or creeks and shall properly clean up and dispose of the spills or leaks. The CONTRACTOR shall not wash the spills or leaks into streets, gutters, storm drain system, drainage courses or creeks and shall not bury the spills or leaks.

d. In case of a hazardous material spillage, the CONTRACTOR shall immediately call 911 and shall handle the spilled material in accordance with the requirements of 6, "Disposal of Hazardous Waste," below.

6. Disposal of Hazardous Waste

a. Unless the CONTRACTOR is a licensed hazardous waste handler, the CONTRACTOR shall contract with a licensed hazardous waste handler to remove and dispose of hazardous waste materials unless the waste quantities to be transported are below threshold limits for transportation as specified in the State and Federal regulations.

b. The CONTRACTOR shall arrange for regular hazardous waste collection to comply with limits for storage of hazardous waste.

c. The CONTRACTOR may dispose of dry, empty paint cans, buckets, paintbrushes, rollers, rags and drop cloths in the trash.

d. The CONTRACTOR shall dispose of hazardous waste at facilities authorized for treatment, storage and disposal of hazardous waste only.

7. Street Sweeping

At the end of each day or as directed by the Engineer, the CONTRACTOR shall sweep roadways of all debris and excess materials attributed to the CONTRACTOR's operations.

8. Water Usage

a. The CONTRACTOR shall use the least amount of water necessary for dust control and street sweeping operations.

b. The CONTRACTOR shall not use water to flush dust and debris down the street in place of street sweeping.

9. Dumpsters and Portable Sanitary Facilities

a. If dumpsters or portable sanitary facilities are used, they shall be stationed at least ten feet (10') away from storm drain facilities.

b. The CONTRACTOR shall arrange for regular waste collection to keep dumpsters and portable sanitary facilities from overflowing and shall regularly inspect these facilities for leaks. If a leak is discovered, the CONTRACTOR shall arrange for the repair or replacement of facilities that leak. The CONTRACTOR shall not wash the dumpsters or portable sanitary facilities on-site.

10. Earthwork

The CONTRACTOR shall maximize the control of erosion and sediment by using the Best Management Practices for erosion and sedimentation control described in the California Storm Water Best Management Practice Handbook—Construction Activity or ABAG Manual of Standards for Erosion and Sediment Control Measures.

11. Dewatering

a. The CONTRACTOR shall route water through a control device, such as a sediment trap, sediment basin or Baker tank, to remove settleable solids prior to discharging the water into the storm drain system. Refer to the California Storm Water Management Practice Handbook for these sediment control measures.

b. Approval of the control device shall be obtained in advance from the Engineer.

c. Filtration of the water following the control device may be required on a case-by-case basis.

d. If the Engineer determines that the dewatering operation would not generate an appreciable amount of settleable solids, the control device may be waived.

12. Saw Cutting

a. During saw cutting or grinding operation, use as little water as possible.

b. During saw cutting, the CONTRACTOR shall cover or barricade catch basins using filter fabric, straw bales, sandbags or fine gravel dams to keep slurry out of the storm drain system. When protecting a catch basin, the CONTRACTOR shall ensure that the entire opening of the catch basin is covered. Refer to California Storm Water Best Management Practice Handbook for these control measures.

c. The CONTRACTOR shall shovel, absorb or vacuum saw cut slurry and pick up the waste as the work progresses prior to moving to the next location, as specified elsewhere in these specifications or as directed by the Engineer.

d. If saw cut slurry enters catch basins, the CONTRACTOR shall, at the CONTRACTOR's cost, clean up the storm drain system immediately.

13. Concrete, Grout and Mortar Related Work

a. Material Handling

i. The CONTRACTOR shall avoid mixing excess amounts of fresh concrete or cement mortar on-site.

ii. The CONTRACTOR shall store concrete, grout and mortar away from storm drain facilities or drainage courses and shall ensure that these materials do not enter the storm drain system.

b. Washing of Concrete Truck and Tools

i. The CONTRACTOR shall not wash out concrete trucks or equipment into streets, gutters, storm drain system, drainage courses or creeks.

ii. The CONTRACTOR shall perform washing of concrete trucks and tools off-site or in a designated area on-site where the water will flow onto dirt or into a temporary pit in a dirt area. The CONTRACTOR shall let the water percolate into the soil and dispose of the hardened concrete in a trash container. If a suitable dirt area is not available, the CONTRACTOR shall collect the wash water and dispose of it off-site.

14. Asphalt Concrete Paving

a. Project Site Management

i. When rain is forecast within 24 hours or during wet weather, the Engineer may prevent the CONTRACTOR from paving.

ii. The Engineer may direct the CONTRACTOR to protect drainage courses by using earth dike, straw wattle or sandbag to trap and filter sediment. Refer to California Storm Water Best Management Practice Handbook for these control measures.

iii. The CONTRACTOR shall place drip pans or absorbent material under paving equipment when not in use.

iv. The CONTRACTOR shall cover catch basins and manholes when paving or applying prime coat, tack coat, seal coat, fog seal or slurry seal.

v. If the paving operation includes an on-site mixing plant, the CONTRACTOR shall comply with Merced County NPDES General Industrial Activities Storm Water Permit requirements.

vi. The CONTRACTOR shall preheat, transfer or load hot bituminous material away from storm drain system, drainage courses or creeks.

b. Paving Waste Management

The CONTRACTOR shall not sweep or wash down excess sand (placed as part of a sand seal or to absorb excess oil) into streets, gutters, storm drain system or creeks but shall collect the sand and dispose of it off-site. The CONTRACTOR shall not wash fresh asphalt concrete pavement.

15. <u>Painting</u>

a. General

i. The CONTRACTOR shall remove as much excess paint as possible from brushes, rollers and other tools before starting cleanup.

ii. The CONTRACTOR shall conduct cleaning of painting equipment and tools in a designated area approved by the Engineer.

iii. The CONTRACTOR shall not allow wash water from cleaning of painting equipment and tools into streets, gutters, storm drain system, drainage courses or creeks.

b. Water-Based Paint

To the maximum extent practicable, the CONTRACTOR shall dispose of wash water from water cleaning of brushes, rollers and other tools used in water-based painting work to the sanitary sewer or direct wash water onto dirt area and spade in.

c. Oil-Based Paint

The CONTRACTOR shall dispose of waste thinner and solvent and sludge from cleaning of brushes, rollers and other tools used in oil- based painting work as hazardous waste and the CONTRACTOR shall handle the waste as described in Section 6, “Disposal of Hazardous Waste,” above. To the maximum extent practicable, the CONTRACTOR shall filter paint thinner and solvents for reuse.

16. <u>Thermoplastic</u>

a. The CONTRACTOR shall transfer and load hot thermoplastic away from drainage systems or drainage courses or creeks.

b. The CONTRACTOR shall sweep thermoplastic grindings into plastic bags. Yellow thermoplastic grindings may require special handling as they may contain

paint.

C. CONTRACTOR TRAINING AND AWARENESS

1. The CONTRACTOR shall train all employees and SUBCONTRACTORs on the storm water pollution prevention requirements contained in these specifications.

2. The CONTRACTOR shall inform SUBCONTRACTORs of the storm water pollution prevention contract requirements and include appropriate subcontract provisions to ensure that these requirements are met.

3. The CONTRACTOR shall post warning signs in areas treated with chemicals.

D. BMP IMPLEMENTATION

The CONTRACTOR shall be responsible throughout the duration of the construction period for installing and maintaining the applicable BMPs and for removing and legally disposing of temporary control measures. Unless otherwise directed by the Engineer or specified elsewhere in these specifications, the CONTRACTOR's responsibility for BMP implementation shall continue throughout any temporary suspension of work ordered in conformance with the provisions in Section 8-1.06, "Suspensions," of the Standard Specifications.

Throughout the rainy season, all soil-disturbed areas of the site shall be fully protected with soil stabilization and sediment control device approved by the Engineer at the end of the same day the soil is disturbed unless fair weather is predicted the next day and the protective measures are exempt by the Engineer. The CONTRACTOR shall monitor the weather forecast on a daily basis and inform the Engineer of the forecast. The National Weather Service forecast shall be used for this purpose. If precipitation is predicted for the following day, construction schedule shall be altered as required to install appropriate BMPs or to ensure that the already installed BMPs are in good operating condition prior to the onset of rain.

E. BMP MAINTENANCE

To ensure proper implementation and effectiveness of the BMPs, the CONTRACTOR shall regularly inspect and maintain the deployed BMPs throughout the construction site. The CONTRACTOR shall identify corrective actions and the time needed to address any deficient BMPs or reinitiate any BMPs that have been discontinued. The CONTRACTOR shall keep written records of all BMP inspections, maintenance and corrective actions.

The frequency of the BMP inspection shall be as follows:

1. Prior to a forecast storm;

2. After any precipitation that causes runoff;

3. At 24-hour intervals during extended rain events; and

4. Routinely, at a minimum of once every week.

If the CONTRACTOR or the Engineer identifies a deficiency in the deployment or functioning of a BMP, the deficiency shall be corrected immediately. If requested by the CONTRACTOR and approved by the Engineer in writing, the deficiency may be corrected at a later time or date but the corrective action shall not be later than the onset of the subsequent rain event. The correction of deficient BMPs shall be at no additional cost to the City.

F. RESPONSIBILITIES, CONSEQUENCES, AND REMEDIES

1. Conformance with the provisions of this section or other requirements in various other sections of these specifications shall not relieve the CONTRACTOR from the CONTRACTOR's responsibilities as provided in various relevant articles of Section 7, "Legal Relations and Responsibilities to the Public," of the Standard Specifications, and as specified herein.

2. For purposes of this section, costs and liabilities include, but are not limited

to, fines, penalties and damages, whether assessed against the City or the CONTRACTOR, including those levied under the Federal Clean Water Act and the State Porter-Cologne Water Act.

3. If solid or liquid materials or waste, hazardous or otherwise, or pollutants originating from the CONTRACTOR's operation enter the storm drain system or water courses, the CONTRACTOR will be required to thoroughly clean up the affected storm drain facilities and water courses to the satisfaction of the Engineer. If the CONTRACTOR fails to clean up the affected facilities as required, the City will issue a stop-work order and take necessary actions to effect the cleanup of the affected facilities.

4. The CONTRACTOR shall be responsible for all costs, including fines, the City's cost of defense, the cost of cleanup by others ordered by the City, and liabilities imposed by law as a result of the CONTRACTOR's failure or negligence in complying with the requirements specified herein.

5. In accordance with the provisions of Section 7-1.05, "Indemnification," of the standard Specifications if the CONTRACTOR fails to accept or reject a tender of defense and indemnity within fifteen (15) calendar days, the City may, in addition to the remedies authorized by law, retain any sum due the CONTRACTOR until disposition has been made of all claims or suits for damages or until the CONTRACTOR accepts or rejects the tender of defense, whichever occurs first.

G. PAYMENT

Full compensation for storm water pollution control shall be considered as included in the payment for various other items of work and no additional compensation will be made therefore.

Special Provisions

1. Requirements

It is required that there be constructed and completed in accordance with the CONTRACT DOCUMENTS for "**Construction of 13th Street Water Extension**" for the City of Los Banos, all WORK as described in these CONTRACT DOCUMENTS.

2. Description of Work

The principal components of the WORK to be performed under these CONTRACT DOCUMENTS include the following:

> Replacing 329 feet of 6-inch waterline with 10-inch waterline in 13th Street from Pacheco Pass Boulevard to the south end of 13th Street, and installing 520 feet of 10-inch waterline at the south end of the California Dairies Property.

Any incidental WORK not described in the CONTRACT DOCUMENTS which is necessary to complete the WORK shall be furnished and installed as part of this CONTRACT at no additional cost to the OWNER. The WORK shall be complete and ready for service to the satisfaction of the OWNER. The CONTRACTOR shall have had the opportunity to inspect the site and observe actual working conditions during the mandatory pre-bid meeting.

3. Commencement, Prosecution and Completion of Work

The CONTRACTOR shall commence WORK and shall complete all of the WORK in accordance with the schedule and within the time stated in the BID. The capacity of the CONTRACTOR'S construction plant, sequence of operations, method of operations, and the forces employed shall at all times during the continuance of the Contract, be subject to the approval of the ENGINEER and shall be such as to ensure the completion of the WORK within the time specified.

4. Hours of Work

Construction work shall be completed between the hours of 7:00 a.m. and 9:00 p.m. Monday through Friday and between 8:00 a.m. using normal construction practices. No WORK shall be performed on Saturday or Sunday. The CONTRACTOR may request to the OWNER to perform construction outside of these specified hours.

5. City Permits and Business Licenses

The CONTRACTOR will not need an Encroachment Permit from the Public Works Department prior to start of construction. The CONTRACTOR and all SUBCONTRACTORS working within the city limits of Los Banos shall apply for and have issued a Business License from the City of Los Banos (209-827-7000) prior to commencement of WORK.

6. Testing

Field density tests shall be made of each compacted layer (subbase and aggregate base) as directed by the Engineer. When these tests indicate that the density of any layer of fill or portion thereof is less than the specified density, that layer shall be reworked unit the required density has been obtained.

Field density tests (compaction testing) shall be performed by a geotechnical laboratory retained by the Owner and under the supervision of a registered geotechnical engineer.

Initial compaction testing will be paid by the Owner. Retesting of areas that failed the initial testing will be paid for by the Contractor.

7. Responsibility Regarding Existing Utilities and Private Property

The existence and location of public and private utilities indicated on the DRAWINGS are not guaranteed and any additional utilities and facilities not shown on the DRAWINGS shall be investigated and protected by the CONTRACTOR. The CONTRACTOR shall be held responsible for damage to and for maintenance

and protection of existing pipelines, public utilities, drives, curbs and gutters, sidewalks, and fences. Excavation in the vicinity of existing public utility structures, underground electrical or telephone cable, oil or gas pipelines, and waterlines shall be carefully done by hand. The CONTRACTOR shall adequately protect all adjoining property and structures from damage, whether within or without of the OWNER furnished rights-of-way, and shall be fully responsible for any damage to adjoining property and structures which may result from WORK done under this Contract. The CONTRACTOR shall use extreme care during construction to prevent damage from dust to crops and adjacent property. The CONTRACTOR shall sprinkle the areas where the passage of operation of vehicles and equipment creates a dust problem, or take other preventive measures as directed by the ENGINEER. The CONTRACTOR shall furnish all labor, equipment, materials and means required to control dust which is in any way a result of the CONTRACTOR'S operations.

The CONTRACTOR shall be responsible for all damage or injury which may result to any property, outside of the construction right-of-way or within the right-of-way where so noted, from the CONTRACTOR'S operations hereunder, or otherwise, from the performance of the Agreement by said CONTRACTOR or any of his SUBCONTRACTORs or employees.

The CONTRACTOR shall attempt to maintain access to the residential and commercial driveways within the construction area at all times during working hours and shall provide access during non-working hours, weekends and holidays.

Payment for all WORK specified above shall be included in the unit or lump sum prices bid in the schedule for the various items of WORK.

8. Obstructions

The CONTRACTOR shall notify the ENGINEER and the appropriate regional notification center for operators of subsurface installation at least 3 working days, but not more than 14 calendar days, prior to performing any excavation or other work close to any underground pipeline, conduit, duct, wire or other structure. Failure to contact the notification center prohibits excavation. Regional notification centers include but are not limited to the following:

NOTIFICATION CENTER	TELEPHONE
Underground Service Alert Northern California (USA) www.usanorth811.org	811 or 1-800-642-2444 or 1-800-227-2600
Underground Service Alert Southern California (USA) www.digalert.org	811 or 1-800-422-4133
South Shore Utility Coordinating Council (DIGS)	1-800-541-3447
Western Utilities Underground Alert, Inc.	1-800-424-3447

9. Materials Furnished By Owner

No labor, material, or other facilities shall be provided by the OWNER unless otherwise indicated on the DRAWINGS or in the CONTRACT DOCUMENTS.

10. Materials Furnished By Contractor

Unless otherwise stipulated, the CONTRACTOR shall provide and pay for all materials, labor, water, tools, equipment, light, power, transportation, and other facilities necessary for the execution and completion of the WORK.

11. Schedule of Values, Material List and Substitutions

Prior to the commencement of WORK, and within 10 days following the signing of the Contract by the CITY and the CONTRACTOR, the CONTRACTOR shall submit 7 copies of a Schedule of Values for all lump sum bid items in the Proposal and a *complete* list of equipment and materials to be furnished, including all substitutions proposed to the ENGINEER for approval. Partial or incomplete material lists will not be considered. No substitutions will be considered thereafter. Only one request for substitution will be considered on each item of material or equipment.

12. Request for Extension of Time

All extension of time requests shall be made in writing to the ENGINEER within seven (7) calendar days from the delay occurrence date. In the case of continuing cause of delay, only one claim is necessary.

13. Rights-of-Way

The CONTRACTOR shall not be entitled to extra compensation for hardships and increased cost caused by the WORK being adjacent to telephone-telegraph lines and guy wires, power lines and guy wires, buildings, fences, pipelines, ditches, roadways, and other obstacles which may physically restrict or limit the use of construction equipment. In some cases, such physical confinement may necessitate special methods of construction of the WORK. If the CONTRACTOR desires to utilize additional area, he shall obtain the necessary approvals from the landowner. No additional compensation shall be paid to the CONTRACTOR for the cost of obtaining additional right-of-way or for the inability to obtain such.

14. Coordination with Other Work

Other work including but not necessarily restricted to relocation of power and telephone poles, installation of a gas line and relocation of water meters may be in progress near or at the construction site at the time the CONTRACTOR is in performance of the WORK specified herein. The CONTRACTOR shall coordinate his WORK with that of others so that prosecution of all WORK will proceed smoothly.

15. Closure of Streets

The CONTRACTOR will be allowed to temporarily close the streets being paved to vehicular traffic between the hours 7:00 a.m. and 5:00 p.m. on the day the streets are being paved. All street closure dates shall be coordinated with and approved by the ENGINEER for approval no later than 10 working days prior to the earliest proposed closures and detours.

16. Construction Signs, Barricades, Lights and Flagmen

The CONTRACTOR shall furnish, erect and maintain adequate barricades, lights, signs and other devices and take other protective measures to prevent damage to the public. The CONTRACTOR shall also furnish adequate warning to the public of dangerous conditions to be encountered. Where one lane of a public road is closed, the CONTRACTOR shall furnish flagmen at each end of the closed lane to control traffic in the open lane. The CONTRACTOR shall also furnish adequate warning to the public of dangerous conditions to be encountered.
Payment for traffic control and other safety measures shall be included in the Traffic Control Plan lump sum price bid in the Bid Schedule.

17. Traffic Control Plan

It is the CONTRACTOR'S sole responsibility to establish and implement a Traffic Control Plan conforming to Sections 7-1.08, "Public Convenience" 7-1.09, "Public Safety", and Section 12, "Construction Area Traffic Control Devices", of the Caltrans Standard Specifications. Nothing in these CONTRACT DOCUMENTS shall be construed as relieving the CONTRACTOR from his responsibility.
The Traffic Control Plan shall be prepared, stamped and signed by a professional engineer registered in California, and three copies provided to the ENGINEER before the CONTRACTOR is issued a NOTICE TO PROCEED.

Payment for the preparation and implementation of the Traffic Control Plan shall be made at the applicable lump sum price bid in the Bid Schedule.

18. Disposal of Waste Materials

Waste material shall be disposed of in accordance with local regulatory requirements. Provide watertight conveyance for liquid, semi-liquid or saturated solids which tend to bleed during transport. Liquid loss from transported materials is not permitted, whether being delivered to construction site or hauled away for disposal. Fluid materials hauled for disposal must be specifically acceptable at selected disposal site.

19. Noise Control

Conduct operations to cause least annoyance to residents in vicinity of Work, and comply with applicable local ordinances. Equip compressors, hoists, and other apparatus with mechanical devices necessary to minimize noise and dust. Equip compressors with silencers on intake lines. Equip gasoline or oil-operated equipment with silencers or mufflers on intake and exhaust lines.

20. Water Supply

Water will be available to the CONTRACTOR in performance of the Work without charge from all Owner fire hydrants. Prior to the use of any hydrant the CONTRACTOR shall notify the Owner and obtain and install a meter furnished by the Public Works Department on the fire hydrant. It will be the CONTRACTOR's responsibility to convey the water to the Work site. Regardless of the method of conveyance chosen, it shall not be cause for closure of any streets nor shall it create a nuisance to nearby residents. An air gap shall be maintained between the hose or pipe discharge to prevent possible backflow in the event of distribution system pressure loss. The CONTRACTOR shall pay a One Thousand Dollar ($1,000) deposit per meter for the use of the fire hydrant meter. The deposit may be refunded in full if the fire hydrant meter is returned undamaged.

21. Notifications

The Owner will notify the CONTRACTOR in writing of any non-compliance with the foregoing provisions or of any environmentally objectionable acts and corrective action to be taken. State or local agencies responsible for verification of certain aspects of the environmental protection requirements shall notify the CONTRACTOR in writing, through the Owner, of any non-compliance with State or local requirements. The CONTRACTOR shall, after receipt of such notice from the Owner or from the regulatory agency through the Owner, immediately take corrective action. Such notice, when delivered to the CONTRACTOR or his authorized representative at the site of the Work, shall be deemed sufficient for the purpose. If the CONTRACTOR fails or refuses to comply promptly, the Owner may issue an order stopping all or part of the Work until satisfactory corrective action has been taken. No part of the time lost due to any such stop orders shall be made the subject of a claim for extension of time or for excess costs or damages by the CONTRACTOR unless it is later determined that the CONTRACTOR was in compliance**.**

22. Work Not Listed in Proposal

It is the intent of the plans, specifications and contract documents to provide for the construction of completed and finished facilities and works of improvement unless otherwise specifically provided. Except for authorized changes in the work, payment for said complete and finished facilities and works of improvement will be made only on the basis of the contract items of work listed in the proposal. All other work, including the furnishing of plants, labor, materials, tools, equipment, and incidentals, provided for in the plans, specifications and contract documents, or required for the proper completion of the work as a whole, for which no separate payment has been provided shall be a supplementary obligation of the CONTRACTOR and payment therefore shall be considered included in the prices paid for the various contract items of work listed in the proposal.

23. Submittals

The CONTRACTOR shall submit to the ENGINEER, a minimum of six sets of the following submittals for review and approval:

1. Water Pipeline Appurtenances (Fittings, Couplings, Saddles)
2. Water Service Tubing and Appurtenances
3. Aggregate Base
4. Concrete Mix Design
5. Asphalt Concrete Mix Design

Within 10 days after the Effective Date of the Agreement and before starting to perform any WORK, the CONTRACTOR shall submit to the ENGINEER for review and approval:

1. A Work Schedule indicating the times for starting and completing the various stages of the Work. No PROGRESS PAYMENT shall be made to CONTRACTOR until an acceptable schedule has been submitted to the ENGINEER.
2. Traffic Control Plan
3. Notice to Residents in English and Spanish
4. A Schedule of Values
5. A complete list of equipment and materials to be furnished
6. City of Los Banos Business License

If more than TWO submittals for a single item are required because of incorrect or insufficient data, or the submittal is unacceptable, or because the CONTRACTOR wishes to change previously approved material, then all costs incurred by the OWNER for the additional review shall be deducted from monies due the CONTRACTOR.

A revised work schedule shall be submitted within 5 days of request by the ENGINEER. No future PROGRESS PAYMENT shall be made to CONTRACTOR until an acceptable schedule has been submitted to ENGINEER.

24. Bid Item Descriptions

Bid Item No. 1 – Mobilization/Demobilization:

This item shall be bid, measured and paid on a per-lump-sum basis. Payment shall include full compensation for furnishing all labor, materials, tools and equipment, temporary facilities, movement onto the sites, sanitation facilities, cost of bonds, insurances for both the prime and subcontractors, removal of temporary facilities at the completion of projects, and all other related mobilization and demobilization costs. Mobilization and Demobilization bid price shall not exceed five percent (5%) of the total bid.

Payment shall be made as follows:

1. Fifty percent (50%) of the mobilization bid price, less retention, will be paid on the initial billing, provided that all equipment is on-site and bond insurance fees paid.
2. Forty percent (40%) of the mobilization bid price, less retention, will be paid on a prorated basis during the remaining life of the contract.
3. Ten percent (10%) of the mobilization bid price, plus any remaining amount left from the prorated payments, less retention, will be paid upon satisfactory completion of punch list items, cleaning up and removal of all temporary facilities and equipment from the project sites.

Bid Item No. 2 – Pavement/Concrete Removal:

This item shall be bid, measured and paid on a per-square-foot basis. Payment shall include full

compensation for furnishing all labor, materials, tools, equipment to remove existing pavement and concrete including, but is not limited to, sawcut existing pavement and concrete, removal and disposal of asphalt, concrete, and debris from the site, and doing all necessary work, and all incidentals, as shown on the plans, and in accordance with these specifications, the Standard Provisions and the Standard Specifications, and as directed by the Engineer.

Bid Item No. 3 – Erosion Control:

This item shall be bid, measured and paid on a per-lump-sum basis. Payment shall constitute the full compensation for all labor, materials, tools and equipment required to install, construct, remove, and dispose of erosion control practices including, but is not limited to, fiber rolls, filter fabric, gravel bags, and all incidentals, as shown on the plans, and in accordance with these specifications, the Standard Provisions and the Standard Specifications, and as directed by the Engineer.

Bid Item No. 4 – Traffic Control and General Safety:

This item shall be bid, measured and paid on a per-lump-sum basis. Payment shall constitute the full compensation for all labor, materials, tools and equipment required to provide a safe working environment above ground for both workers and the general public through effective use of traffic control devices including, but is not limited to, signs, flag holders, flaggers, flashing arrow boards and all incidentals, as shown on the plans, and in accordance with these specifications, the Standard Provisions and the Standard Specifications, and as directed by the Engineer.

Bid Item No. 5 – Remove/Replace Ex. Sign and Bollards:

This item shall be bid, measured and paid on a per-lump-sum basis. Payment shall include full compensation for furnishing all labor, materials, tools and equipment to relocate sign and bollards including, but is not limited to, removal of existing sign and posts and bollards, salvaging sign to be mounted on new posts and bollards, new sign posts, excavation and concrete foundations, and doing all necessary work, and all incidentals, complete in place, as shown on the plans, and in accordance with these specifications, the Standard Provisions and the Standard Specifications, and as directed by the Engineer.

Bid Item No. 6 – Remove Ex. Waterline:

This item shall be bid, measured and paid on a per-linear-foot basis. Payment shall include full compensation for furnishing all labor, materials, tools and equipment to remove existing waterline including, but is not limited to, excavation, removal and disposal of water pipe, and doing all necessary work, and all incidentals, as shown on plans, and in accordance with these specifications, the Standard Provisions and the Standard Specifications, and as directed by the Engineer.

Bid Item No. 7 – Construction Staking:

This item shall be bid, measured and paid on a per-lump-sum basis. Payment shall include full compensation for furnishing all labor, materials, tools and equipment to stake the project site prior to construction, and doing all necessary work, and all incidentals, complete in place, as shown on the plans, and in accordance with these specifications, the Standard Provisions and the Standard Specifications, and as directed by the Engineer.

Bid Item No. 8 – 2” Water Service Line:

This item shall be bid, measured and paid on a per-linear-foot basis. Payment shall include full compensation for furnishing all labor, materials, tools and equipment to install 2” water pipe by conventional open trench method, including, but is not limited to, trenching, bedding, backfilling, ground restoration, compaction, testing and pavement restoration, and all incidentals, complete in place, as shown on the plans, and in accordance with these specifications, the Standard Provisions and the Standard Specifications, and as directed by the Engineer.

Bid Item No. 9 – 10” C900 Waterline:

This item shall be bid, measured and paid on a per-linear-foot basis. Payment shall include full compensation for furnishing all labor, materials, tools and equipment to install 10” C900 water pipe by conventional open trench method, including, but is not limited to, trenching, bedding, backfilling, ground restoration, compaction, testing and pavement restoration, and all incidentals, complete in place, as shown on the plans, and in accordance with these specifications, the Standard Provisions and the Standard Specifications, and as directed by the Engineer.

Bid Item No. 10 – 10” Gate Valve:

This item shall be bid, measured and paid on a per-each basis. Payment shall include full compensation for furnishing all labor, materials, tools and equipment to install 10” gate valve, including, but is not limited to, connecting to 10” water pipe, testing, and all incidentals, complete in place, as shown on the plans, and in accordance with these specifications, the Standard Provisions and the Standard Specifications, and as directed by the Engineer.

Bid Item No. 11 – Connect 10”W to Existing:

This item shall be bid, measured and paid on a per-each basis. Payment shall include full compensation for furnishing all labor, materials, tools and equipment to connect the new 10” water line to existing water lines, including but not limited to, connections to existing pipes, testing, and all incidentals, complete in place, as shown on the plans, and in accordance with these specifications, the Standard Provisions and the Standard Specifications, and as directed by the Engineer.

Bid Item No. 12 – Connect 10”W to Existing Within Highway 152:

This item shall be bid, measured and paid on a per-each basis. Payment shall include full compensation for furnishing all labor, materials, tools and equipment to connect the new 10” water line to the existing water line within Highway 152, including but not limited to, connection to the existing pipe, testing, and all incidentals, complete in place, as shown on the plans, and in accordance with these specifications, the Standard Provisions and the Standard Specifications, and as directed by the Engineer.

Bid Item No. 13 – Connect 2”W to Existing:

This item shall be bid, measured and paid on a per-each basis. Payment shall include full compensation for furnishing all labor, materials, tools and equipment to connect the new 2” water service line to existing water lines, including but not limited to, connections to existing pipes, testing, and all incidentals, complete in place, as shown on the plans, and in accordance with these specifications, the Standard Provisions and the Standard Specifications, and as directed by the Engineer.

Bid Item No. 14 – Trench Patch AC Pavement:

This item shall be bid, measured and paid on a per-square-foot basis. Payment shall include full compensation for furnishing all labor, materials, tools and equipment to trench patch existing pavement section, placed and installed, and for doing all work involved in installing pavement section including, but not limited to, grading and compaction of sub-grade, placement and installation of asphalt concrete, installation of lap joints to conform to existing pavement complete in place, and doing all necessary work, and all incidentals, as shown on the plans, and in accordance with these specifications, the Standard Provisions and the Standard Specifications, and as directed by the Engineer.

Bid Item No. 15 – Trench Patch Concrete Median:

This item shall be bid, measured and paid on a per-square-foot basis. Payment shall include full compensation for furnishing all labor, materials, tools and equipment to trench patch existing concrete median including, but is not limited to, grading and compaction of sub-grade, placement of concrete and aggregate base, including concrete curb, and doing all necessary work, and all

incidentals, complete in place, as shown on the plans, and in accordance with the City Standard Specifications and these specifications, the Standard Provisions and the Standard Specifications, and as directed by the Engineer.

Bid Item No. 16 – Trench Patch Driveway:

This item shall be bid, measured and paid on a per-square-foot basis. Payment shall include full compensation for furnishing all labor, materials, tools and equipment to trench patch driveway including, but is not limited to, grading and compaction of sub-grade, placement of concrete and aggregate base, including concrete curb, and doing all necessary work, and all incidentals, complete in place, as shown on the plans, and in accordance with the City Standard Specifications and these specifications, the Standard Provisions and the Standard Specifications, and as directed by the Engineer.

TECHNICAL PROVISIONS

SECTION 221113

FACILITY WATER DISTRIBUTION PIPING

PART 1 GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

A. This Section includes water-distribution piping and related components for water service mains.

B. Utility-furnished products include water meters that will be furnished to the site, ready for installation.

1.03 DEFINITIONS

A. EPDM: Ethylene propylene diene terpolymer rubber.

B. LLDPE: Linear, low-density polyethylene plastic.

C. PA: Polyamide (nylon) plastic.

D. PE: Polyethylene plastic.

E. PP: Polypropylene plastic.

F. PVC: Polyvinyl chloride plastic.

G. RTRF: Reinforced thermosetting resin (fiberglass) fittings.

H. RTRP: Reinforced thermosetting resin (fiberglass) pipe.

1.04 ACTION SUBMITTALS

A. Product Data: For each type of product indicated.

B. Shop Drawings: Detail precast concrete vault assemblies and indicate dimensions, method of field assembly, and components.

1.05 INFORMATIONAL SUBMITTALS

A. Coordination Drawings: For piping and specialties including relation to other services in same area, drawn to scale. Show piping and specialty sizes and valves, meter and specialty locations, and elevations.

B. Field quality-control test reports.

1.06 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For water valves and specialties to include in emergency, operation, and maintenance manuals.

1.07 QUALITY ASSURANCE

A. Regulatory Requirements:

1. Comply with requirements of utility company supplying water. Include tapping of water mains and backflow prevention.

2. Comply with standards of authorities having jurisdiction for potable-water-service piping, including materials, installation, testing, and disinfection.

3. Comply with standards of authorities having jurisdiction for fire-suppression water-service piping, including materials, hose threads, installation, and testing.

B. Piping materials shall bear label, stamp, or other markings of specified testing agency.

C. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

D. Comply with ASTM F 645 for selection, design, and installation of thermoplastic water piping.

E. Comply with FMG's "Approval Guide" or UL's "Fire Protection Equipment Directory" for fire-service-main products.

F. NFPA Compliance: Comply with NFPA 24 for materials, installations, tests, flushing, and valve and hydrant supervision for fire-service-main piping for fire suppression.

G. NSF Compliance:

1. Comply with NSF 14 for plastic potable-water-service piping. Include marking "NSF-pw" on piping.

2. Comply with NSF 61 Annex G for materials for water-service piping and specialties for domestic water.

1.08 DELIVERY, STORAGE, AND HANDLING

A. Preparation for Transport: Prepare valves according to the following:

1. Ensure that valves are dry and internally protected against rust and corrosion.

2. Protect valves against damage to threaded ends and flange faces.

3. Set valves in best position for handling. Set valves closed to prevent rattling.

B. During Storage: Use precautions for valves, including fire hydrants, according to the following:

1. Do not remove end protectors unless necessary for inspection; then reinstall for storage.

2. Protect from weather. Store indoors and maintain temperature higher than ambient dew-point temperature. Support off the ground or pavement in watertight enclosures when outdoor storage is necessary.

C. Handling: Use sling to handle valves and fire hydrants if size requires handling by crane or lift. Rig valves to avoid damage to exposed parts. Do not use handwheels or stems as lifting or rigging points.

D. Deliver piping with factory-applied end caps. Maintain end caps through shipping, storage, and handling to prevent pipe-end damage and to prevent entrance of dirt, debris, and moisture.

E. Protect stored piping from moisture and dirt. Elevate above grade. Do not exceed structural capacity of floor when storing inside.

F. Protect flanges, fittings, and specialties from moisture and dirt.

G. Store plastic piping protected from direct sunlight. Support to prevent sagging and bending.

1.09 PROJECT CONDITIONS

A. Interruption of Existing Water-Distribution Service: Do not interrupt service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary water-distribution service according to requirements indicated:

1. Notify the City no fewer than two days in advance of proposed interruption of service.

2. Do not proceed with interruption of water-distribution service without the City's written permission.

1.10 COORDINATION

A. Coordinate connection to water main with utility company.

PART 2 PRODUCTS

2.01 PVC PIPE AND FITTINGS

A. PVC pipe and fittings shall comply with Section 513 "Water Service Pipelines" of the City of Los Banos Standard Specifications.

2.02 SPECIAL PIPE FITTINGS

A. Special pipe fittings shall comply with Section 513 "Water Service Pipelines" of the City of Los Banos Standard Specifications.

2.03 GATE VALVES

A. Gate valves shall comply with Section 513 "Water Service Pipelines" of the City of Los Banos Standard Specifications.

2.04 GATE VALVE ACCESSORIES AND SPECIALTIES

A. Gate valve accessories and specialties shall comply with Section 513 “Water Service Pipelines” of the City of Los Banos Standard Specifications.

PART 3 EXECUTION

3.01 EARTHWORK

A. Earthwork shall comply with Section 220 “Earthwork” of the City of Los Banos Standard Specifications.

3.02 PIPING APPLICATIONS

A. General: Use pipe, fittings, and joining methods for piping systems according to the following applications.

B. Transition couplings and special fittings with pressure ratings at least equal to piping pressure rating may be used, unless otherwise indicated.

C. Do not use flanges or unions for underground piping.

D. Flanges, unions, grooved-end-pipe couplings, and special fittings may be used, instead of joints indicated, on aboveground piping and piping in vaults.

E. Underground water-service piping NPS 3/4 to NPS 3 shall be:

1. PVC, Schedule 40 pipe; PVC, Schedule 40 socket fittings; and solvent-cemented joints.

F. Underground water-service piping NPS 4 to NPS 8 shall be the following:

1. PVC, Schedule 40 pipe; PVC, Schedule 40 socket fittings; and solvent-cemented joints.

G. Underground Fire-Service-Main Piping NPS 4 to NPS 12 shall be the following:

1. PVC, AWWA Class 200 pipe listed for fire-protection service; PVC Class 200 fabricated fittings; and gasketed joints.

H. Aboveground Fire-Service-Main Piping NPS 4 to NPS 12 shall be ductile-iron, grooved-end pipe; ductile-iron-pipe appurtenances; and grooved joints.

3.03 VALVE APPLICATIONS

A. General Application: Use mechanical-joint-end valves for NPS 3 and larger underground installation. Use threaded- or flanged-end valves for installation in vaults. Use UL/FMG, nonrising-stem gate valves for installation with indicator posts. Use corporation valves and curb valves with ends compatible with piping, for NPS 2 and smaller installation.

B. Drawings indicate valve types to be used. Where specific valve types are not indicated, the following requirements apply:

1. Underground Valves, NPS 3 and Larger: AWWA, cast-iron, nonrising-stem, resilient-seated gate valves with valve box.

2. Underground Valves, NPS 4 and Larger, for Indicator Posts: UL/FMG, cast-iron, nonrising-stem gate valves with indicator post.

3. Use the following for valves in vaults and aboveground:

   a. Gate Valves, NPS 2 and Smaller: Bronze, nonrising stem.

   b. Gate Valves, NPS 3 and Larger: AWWA, cast iron, OS&Y rising stem, metal seated.

   c. Check Valves: AWWA C508, swing type.

4. Pressure-Reducing Valves: Use for water-service piping in vaults and aboveground to control water pressure.

5. Detector Check Valves: Use for water-service piping in vaults and aboveground to detect unauthorized use of water.

3.04 PIPING INSTALLATION

A. Piping installation shall comply with Section 510 “Pipelines, General” of the City of Los Banos Standard Specifications.

3.05 JOINT CONSTRUCTION

A. Joint construction shall comply with Section 510 “Pipelines, General” of the City of Los Banos Standard Specifications.

3.06 ANCHORAGE INSTALLATION

A. Anchorage installation shall comply with Section 510 “Pipelines, General” of the City of Los Banos Standard Specifications.

3.07 VALVE INSTALLATION

A. Valve installation shall comply with Section 513 “Water Service Pipelines” of the City of Los Banos Standard Specifications.

3.08 CONNECTIONS

A. Connections shall comply with Section 510 “Pipelines, General” of the City of Los Banos Standard Specifications.

3.09 FIELD QUALITY CONTROL

A. Piping Tests: Conduct piping tests before joints are covered and after concrete thrust blocks have hardened sufficiently. Fill pipeline 24 hours before testing and apply test pressure to stabilize system. Use only potable water.

B. Hydrostatic Tests: Test at not less than one-and-one-half times working pressure for two hours.

1. Increase pressure in 50-psig increments and inspect each joint between increments. Hold at test pressure for 1 hour; decrease to 0 psig. Slowly increase again to test pressure and hold for 1 more hour. Maximum allowable leakage is 2 quarts per hour per 100 joints. Remake leaking joints with new materials and repeat test until leakage is within allowed limits.

C. Prepare reports of testing activities.

3.10 IDENTIFICATION

A. Install continuous underground detectable warning tape during backfilling of trench for underground water-distribution piping. Locate below finished grade, directly over piping.

B. Permanently attach equipment nameplate or marker indicating plastic water-service piping, on main electrical meter panel.

3.11 CLEANING

A. Clean and disinfect water-distribution piping as follows:

1. Purge new water-distribution piping systems and parts of existing systems that have been altered, extended, or repaired before use.

2. Use purging and disinfecting procedure prescribed by authorities having jurisdiction or, if method is not prescribed by authorities having jurisdiction, use procedure described in NFPA 24 for flushing of piping. Flush piping system with clean, potable water until dirty water does not appear at points of outlet.

3. Use purging and disinfecting procedure prescribed by authorities having jurisdiction or, if method is not prescribed by authorities having jurisdiction, use procedure described in AWWA C651 or do as follows:

a. Fill system or part of system with water/chlorine solution containing at least 50 ppm of chlorine; isolate and allow to stand for 24 hours.

b. Drain system or part of system of previous solution and refill with water/chlorine solution containing at least 200 ppm of chlorine; isolate and allow to stand for 3 hours.

c. After standing time, flush system with clean, potable water until no chlorine remains in water coming from system.

d. Submit water samples in sterile bottles to authorities having jurisdiction. Repeat procedure if biological examination shows evidence of contamination.

B. Prepare reports of purging and disinfecting activities.

END OF SECTION 221113

SECTION 321216

ASPHALT PAVING

PART 1 GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

A. Section Includes:

1. Hot-mix asphalt paving.

2. Asphalt surface treatments.

1.03 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1. Review methods and procedures related to hot-mix asphalt paving including, but not limited to, the following:

a. Review proposed sources of paving materials, including capabilities and location of plant that will manufacture hot-mix asphalt.

b. Review requirements for protecting paving work, including restriction of traffic during installation period and for remainder of construction period.

1.04 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include technical data and tested physical and performance properties.

2. Job-Mix Designs: Certification, by authorities having jurisdiction, of approval of each job mix proposed for the Work.

3. Job-Mix Designs: For each job mix proposed for the Work.

1.05 INFORMATIONAL SUBMITTALS

A. Qualification Data: For manufacturer and testing agency.

B. Material Certificates: For each paving material. Include statement that mixes containing recycled materials will perform equal to mixes produced from all new materials.

C. Material Test Reports: For each paving material, by a qualified testing agency.

D. Field quality-control reports.

1.06 QUALITY ASSURANCE

A. Quality assurance shall comply with the requirements of Section 39 “Hot Mix Asphalt” of the Caltrans Standard Specifications and City of Los Banos Standard Specifications.

1.07 FIELD CONDITIONS

A. Field Conditions shall comply with the requirements of Section 39 “Hot Mix Asphalt” of the Caltrans Standard Specifications and City of Los Banos Standard Specifications.

PART 2 PRODUCTS

2.01 AGGREGATES

A. Aggregates shall comply with the requirements of Section 39 “Hot Mix Asphalt” of the Caltrans Standard Specifications and City of Los Banos Standard Specifications.

2.02 ASPHALT MATERIALS

A. Asphalt materials shall comply with the requirements of Section 39 “Hot Mix Asphalt” of the Caltrans Standard Specifications and City of Los Banos Standard Specifications.

2.03 MIXES

A. Mixes shall comply with the requirements of Section 39 “Hot Mix Asphalt” of the Caltrans Standard Specifications and City of Los Banos Standard Specifications.

PART 3 EXECUTION

3.01 EXAMINATION

A. Examination shall comply with the requirements of Section 39 “Hot Mix Asphalt” of the Caltrans Standard Specifications and City of Los Banos Standard Specifications.

3.02 SURFACE PREPARATION

A. Surface Preparation shall comply with the requirements of Section 39 “Hot Mix Asphalt” of the Caltrans Standard Specifications and City of Los Banos Standard Specifications.

3.03 PLACING HOT-MIX ASPHALT

A. Placing hot-mix asphalt shall comply with the requirements of Section 39 “Hot Mix Asphalt” of the Caltrans Standard Specifications and City of Los Banos Standard Specifications.

3.04 JOINTS

A. Joints shall comply with the requirements of Section 39 “Hot Mix Asphalt” of the Caltrans Standard Specifications and City of Los Banos Standard Specifications.

3.05 COMPACTION

A. Compaction shall comply with the requirements of Section 39 “Hot Mix Asphalt” of the Caltrans Standard Specifications and City of Los Banos Standard Specifications.

3.06 INSTALLATION TOLERANCES

A. Pavement Thickness: Compact each course to produce the thickness indicated within the following tolerances:

1. Base Course: Plus or minus 1/2 inch.

2. Surface Course: Plus 1/4 inch, no minus.

B. Pavement Surface Smoothness: Compact each course to produce a surface smoothness within the following tolerances as determined by using a 10-foot straightedge applied transversely or longitudinally to paved areas:

1. Base Course: 1/4 inch.

2. Surface Course: 1/8 inch.

3. Crowned Surfaces: Test with crowned template centered and at right angle to crown. Maximum allowable variance from template is 1/4 inch.

3.07 SURFACE TREATMENTS

A. Examination shall comply with the requirements of Section 39 “Hot Mix Asphalt” of the Caltrans Standard Specifications and City of Los Banos Standard Specifications.

3.08 FIELD QUALITY CONTROL

A. Testing Agency: Engage a qualified testing agency to perform tests and inspections.

B. Thickness: In-place compacted thickness of hot-mix asphalt courses will be determined according to ASTM D 3549.

C. Surface Smoothness: Finished surface of each hot-mix asphalt course will be tested for compliance with smoothness tolerances.

D. In-Place Density: Testing agency will take samples of uncompacted paving mixtures and compacted pavement according to ASTM D 979 or AASHTO T 168.

1. Reference maximum theoretical density will be determined by averaging results from four samples of hot-mix asphalt-paving mixture delivered daily to site, prepared according to ASTM D 2041, and compacted according to job-mix specifications.

2. In-place density of compacted pavement will be determined by testing core samples according to ASTM D 1188 or ASTM D 2726.

a. One core sample will be taken for every 1000 sq. yd. or less of installed pavement, with no fewer than three cores taken.

b. Field density of in-place compacted pavement may also be determined by nuclear method according to ASTM D 2950 and correlated with ASTM D 1188 or ASTM D 2726.

E. Replace and compact hot-mix asphalt where core tests were taken.

F. Remove and replace or install additional hot-mix asphalt where test results or measurements indicate that it does not comply with specified requirements.

END OF SECTION 321216

SECTION 321313

CONCRETE PAVING

PART 1 GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

A. Section Includes Concrete Paving Including the Following:

1. Driveways.

2. Curbs and gutters.

3. Walks.

1.03 DEFINITIONS

A. Cementitious Materials: Portland cement alone or in combination with one or more of blended hydraulic cement, fly ash, slag cement, and other pozzolans.

B. W/C Ratio: The ratio by weight of water to cementitious materials.

1.04 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1. Review methods and procedures related to concrete paving, including but not limited to, the following:

a. Concrete mixture design.

b. Quality control of concrete materials and concrete paving construction practices.

2. Require representatives of each entity directly concerned with concrete paving to attend, including the following:

a. Contractor's superintendent.

b. Independent testing agency responsible for concrete design mixtures.

c. Ready-mix concrete manufacturer.

d. Concrete paving Subcontractor.

e. Manufacturer's representative of stamped concrete paving system used for stamped detectable warnings.

1.05 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Samples for Initial Selection: For each type of product, ingredient, or admixture requiring color selection.

C. Samples for Verification: For each type of product or exposed finish, prepared as Samples of size indicated below:

1. Exposed Aggregate: 10-lb Sample of each mix.

D. Design Mixtures: For each concrete paving mixture. Include alternate design mixtures when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.

1.06 INFORMATIONAL SUBMITTALS

A. Qualification Data: For qualified Installer of stamped detectable warnings ready-mix concrete manufacturer and testing agency.

B. Material Certificates: For the following, from manufacturer:

1. Cementitious materials.

2. Steel reinforcement and reinforcement accessories.

3. Fiber reinforcement.

4. Admixtures.

5. Curing compounds.

6. Applied finish materials.

7. Bonding agent or epoxy adhesive.

8. Joint fillers.

C. Material Test Reports: For each of the following:

1. Aggregates: Include service-record data indicating absence of deleterious expansion of concrete due to alkali-aggregate reactivity.

D. Field quality-control reports.

1.07 QUALITY ASSURANCE

A. Ready-Mix-Concrete Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment.

1. Manufacturer certified according to NRMCA's "Certification of Ready Mixed Concrete Production Facilities" (Quality Control Manual - Section 3, "Plant Certification Checklist").

B. Testing Agency Qualifications: Qualified according to ASTM C 1077 and ASTM E 329 for testing indicated.

1. Personnel conducting field tests shall be qualified as ACI Concrete Field Testing Technician, Grade 1, according to ACI CP-1 or an equivalent certification program.

C. Mockups: Build mockups to verify selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.

1. Build mockups of full-thickness sections of concrete paving to demonstrate typical joints; surface finish, texture, and color; curing; and standard of workmanship.

2. Build mockups of concrete paving in the location and of the size indicated or, if not indicated, build mockups where directed by the University.

3. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.

4. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.08 PRECONSTRUCTION TESTING

A. Preconstruction Testing Service: Engage a qualified independent testing agency to perform preconstruction testing on concrete paving mixtures.

1.09 FIELD CONDITIONS

A. Traffic Control: Maintain access for vehicular and pedestrian traffic as required for other construction activities.

B. Cold-Weather Concrete Placement: Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing, or low temperatures. Comply with ACI 306.1 and the following:

1. When air temperature has fallen to or is expected to fall below 40 deg F, uniformly heat water and aggregates before mixing to obtain a concrete mixture temperature of not less than 50 deg F and not more than 80 deg F at point of placement.

2. Do not use frozen materials or materials containing ice or snow.

3. Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators unless otherwise specified and approved in design mixtures.

C. Hot-Weather Concrete Placement: Comply with ACI 301 and as follows when hot-weather conditions exist:

1. Cool ingredients before mixing to maintain concrete temperature below 90 deg F at time of placement. Chilled mixing water or chopped ice may be used to control temperature, provided water equivalent of ice is calculated in total amount of mixing water. Using liquid nitrogen to cool concrete is Contractor's option.

2. Cover steel reinforcement with water-soaked burlap, so steel temperature will not exceed ambient air temperature immediately before embedding in concrete.

3. Fog-spray forms, steel reinforcement, and subgrade just before placing concrete. Keep subgrade moisture uniform without standing water, soft spots, or dry areas.

PART 2 PRODUCTS

2.01 CONCRETE, GENERAL

A. Concrete shall comply with Section 320 “Concrete Improvements” of the City of Los Banos Standard Specifications and Caltrans Standard Specifications.

2.02 FORMS

A. Forms shall comply with Section 320 “Concrete Improvements” of the City of Los Banos Standard Specifications and Caltrans Standard Specifications.

2.03 STEEL REINFORCEMENT

A. Steel reinforcement shall comply with Section 320 “Concrete Improvements” of the City of Los Banos Standard Specifications and Caltrans Standard Specifications.

2.04 CONCRETE MATERIALS

A. Concrete materials shall comply with Section 320 “Concrete Improvements” of the City of Los Banos Standard Specifications and Caltrans Standard Specifications.

2.05 FIBER REINFORCEMENT

A. Fiber reinforcement shall comply with Section 320 “Concrete Improvements” of the City of Los Banos Standard Specifications and Caltrans Standard Specifications..

2.06 CURING MATERIALS

A. Curing materials shall comply with Section 320 “Concrete Improvements” of the City of Los Banos Standard Specifications and Caltrans Standard Specifications.

2.07 RELATED MATERIALS

A. Joint Fillers shall comply with Section 320 “Concrete Improvements” of the City of Los Banos Standard Specifications and Caltrans Standard Specifications.

B. Bonding Agents shall comply with Section 320 “Concrete Improvements” of the City of Los Banos Standard Specifications and Caltrans Standard Specifications.

C. Epoxy-Bonding Adhesives shall comply with Section 320 “Concrete Improvements” of the City of Los Banos Standard Specifications and Caltrans Standard Specifications.

D. Chemical Surface Retarder shall comply with Section 320 “Concrete Improvements” of the City of Los Banos Standard Specifications and Caltrans Standard Specifications.

2.08 CONCRETE MIXTURES

A. Concrete mixtures shall comply with Section 320 “Concrete Improvements” of the City of Los Banos Standard Specifications and Caltrans Standard Specifications.

PART 3 EXECUTION

3.01 EXAMINATION

A. Examination shall comply with Section 320 “Concrete Improvements” of the City of Los Banos Standard Specifications and Caltrans Standard Specifications.

3.02 PREPARATION

A. Preparation shall comply with Section 320 “Concrete Improvements” of the City of Los Banos Standard Specifications and Caltrans Standard Specifications.

3.03 EDGE FORMS AND SCREED CONSTRUCTION

A. Edge forms and screen construction shall comply with Section 320 “Concrete Improvements” of the City of Los Banos Standard Specifications and Caltrans Standard Specifications.

3.04 STEEL REINFORCEMENT INSTALLATION

A. Steel reinforcement installation shall comply with Section 310 “Structural Concrete” of the City of Los Banos Standard Specifications and Caltrans Standard Specifications.

3.05 JOINTS

A. Joints shall comply with Section 320 “Concrete Improvements” of the City of Los Banos Standard Specifications and Caltrans Standard Specifications.

3.06 CONCRETE PLACEMENT

A. Concrete placement shall comply with Section 320 “Concrete Improvements” of the City of Los Banos Standard Specifications and Caltrans Standard Specifications.

3.07 FLOAT FINISHING

A. Float finishing shall comply with Section 320 “Concrete Improvements” of the City of Los Banos Standard Specifications and Caltrans Standard Specifications.

3.08 SPECIAL FINISHES

A. Special finishes shall comply with Section 320 “Concrete Improvements” of the City of Los Banos Standard Specifications and Caltrans Standard Specifications.

3.09 CONCRETE PROTECTION AND CURING

A. Concrete protection and curing shall comply with Section 320 “Concrete Improvements” of the City of Los Banos Standard Specifications and Caltrans Standard Specifications.

3.10 PAVING TOLERANCES

A. Paving tolerances shall comply with Section 320 “Concrete Improvements” of the City of Los Banos Standard Specifications and Caltrans Standard Specifications.

3.11 FIELD QUALITY CONTROL

A. Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections.

B. Testing Services: Testing and inspecting of composite samples of fresh concrete obtained according to ASTM C 172/C 172M shall be performed according to the following requirements:

1. Testing Frequency: Obtain at least one composite sample for each 100 cu. yd. or fraction thereof of each concrete mixture placed each day.

   a. When frequency of testing will provide fewer than five compressive-strength tests for each concrete mixture, testing shall be conducted from at least five randomly selected batches or from each batch if fewer than five are used.

2. Slump: ASTM C 143/C 143M; one test at point of placement for each composite sample, but not less than one test for each day's pour of each concrete mixture. Perform additional tests when concrete consistency appears to change.

3. Air Content: ASTM C 231/C 231M, pressure method; one test for each composite sample, but not less than one test for each day's pour of each concrete mixture.

4. Concrete Temperature: ASTM C 1064/C 1064M; one test hourly when air temperature is 40 deg F and below and when it is 80 deg F and above, and one test for each composite sample.

5. Compression Test Specimens: ASTM C 31/C 31M; cast and laboratory cure one set of three standard cylinder specimens for each composite sample.

6. Compressive-Strength Tests: ASTM C 39/C 39M; test one specimen at seven days and two specimens at 28 days.

   a. A compressive-strength test shall be the average compressive strength from two specimens obtained from same composite sample and tested at 28 days.

C. Strength of each concrete mixture will be satisfactory if average of any three consecutive compressive-strength tests equals or exceeds specified compressive strength and no compressive-strength test value falls below specified compressive strength by more than 500 psi.

D. Test results shall be reported in writing to Architect, concrete manufacturer, and Contractor within 48 hours of testing. Reports of compressive-strength tests shall contain Project

identification name and number, date of concrete placement, name of concrete testing and inspecting agency, location of concrete batch in Work, design compressive strength at 28 days, concrete mixture proportions and materials, compressive breaking strength, and type of break for both 7- and 28-day tests.

E. Nondestructive Testing: Impact hammer, sonoscope, or other nondestructive device may be permitted by Architect but will not be used as sole basis for approval or rejection of concrete.

F. Additional Tests: Testing and inspecting agency shall make additional tests of concrete when test results indicate that slump, air entrainment, compressive strengths, or other requirements have not been met, as directed by Architect.

G. Concrete paving will be considered defective if it does not pass tests and inspections.

H. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

I. Prepare test and inspection reports.

3.12 REPAIR AND PROTECTION

A. Remove and replace concrete paving that is broken, damaged, or defective or that does not comply with requirements in this Section. Remove work in complete sections from joint to joint unless otherwise approved by Architect.

B. Drill test cores, where directed by Architect, when necessary to determine magnitude of cracks or defective areas. Fill drilled core holes in satisfactory paving areas with portland cement concrete bonded to paving with epoxy adhesive.

C. Protect concrete paving from damage. Exclude traffic from paving for at least 14 days after placement. When construction traffic is permitted, maintain paving as clean as possible by removing surface stains and spillage of materials as they occur.

D. Maintain concrete paving free of stains, discoloration, dirt, and other foreign material. Sweep paving not more than two days before date scheduled for Substantial Completion inspections.

END OF SECTION 321313

SECTION 321723

PAVEMENT MARKINGS

PART 1 GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes painted markings applied to concrete pavement.

1.3 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1. Review methods and procedures related to marking pavement including, but not limited to, the following:

   a. Pavement aging period before application of pavement markings.

   b. Review requirements for protecting pavement markings, including restriction of traffic during installation period.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include technical data and tested physical and performance properties.

B. Shop Drawings: For pavement markings.

1. Indicate pavement markings, colors, lane separations, defined parking spaces, and dimensions to adjacent work.

2. Indicate, with international symbol of accessibility, spaces allocated for people with disabilities.

C. Samples: For each exposed product and for each color and texture specified; on rigid backing, 8 inches square.

1.5 QUALITY ASSURANCE

A. Regulatory Requirements: Comply with materials, workmanship, and other applicable requirements of Section 84 “Traffic Stripes and Pavement Markings” of the Caltrans Standard Specifications for pavement-marking work.

1. Measurement and payment provisions and safety program submittals included in standard specifications do not apply to this Section.

1.6 FIELD CONDITIONS

A. Environmental Limitations: Proceed with pavement marking only on clean, dry surfaces and at a minimum ambient or surface temperature of 40 deg F for alkyd materials, and not exceeding 95 deg F.

PART 2 PRODUCTS

2.1 PAVEMENT-MARKING PAINT

A. Pavement-Marking Paint shall comply with the requirements of Section 84 of the Caltrans Standard Specifications.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that pavement is dry and in suitable condition to begin pavement marking according to manufacturer's written instructions.

B. Proceed with pavement marking only after unsatisfactory conditions have been corrected.

3.2 PAVEMENT MARKING

A. Do not apply pavement-marking paint until layout, colors, and placement have been verified with Architect.

B. Allow paving to age for a minimum of 30 days before starting pavement marking.

C. Sweep and clean surface to eliminate loose material and dust.

D. Apply paint with mechanical equipment to produce pavement markings, of dimensions indicated, with uniform, straight edges. Apply at manufacturer's recommended rates to provide a minimum wet film thickness of 15 mils.

1. Apply graphic symbols and lettering with paint-resistant, die-cut stencils, firmly secured to pavement. Mask an extended area beyond edges of each stencil to prevent paint application beyond the stencil. Apply paint so that it cannot run beneath the stencil.

2. Broadcast glass beads uniformly into wet markings at a rate of 6 lb/gal.

3.3 PROTECTING AND CLEANING

A. Protect pavement markings from damage and wear during remainder of construction period.

B. Clean spillage and soiling from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

END OF SECTION 321723

13TH STREET WATER EXTENSION IMPROVEMENT PLAN

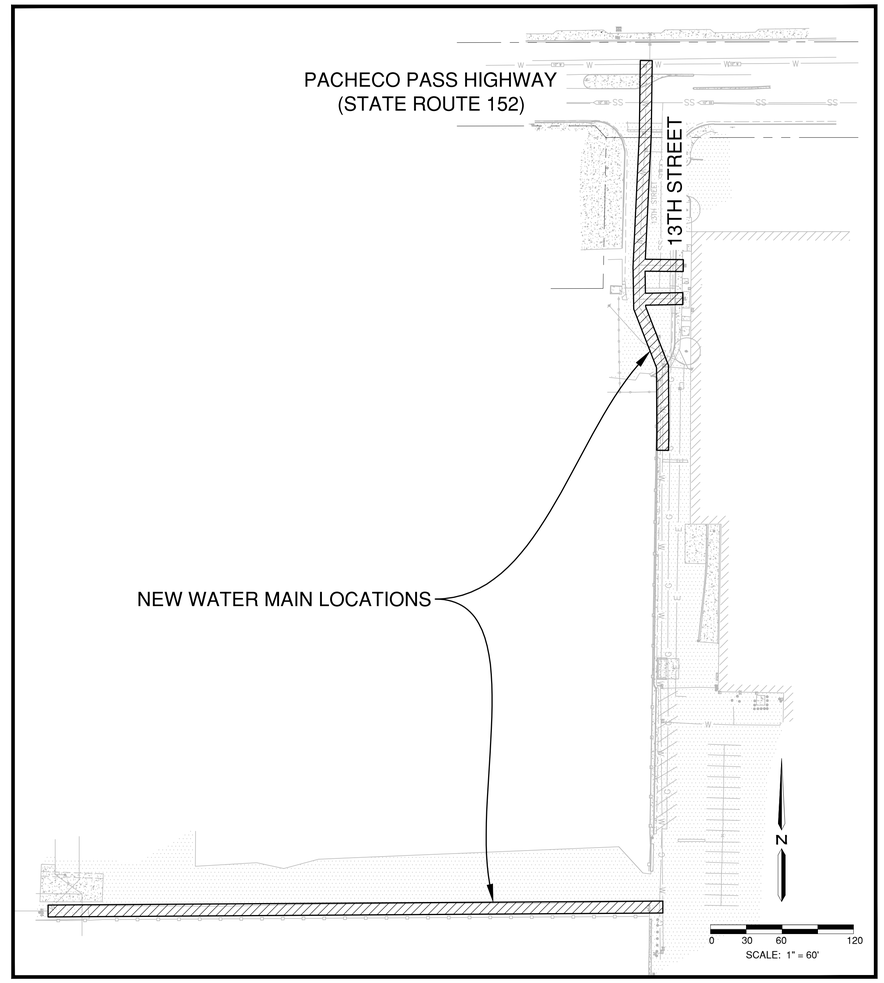
LOS BANOS, CALIFORNIA

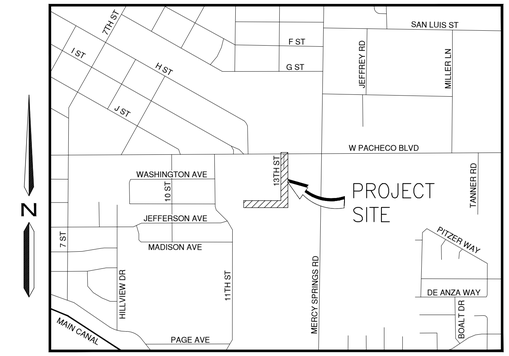
ABBREVIATION LIST

±	PLUS OR MINUS	MH	MANHOLE
AB	AGGREGATE BASE	MIN	MINIMUM
AC	ASPHALT CONCRETE	N.T.S.	NOT TO SCALE
ADA	AMERICANS WITH DISABILITY ACT	PCC	POINT OF COMPOUND CURVE
BC	BEGINNING OF CURVE	PL	PROPERTY LINE
BDRY	BOUNDARY	PP	POWER POLE
BM	BENCH MARK	PRC	POINT OF REVERSE CURVE
BO	BLOW-OFF	PUE	PUBLIC UTILITY EASEMENT
BOC	BACK OF CURB	PVC	POLYVINYL CHLORIDE PIPE
BSL	BUILDING SETBACK LINE	P or PVMT	PAVEMENT
BW	BACK OF WALK	R	RADIUS
C&G	CURB AND GUTTER	RCP	REINFORCED CONCRETE PIPE
CB	CATCH BASIN	RET	RETURN
CO	CLEANOUT	ROW	RIGHT OF WAY
℄	CENTER LINE	S/W	SIDEWALK
C or CONC.	CONCRETE	S	SANITARY SEWER
D	STORM DRAIN	SD	STORM DRAIN
D-FM	STORM DRAIN FORCE MAIN	SHT	SHEET
D.I.P.	DUCTILE IRON PIPE	SNS	STREET NAME SIGN
EC	END OF CURVE	SP	STANDPIPE
ELEV.	ELEVATION	STA	STATION
EP	EDGE OF PAVEMENT	STD	STANDARD
ESMT	EASEMENT	TBM	TEMPORARY BENCH MARK
EX or EXIST	EXISTING	TC	TOP OF CURB
FF	FINISH FLOOR	TEMP	TEMPORARY
FH	FIRE HYDRANT	THRU	THROUGH
FL	FLOW LINE	TPE	TREE PLANTING EASEMENT
GB	GRADE BREAK	VC	VERTICAL CURVE
HORIZ	HORIZONTAL	VCP	VITRIFIED CLAY PIPE
HP	HIGH POINT	VERT	VERTICAL
INV.	INVERT	W	WATER
IRR	IRRIGATION	U.N.O.	UNLESS NOTED OTHERWISE
JP	JOINT POLE	UP	UTILITY POLE
LF	LINEAL FEET	TYP.	TYPICAL

LEGEND (PLANS)

EXISTING	PROPOSED	
		ACCESSIBLE PARKING STRIPING
		BACKFLOW PREVENTOR
		BENCHMARK
		BOLLARD
		CATCH BASIN
		CLEAN OUT
		CONCRETE
10	10	CONTOUR
		DOOR
		DOUBLE DETECTOR CHECK VALVE
		DRAIN INLET
		ELECTRIC METER/BOX
		ELECTROLIER
× 100.65 EP	× 100.65 EP	ELEVATION W/ DESCRIPTION
		FIRE DEPARTMENT CONNECTION
		FIRE HYDRANT
		GAS METER/BOX
GV	GV	GAS VALVE
		HOSE BIB
IRR	IRR	IRRIGATION VALVE
		MANHOLE
		POINT INDICATOR VALVE
		SANITARY SEWER MANHOLE
		SIGN
		STORM DRAIN MANHOLE
		STREET/SITE LIGHT PULL BOX
		TELECOMMUNICATIONS BOX
		TELECOMMUNICATIONS MANHOLE
		TRAFFIC SIGNAL
		TRAFFIC SIGNAL BOX
		TREES W/ DRIP LINE
XX"SD XX"SS	XX"SD XX"SS	UNDERGROUND UTILITY LINE LABEL AND DIRECTION
		UTILITY POLE
		WALL (HEIGHT/TYPE NOTED)
W	W	WATER METER/BOX
WV		WATER VALVE
		CONCRETE
		PAVEMENT
		GRAVEL
		BRICK/PAVERS
		LANDSCAPE





VICINITY MAP

N.T.S.

SHEET INDEX

1. COVER SHEET
2. NOTES
3. DETAILS
4. WATERLINE LAYOUT AND DESIGN
5. EROSION CONTROL PLAN

CONTACT INFORMATION

OWNERS: CITY OF LOS BANOS
520 J STREET
LOS BANOS, CA 93635
CONTACT: GREG PIMENTEL
(209) 827-7056

CIVIL ENGINEER: O'DELL ENGINEERING
1165 SCENIC DRIVE, SUITE B
MODESTO, CA 95350
CONTACT: MIKE PERSAK
(209) 571-1765

BENCHMARK:

DATUM: NAVD88 (HORIZONTAL DATUM: NAD 83 – EPOCH DATE 2010 PER NGS CORS S300)

NAME: #15011

ELEVATION: 117.52 FEET

LOCATION: NORTHING: 1842686.72, EASTING: 6462938.78
13 FEET NORTH OF CHAINLINK FENCE. 2 FEET NORTH OF SOUTH EDGE OF PAVEMENT.

CALL BEFORE YOU DIG
USA
800-227-2600

PLAN REVISIONS

NO.	DATE	REVISION
NO.		

O'DELL ENGINEERING
Modesto Palo Alto Pleasanton
1165 Scenic Drive, Suite B
Modesto, CA 95350
Ph 209.571.1765 odellengineering.com

IMPROVEMENT PLAN
13TH STREET WATER EXTENSION
LOS BANOS CALIFORNIA

COVER SHEET

REGISTERED PROFESSIONAL ENGINEER
MICHAEL T. PERSAK
No. C44908
Exp. 12/31/16
CIVIL
STATE OF CALIFORNIA

APPROVED:

DESIGNED:	MP
DRAWN:	SC
CHECKED:	MP
SCALE:	N.T.S.
DATE:	03/05/2015
JOB NO.:	27913
FILE NO.:	27913-CV.dwg

SHEET NO.
1
OF
5

H:\27913-Los Banos 13th Street Water Supply\ConstPlans\27913-CV.dwg 15:30:05 03/05/2015

GENERAL NOTES:

1. CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER, ENGINEER AND THE CITY HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.

2. UNLESS OTHERWISE STATED, ALL STATIONS INDICATED ON THE IMPROVEMENT PLANS ARE REFERENCED TO THE CENTER LINE OF THE STREET. ALL STATIONS ON THE CURBS ARE PERPENDICULAR TO OR RADIALLY OPPOSITE CENTER LINE STATIONS, UNLESS OTHERWISE NOTED.

3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION OF ALL EXISTING FACILITIES.

4. THE CONTRACTOR SHALL PROVIDE ALL LIGHTS, SIGNS, BARRICADES, FLAGMEN OR OTHER DEVICES NECESSARY TO PROVIDE FOR PUBLIC SAFETY IN ORDINANCE WITH THE CURRENT ISSUE OF "MANUAL OF TRAFFIC CONTROLS WARNING SIGNS, LIGHTS AND DEVICES FOR USE IN PERFORMANCE OF WORK UPON HIGHWAYS" PUBLISHED BY THE STATE OF CALIFORNIA BUSINESS AND TRANSPORTATION AGENCY.

5. ALL MATERIALS, WORKMANSHIP, AND CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT CITY OF LOS BANOS IMPROVEMENT STANDARDS AND SPECIFICATIONS; AND THE LATEST EDITION OF THE STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS. LOS BANOS STANDARD PLANS ARE AVAILABLE AT WWW.USSPECBOOK.COM.

6. THE OWNER IS RESPONSIBLE FOR ARRANGEMENTS TO PAY FOR ALL MATERIAL TESTING REQUIRED BY THE PUBLIC WORKS INSPECTOR. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SEE TO IT THAT ALL TESTING REQUIRED BY THE PUBLIC WORKS INSPECTOR IS PERFORMED.

7. THE CONTRACTOR SHALL MEET WITH CITY OF LOS BANOS AT LEAST 48 HOURS PRIOR TO START OF CONSTRUCTION WITH 24 HOURS NOTICE REQUIRED BEFORE ALL INSPECTIONS. ALL ARRANGEMENTS FOR SITE INSPECTION ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CITY OF LOS BANOS WILL REQUIRE A PRE-CONSTRUCTION MEETING PRIOR TO THE START OF CONSTRUCTION.

8. ALL CONSTRUCTION SHALL BE LIMITED TO BETWEEN THE HOURS OF 7:00 A.M. AND 9:00 P.M., MONDAY THROUGH FRIDAY AND INSPECTION REQUESTS SHALL BE LIMITED TO NORMAL CITY BUSINESS HOURS: 7:00 A.M. THROUGH 4:00 P.M. MONDAY THROUGH FRIDAY. IF OVERTIME IS REQUIRED, THE CONTRACTOR SHALL INFORM THE CITY OF LOS BANOS PUBLIC WORKS INSPECTOR. ARRANGEMENTS FOR ANY OVERTIME INSPECTION SERVICES AND PAYMENT OF FEES FOR SAME SHOULD BE MADE 48 HOURS IN ADVANCE AND ARE SUBJECT TO INSPECTION AVAILABILITY AND APPROVAL BY THE CITY ENGINEER.

9. THE CITY OF LOS BANOS OR ASSOCIATED UTILITY COMPANY AND RESIDENCES TO BE AFFECTED SHALL BE NOTIFIED IMMEDIATELY UPON ANY UTILITY SERVICE DISRUPTION OTHER THAN SPECIFIED ON THESE IMPROVEMENT PLANS AND A 48 HOUR NOTICE SHALL BE GIVEN FOR ANY PLANNED DISRUPTION.

10. DUST SHALL BE CONTROLLED BY THE CONTRACTOR AS PER SECTION 10 OF THE STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS AND THE CITY OF LOS BANOS' SPECIFICATIONS. WATER FOR DUST CONTROL AND USE FOR COMPACTION MAY BE PURCHASED FROM THE APPROPRIATE AGENCY PRIOR TO START OF ANY WORK, AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR FOR ANY FEES OR DEPOSITS. IT IS ALSO THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN CLEANLINESS OF THE EXISTING IMPROVED STREETS IN THE CONSTRUCTION AREA.

11. THE CONTRACTORS SHALL SUBMIT TO THE ENGINEER, PRIOR TO FINAL ACCEPTANCE, AS BUILT DRAWINGS OF ALL IMPROVEMENTS REPRESENTED BY THE PROJECT PLANS AND SPECIFICATIONS.

12. CONSTRUCTION EQUIPMENT SHALL UTILIZE PACHECO PASS HIGHWAY (STATE ROUTE 152) FOR ACCESS.

13. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS FROM DAMAGE. COST OF REPLACING EXISTING IMPROVEMENTS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEMS REQUIRING REMOVAL AND REPLACEMENT OF EXISTING IMPROVEMENTS.

14. THE CONTRACTOR IS TO MAKE PROVISIONS FOR TRENCH SPOILS.

15. SAWCUT ALL TRENCHES IN EXISTING PAVEMENT.

16. THE CONTRACTOR IS RESPONSIBLE FOR COMPACTION OF ALL UTILITY TRENCHES INCLUDING P.G.&E. AND FOR THE SPOILS GENERATED BY THESE SAME UTILITY TRENCHES.

17. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE DESIGN ENGINEER OF ANY ANTICIPATED SOILS IMBALANCE SO GRADES CAN BE ADJUSTED. ADJUSTMENTS REQUIRE THE APPROVAL OF THE CITY ENGINEER.

18. ALL ENDS, BENDS, AND TEES ON WATER LINES MUST HAVE ADEQUATE THRUST BLOCKS PER CITY OF LOS BANOS REQUIREMENTS.

19. THE CITY OF LOS BANOS WILL OPERATE ALL EXISTING WATER VALVES. CONTRACTOR SHALL MAKE ARRANGEMENTS IN ADVANCE WITH THE PUBLIC WORKS INSPECTOR.

20. DRAWING DETAIL NUMBERS SHOWN ON THE PLANS REFER TO DRAWINGS CONTAINED IN THE CITY OF LOS BANOS' IMPROVEMENT STANDARDS AND SPECIFICATIONS, SHOWN THUS; (I.E. DET. BF-1)

21. CONTRACTOR SHALL FURNISH CERTIFICATES OF COMPLIANCE TO THE CITY FOR CRUSHED MISCELLANEOUS BASE MATERIAL AND FOR THE SPECIFIED CLASS OF P.C.C. PRIOR TO PAVING ROADWAYS.

22. IN AREAS WHICH ARE TO RECEIVE A.C., P.C.C., OR AGGREGATE BASE, THE CONTRACTOR SHALL MAINTAIN SUBGRADE AT THE AS-GRADED WATER CONTENT. IF THE SUBGRADE IS ALLOWED TO DRY, THE WATER CONTENT OF SOIL SHOULD BE RAISED TO THE RECOMMENDED VALUE SPECIFIED FOR THE PROJECT.

23. STREET SIGNS, TRAFFIC CONTROL SIGNS, AND PAVEMENT MARKINGS SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR AT LOCATIONS SHOWN ON THESE PLANS.

24. THE CONTRACTOR SHALL SECURE A TRENCH PERMIT FROM THE CALIFORNIA DIVISION OF INDUSTRIAL SAFETY PRIOR TO EXCAVATION OF ANY TRENCH OVER FIVE FEET IN DEPTH.

25. THE CONTRACTOR SHALL VERIFY LOCATIONS OF ALL EXISTING UNDERGROUND UTILITIES AND SHALL CONTACT THE RESPECTIVE UTILITY COMPANIES PRIOR TO COMMENCEMENT OF WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION AND PRESERVATION OF ALL SUCH FACILITIES IN THE AREA OF CONSTRUCTION AND SHALL NOTIFY UTILITIES FORTY-EIGHT (48) HOURS IN ADVANCE OF ANY CONSTRUCTION.

26. CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF THE REMOVAL OR RELOCATIONS OF ALL EXISTING UTILITIES WITH RESPECTIVE UTILITY COMPANIES.

27. ALL WATER LINES SHALL BE TESTED AND DISINFECTED IN COMPLIANCE WITH THE REQUIREMENTS OF THE CITY OF LOS BANOS IMPROVEMENT STANDARDS AND SPECIFICATIONS, PRIOR TO FINAL ACCEPTANCE.

28. ALL TRENCHES ON MAJOR AND COLLECTOR STREETS AND CROSS TRENCHES ON ALL STREETS SHALL BE PAVED WITH TEMPORARY PAVING THE SAME DAY THE PAVEMENT CUT IS MADE.

29. IT IS INTENDED THAT THESE PLANS AND SPECIFICATIONS REQUIRE ALL LABOR AND MATERIALS NECESSARY AND PROPER FOR THE WORK CONTEMPLATED AND THAT THE WORK BE COMPLETED IN ACCORDANCE WITH THEIR TRUE INTENT AND PURPOSE. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY REGARDING ANY DISCREPANCIES OR AMBIGUITIES WHICH MAY EXIST IN THE PLANS OR SPECIFICATIONS. THE ENGINEER'S INTERPRETATION OR CORRECTION THEREOF SHALL BE CONCLUSIVE.

30. FOR ALL WORK WITHIN PUBLIC RIGHT-OF-WAYS, THE CONTRACTOR SHALL OBTAIN AN ENCROACHMENT PERMIT AND SHALL PRESERVE THE INTEGRITY AND LOCATION OF ANY AND ALL PUBLIC UTILITIES, STREET IMPROVEMENTS AND PROVIDE NECESSARY CONSTRUCTION TRAFFIC CONTROL. THE CONTRACTOR SHALL THROUGH THE ENCROACHMENT PERMIT PROCESS, VERIFY WITH THE CITY OF LOS BANOS THE NEED FOR ANY DETOUR PLAN. IF A PLAN IS REQUIRED, CONTRACTOR SHALL PROVIDE PLAN AND RECEIVE APPROVAL PRIOR TO CONSTRUCTION.

31. THE CONTRACTOR SHALL MAINTAIN A NEATLY MARKED SET OF FULL-SIZE RECORD DRAWINGS SHOWING THE FINAL LOCATION AND LAYOUT OF ALL ELECTRICAL, PIPING AND CONDUITS, STRUCTURES AND OTHER FACILITIES. THE AS-BUILTS OF THE ELECTRICAL SYSTEM SHALL INCLUDE THE STREET LIGHT LAYOUT PLAN SHOWING LOCATIONS OF LIGHTS, CONDUITS, CONDUCTORS, POINTS OF CONNECTIONS, PULLBOXES AND WIRE SIZES. AS-BUILT RECORD DRAWINGS SHALL REFLECT CHANGE ORDERS, ACCOMMODATIONS AND ADJUSTMENTS TO ALL IMPROVEMENTS CONSTRUCTED. WHERE NECESSARY, SUPPLEMENTAL DRAWINGS SHALL BE PREPARED BY THE CONTRACTOR.

32. PRIOR TO ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL DELIVER TO THE ENGINEER, ONE SET OF NEATLY MARKED AS-BUILT RECORD DRAWINGS INCLUDING THE INFORMATION REQUIRED ABOVE. AS-BUILT RECORD DRAWINGS SHALL BE REVIEWED AND THE COMPLETE AS-BUILT RECORD DRAWINGS SET SHALL BE CURRENT WITH ALL CHANGES AND DEVIATIONS REDLINED AS A PRECONDITIONED TO THE FINAL PROGRESS PAYMENT APPROVAL AND/OR FINAL CITY ACCEPTANCE. THE ENGINEER SHALL PROVIDE THE CITY WITH A COMPLETE REPRODUCIBLE AS-BUILTS RECORD DRAWING SET.

33. WHERE THE PLANS OR 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.

34. THE CONTRACTOR SHALL OBTAIN ALL PERMITS AND LICENSES REQUIRED FOR THE CONSTRUCTION AND COMPLETION OF THE PROJECT.

35. CONSTRUCTION STAKING SHALL BE DONE BY THE CONTRACTOR.

36. THE CONTRACTOR SHALL EXERCISE DUE CAUTION AND SHALL CAREFULLY PRESERVE BENCH MARKS, REFERENCE POINTS AND ALL SURVEY STAKES, AND SHALL BEAR ALL EXPENSES FOR REPLACEMENT AND/OR ERRORS CAUSED BY THEIR UNNECESSARY LOSS OR DISTURBANCE.

37. PRIOR TO COMMENCING ANY WORK, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ALL CURRENT STANDARDS FOR THE CITY OF LOS BANOS ARE FOLLOWED AS WELL AS TO HAVE EACH UTILITY COMPANY LOCATE, IN THE FIELD THEIR MAIN AND SERVICE LINES. THE CONTRACTOR SHALL NOTIFY MEMBERS OF THE UNDERGROUND SERVICE ALERT (USA) 48 HOURS IN ADVANCE OF PERFORMING ANY EXCAVATION WORK BY CALLING THE TOLL FREE NUMBER (800) 642-2444. THE CONTRACTOR SHALL RECORD THE U.S.A. ORDER NUMBER AND FURNISH ORDER NUMBER TO OWNER PRIOR TO ANY EXCAVATION. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO PROTECT ALL EXISTING UTILITIES SO THAT NO DAMAGE RESULTS TO THEM DURING THE PERFORMANCE OF THIS CONTRACT. ANY REPAIRS NECESSARY TO DAMAGED UTILITIES SHALL BE PAID FOR BY THE CONTRACTOR. THE CONTRACTOR SHALL BE REQUIRED TO COOPERATE WITH OTHER CONTRACTORS AND UTILITY COMPANIES INSTALLING NEW STRUCTURES, UTILITIES AND SERVICE TO THE DEVELOPMENT.

38. WHENEVER PAVEMENT IS BROKEN OR CUT IN THE INSTALLATION OF THE WORK COVERED BY THESE SPECIFICATIONS. THE PAVEMENT SHALL BE REPLACED, AFTER PROPER BACKFILLING, WITH PAVEMENT MATERIALS EQUAL TO OR BETTER THAN THE MATERIALS USED IN THE ORIGINAL PAVING. THE FINISHED PAVEMENT SHALL BE SUBJECT TO THE APPROVAL OF THE PUBLIC WORKS DIRECTOR.

39. PAYMENT FOR PAVEMENT WILL BE MADE ONLY FOR AREAS SHOWN ON PLANS, REPLACEMENT OF PAVEMENT WHICH IS BROKEN OR CUT DURING THE INSTALLATION OF THE WORK COVERED BY THESE SPECIFICATIONS, AND WHICH LIES OUTSIDE OF SAID AREAS, SHALL BE INCLUDED IN THE CONTRACTOR'S UNIT PRICE FOR PAVEMENT, AND NO ADDITIONAL PAYMENT SHALL BE MADE FOR SUCH WORK.

40. WE CALL YOUR ATTENTION TO TITLE 8 CALIFORNIA ADMINISTRATION CODE SECTION 1540 (A) (1) OF THE CONSTRUCTION SAFETY ORDERS ISSUED BY THE OCCUPATION SAFETY AND HEALTH STANDARDS BOARD PURSUANT TO THE CALIFORNIA OCCUPATIONS SAFETY AND HEALTH ACT OF 1973 AS AMENDED WHICH STATES: (1) PRIOR TO OPENING AND EXCAVATION, EFFORT SHALL BE MADE TO DETERMINE WHETHER UNDERGROUND INSTALLATIONS; I.E., SEWER, WATER, FUEL, ELECTRIC LINES, ETC., WILL BE ENCOUNTERED AND IF SO, WHERE SUCH UNDERGROUND INSTALLATIONS ARE LOCATED WHEN THE EXCAVATION APPROACHES THE APPROXIMATE LOCATION OF SUCH AN INSTALLATION, THE EXACT LOCATION SHALL BE DETERMINED BY CAREFUL PROBING OR HAND DIGGING; AND, WHEN IT IS UNCOVERED ADEQUATE PROTECTION SHALL BE PROVIDED FOR THE EXISTING INSTALLATION. ALL KNOWN OWNERS OF UNDERGROUND FACILITIES IN THE AREA CONCERNED SHALL BE ADVISED OF PROPOSED WORK AT LEAST 48 HOURS PRIOR TO THE START OF ACTUAL EXCAVATION.

CLEARING NOTES:

1. THE CONTRACTOR SHALL REVIEW SITE PRIOR TO BIDDING. ALL VEGETATION, STRUCTURES, TREES, DELETERIOUS MATERIAL, ETC. SHALL BE REMOVED FROM THE SITE AT THE EXPENSE OF THE CONTRACTOR AND SHALL BE INCLUDED IN THE LUMP SUM CLEARING COST. ALL WORK SHALL COMPLY WITH ASTM REQUIREMENTS AND CITY STANDARDS.

DUST CONTROL NOTES:

1. SPRAY WATER ON ALL EXPOSED EARTH SURFACED DURING CLEARING, GRADING, EARTH MOVING AND OTHER SITE PREPARATION ACTIVITIES THROUGHOUT THE DAY TO MINIMIZE DUST. USE TARPAULINS OR OTHER EFFECTIVE COVERS ON ALL STOCKPILED EARTH MATERIAL AND ON ALL HAUL TRUCKS TO MINIMIZE DUST. SWEEP THE ADJACENT STREET FRONTAGES AT LEAST ONCE A DAY OR AS NEEDED TO REMOVE SILT AND OTHER DIRT WHICH IS EVIDENT FROM CONSTRUCTION ACTIVITIES. ENSURE THAT CONSTRUCTION VEHICLES ARE CLEANED PRIOR TO LEAVING THE SITE TO PREVENT DUST AND DIRT FROM BEING TRACKED OFF SITE.

2. ALL EXPOSED SURFACES SHALL BE WATERED A MINIMUM OF TWICE DAILY UNLESS DEEMED UNNECESSARY DUE TO WEATHER. WATER SHALL BE APPLIED AS PROVIDED IN SECTION 17 OF CALTRANS STANDARD SPECIFICATIONS.

3. DUST PALLIATIVES MAY BE SUBSTITUTED FOR WATERING UPON THE APPROVAL OF THE CITY ENGINEER. DUST PALLIATIVES SHALL BE APPLIED AS PROVIDED IN SECTION 18 OF CALTRANS STANDARD SPECIFICATIONS.

STORM WATER POLLUTION PREVENTION:

1. STORM WATER POLLUTION PREVENTION PLAN (SWPPP) WILL BE PREPARED IN ACCORDANCE WITH THE CURRENT STATE WATER RESOURCES CONTROL BOARD N.P.D.E.S. PERMIT REQUIREMENTS. CONTRACTOR SHALL SUPPLY A SWPPP COMPLETED BY A QUALIFIED SWPPP DEVELOPER (QSD). THE SWPPP SHALL BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES DURING CONSTRUCTION.

WATER NOTES:

1. CONTRACTOR SHALL EXPOSE EXISTING WATER LINES TO VERIFY EXISTING ELEVATION AND LOCATION PRIOR TO START OF CONSTRUCTION.

2. WATER LINE CROSSINGS SHALL MEET STATE HEALTH STANDARDS AND DETAILS AS SHOWN ON THESE PLANS.

3. WATER LINE CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF CITY OF LOS BANOS STANDARD SPECIFICATIONS.

4. INSTALL TRACER WIRE FOR ALL WATER LINES. ALL WATER LINES SHALL BE INSTALLED WITH A NO. 12 GAGE TW SOLID COATED TRACER WIRE.

5. PRIOR TO FINAL ACCEPTANCE, ALL WATER LINES SHALL BE TESTED AND DISINFECTED IN COMPLIANCE WITH THE REQUIREMENTS OF CITY OF LOS BANOS IMPROVEMENT STANDARD SPECIFICATIONS.

6. ALL CONNECTIONS TO EXISTING CITY FACILITIES SHALL BE MADE IN THE PRESENCE OF THE CITY PUBLIC WORKS DEPARTMENT. HOT TAPS SHALL CONFORM TO CITY REQUIREMENTS.

WATER PIPE MATERIALS:

THE FOLLOWING PIPE MATERIALS SHALL BE USED FOR WATER MAIN CONSTRUCTION AND SHALL CONFORM TO THE LATEST EDITION OF APPROPRIATE AMERICAN WATER WORKS ASSOCIATION STANDARDS:

PIPE MATERIALS	STANDARD
PVC (IRON PIPE O.D.)	AWWA C900, DR 18 (CLASS 200 MINIMUM)

PLAN REVISIONS

NO.	DATE	REVISION
NO.		

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IMPROVEMENT PLAN
13TH STREET WATER EXTENSION
LOS BANOS CALIFORNIA

NOTES

REGISTERED PROFESSIONAL ENGINEER
MICHAEL T. PERSAK
No. C44908
Exp. 12/31/16
CIVIL
STATE OF CALIFORNIA

APPROVED:

DESIGNED:	MP
DRAWN:	SC
CHECKED:	MP
SCALE:	N.T.S.
DATE:	03/05/2015
JOB NO.:	27913
FILE NO.:	27913-NT-DT.dwg

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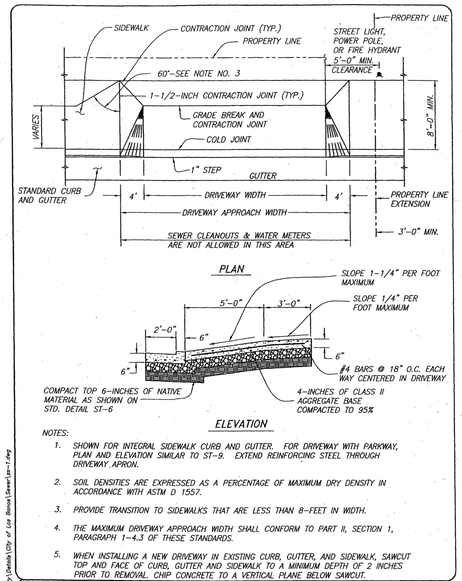
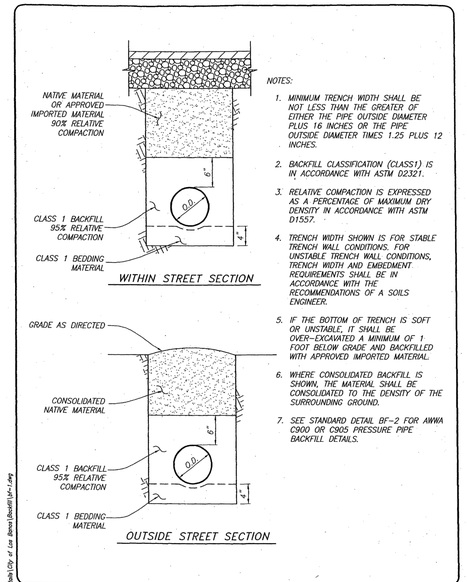


NOTES:

1. SHOWN FOR INTEGRAL SIDEWALK CURB AND GUTTER. FOR DRIVEWAY WITH PARKWAY, PLAN AND ELEVATION SIMILAR TO ST-9. EXTEND REINFORCING STEEL THROUGH DRIVEWAY APRON.
2. SOIL DENSITIES ARE EXPRESSED AS A PERCENTAGE OF MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D 1557.
3. PROVIDE TRANSITION TO SIDEWALKS THAT ARE LESS THAN 8-FEET IN WIDTH.
4. THE MAXIMUM DRIVEWAY APPROACH WIDTH SHALL CONFORM TO PART II, SECTION 1, PARAGRAPH 1-4.3 OF THESE STANDARDS.
5. WHEN INSTALLING A NEW DRIVEWAY IN EXISTING CURB, GUTTER, AND SIDEWALK, SAWCUT TOP AND FACE OF CURB, GUTTER AND SIDEWALK TO A MINIMUM DEPTH OF 2 INCHES PRIOR TO REMOVAL. CHIP CONCRETE TO A VERTICAL PLANE BELOW SAWCUT.

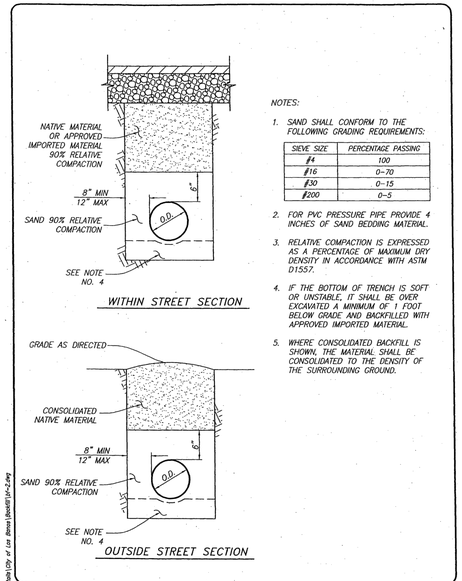
DATE APPROVED: 10-06-04	STREET IMPROVEMENTS	STANDARD DETAIL
APPROVED BY:	COMMERCIAL/INDUSTRIAL DRIVEWAY	ST-10
DRAWN: D. MORENO DATE: 10/18/00	CITY OF LOS BANOS	



NOTES:

1. MINIMUM TRENCH WIDTH SHALL BE NOT LESS THAN THE GREATER OF EITHER THE PIPE OUTSIDE DIAMETER PLUS 16 INCHES OR THE PIPE OUTSIDE DIAMETER TIMES 1.25 PLUS 12 INCHES.
2. BACKFILL CLASSIFICATION (CLASS1) IS IN ACCORDANCE WITH ASTM D2321.
3. RELATIVE COMPACTION IS EXPRESSED AS A PERCENTAGE OF MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D1557.
4. TRENCH WIDTH SHOWN IS FOR STABLE TRENCH WALL CONDITIONS. FOR UNSTABLE TRENCH WALL CONDITIONS, TRENCH WIDTH AND EMBEDMENT REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF A SOILS ENGINEER.
5. IF THE BOTTOM OF TRENCH IS SOFT OR UNSTABLE, IT SHALL BE OVER-EXCAVATED A MINIMUM OF 1 FOOT BELOW GRADE AND BACKFILLED WITH APPROVED IMPORTED MATERIAL.
6. WHERE CONSOLIDATED BACKFILL IS SHOWN, THE MATERIAL SHALL BE CONSOLIDATED TO THE DENSITY OF THE SURROUNDING GROUND.
7. SEE STANDARD DETAIL BF-2 FOR AWWA C900 OR C905 PRESSURE PIPE BACKFILL DETAILS.

DATE APPROVED: 10-06-04	BACKFILL AND BEDDING	STANDARD DETAIL
APPROVED BY:	FLEXIBLE WALLED PIPE BACKFILL	BF-1
DRAWN: D. MORENO DATE: 03/26/04	CITY OF LOS BANOS	



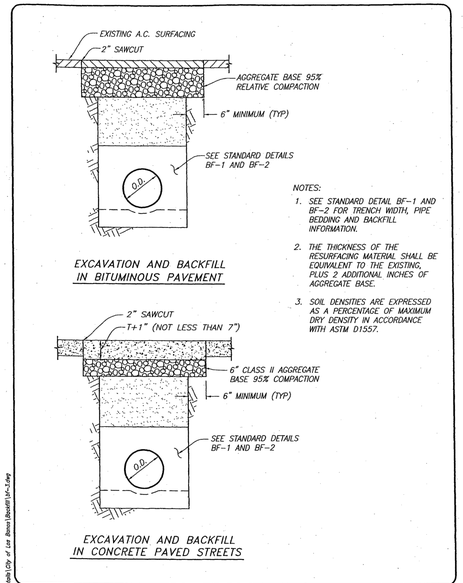
NOTES:

1. SAND SHALL CONFORM TO THE FOLLOWING GRADING REQUIREMENTS:

SIEVE SIZE	PERCENTAGE PASSING
#4	100
#16	0-70
#30	0-15
#200	0-5

2. FOR PVC PRESSURE PIPE PROVIDE 4 INCHES OF SAND BEDDING MATERIAL.
3. RELATIVE COMPACTION IS EXPRESSED AS A PERCENTAGE OF MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D1557.
4. IF THE BOTTOM OF TRENCH IS SOFT OR UNSTABLE, IT SHALL BE OVER EXCAVATED A MINIMUM OF 1 FOOT BELOW GRADE AND BACKFILLED WITH APPROVED IMPORTED MATERIAL.
5. WHERE CONSOLIDATED BACKFILL IS SHOWN, THE MATERIAL SHALL BE CONSOLIDATED TO THE DENSITY OF THE SURROUNDING GROUND.

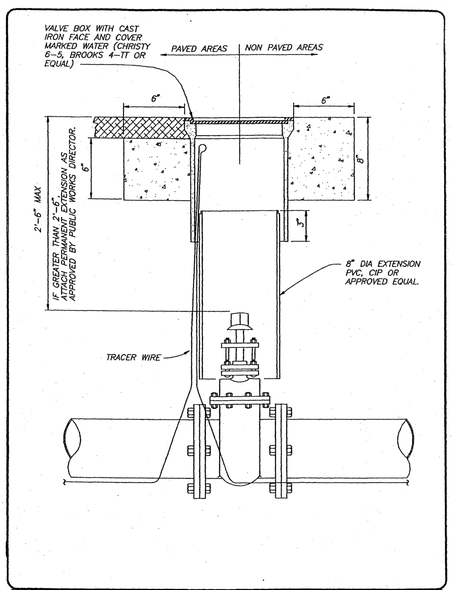
DATE APPROVED: 10-06-04	BACKFILL AND BEDDING	STANDARD DETAIL
APPROVED BY:	RIGID WALLED PIPE BACKFILL	BF-2
DRAWN: D. MORENO DATE: 03/26/04	CITY OF LOS BANOS	



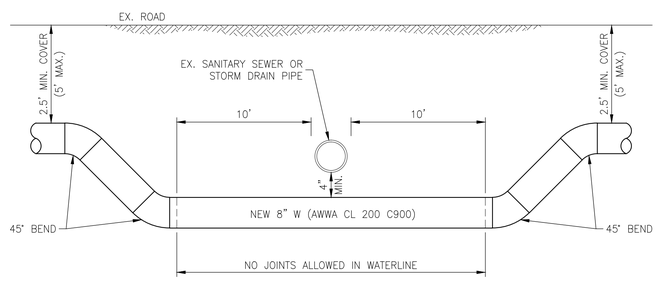
NOTES:

1. SEE STANDARD DETAIL BF-1 AND BF-2 FOR TRENCH WIDTH, PIPE BEDDING AND BACKFILL INFORMATION.
2. THE THICKNESS OF THE RESURFACING MATERIAL SHALL BE EQUIVALENT TO THE EXISTING, PLUS 2 ADDITIONAL INCHES OF AGGREGATE BASE.
3. SOIL DENSITIES ARE EXPRESSED AS A PERCENTAGE OF MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D1557.

DATE APPROVED: 10-06-04	BACKFILL AND BEDDING	STANDARD DETAIL
APPROVED BY:	EXCAVATION AND BACKFILL IN EXISTING STREETS	BF-3
DRAWN: D. MORENO DATE: 03/26/04	CITY OF LOS BANOS	



DATE APPROVED: 6-15-92	WATER IMPROVEMENTS	STANDARD DETAIL
APPROVED BY:	VALVE BOX DETAIL	W-3
DRAWN: ALEX BUENROSTRO DATE: 6/23/93	CITY OF LOS BANOS	



1 WATERLINE CONSTRUCTION BELOW EXISTING SEWER OR STORM DRAIN LINE

NOT TO SCALE

PLAN REVISIONS

NO.	DATE	REVISION
NO.		

O'DELL ENGINEERING
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IMPROVEMENT PLAN
13TH STREET WATER EXTENSION
LOS BANOS CALIFORNIA

DETAILS

REGISTERED PROFESSIONAL ENGINEER MICHAEL T. PERSAK No. C44908 Exp. 12/31/16 CIVIL STATE OF CALIFORNIA

APPROVED:

DESIGNED:	MP
DRAWN:	SC
CHECKED:	MP
SCALE:	N.T.S.
DATE:	03/05/2015
JOB NO.:	27913
FILE NO.:	27913-NT-DT.dwg

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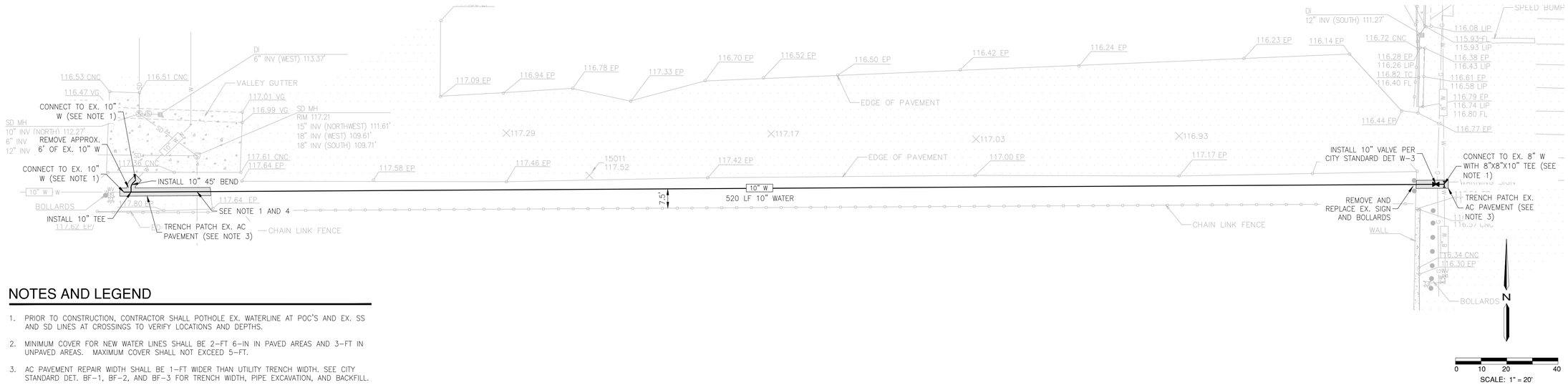
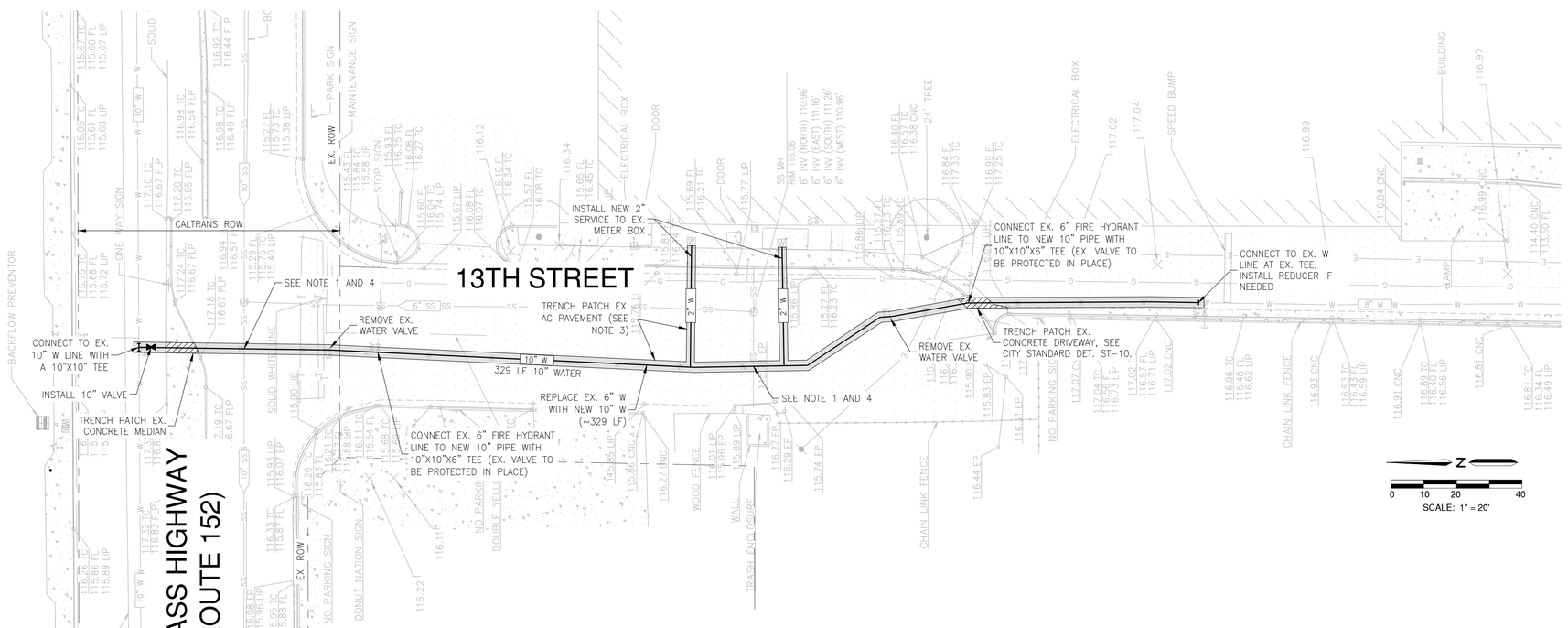


NOTES AND LEGEND

1. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL POTHOLE EX. WATERLINE AT POC'S AND EX. SS AND SD LINES AT CROSSINGS TO VERIFY LOCATIONS AND DEPTHS.
2. MINIMUM COVER FOR NEW WATER LINES SHALL BE 2-FT 6-IN IN PAVED AREAS AND 3-FT IN UNPAVED AREAS. MAXIMUM COVER SHALL NOT EXCEED 5-FT.
3. AC PAVEMENT REPAIR WIDTH SHALL BE 1-FT WIDER THAN UTILITY TRENCH WIDTH. SEE CITY STANDARD DET. BF-1, BF-2, AND BF-3 FOR TRENCH WIDTH, PIPE EXCAVATION, AND BACKFILL.
4. WATERLINE SHALL BE INSTALLED MIN. 12" ABOVE EX. SS OR SD LINE. IF MINIMUM COVER CANNOT BE MET, WATERLINE MAY BE INSTALLED BELOW EX. SS OR SD LINE PER DETAIL 1, SHEET 3.

TRENCH PATCH EX. AC PAVEMENT, SEE NOTE 2.

TRENCH PATCH EX. CONCRETE VALLEY GUTTER, SEE CITY STANDARD DET. ST-8.



PLAN REVISIONS		
NO.	DATE	REVISION
NO.		

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IMPROVEMENT PLAN 13TH STREET WATER EXTENSION

LOS BANOS CALIFORNIA

WATERLINE LAYOUT AND DESIGN

REGISTERED PROFESSIONAL ENGINEER MICHAEL F. PIERSAT No. C44908 Exp. 12/31/16 CIVIL STATE OF CALIFORNIA

APPROVED:

DESIGNED:	MP
DRAWN:	SC
CHECKED:	MP
SCALE:	1" = 20'
DATE:	03/05/2015
JOB NO.:	27913
FILE NO.:	27913-GR.dwg

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CALL BEFORE YOU DIG 800-227-2600

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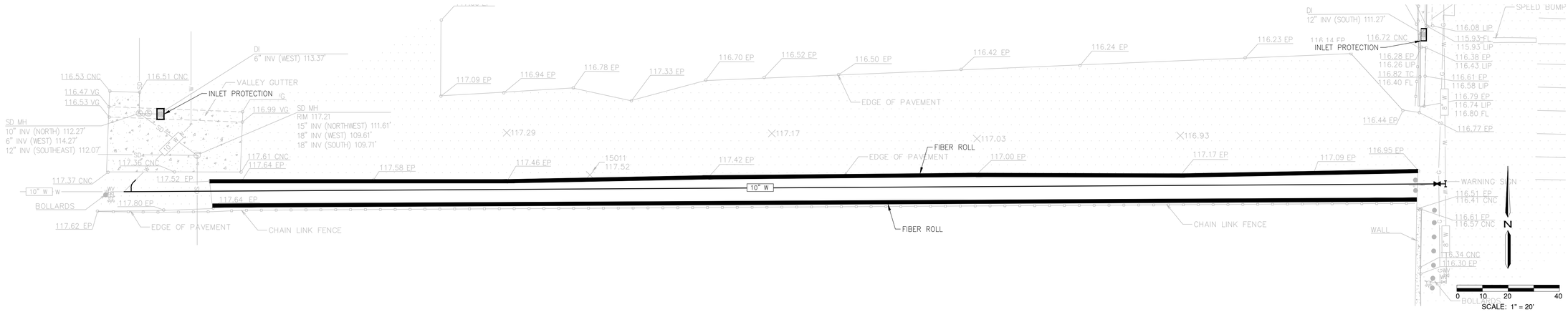
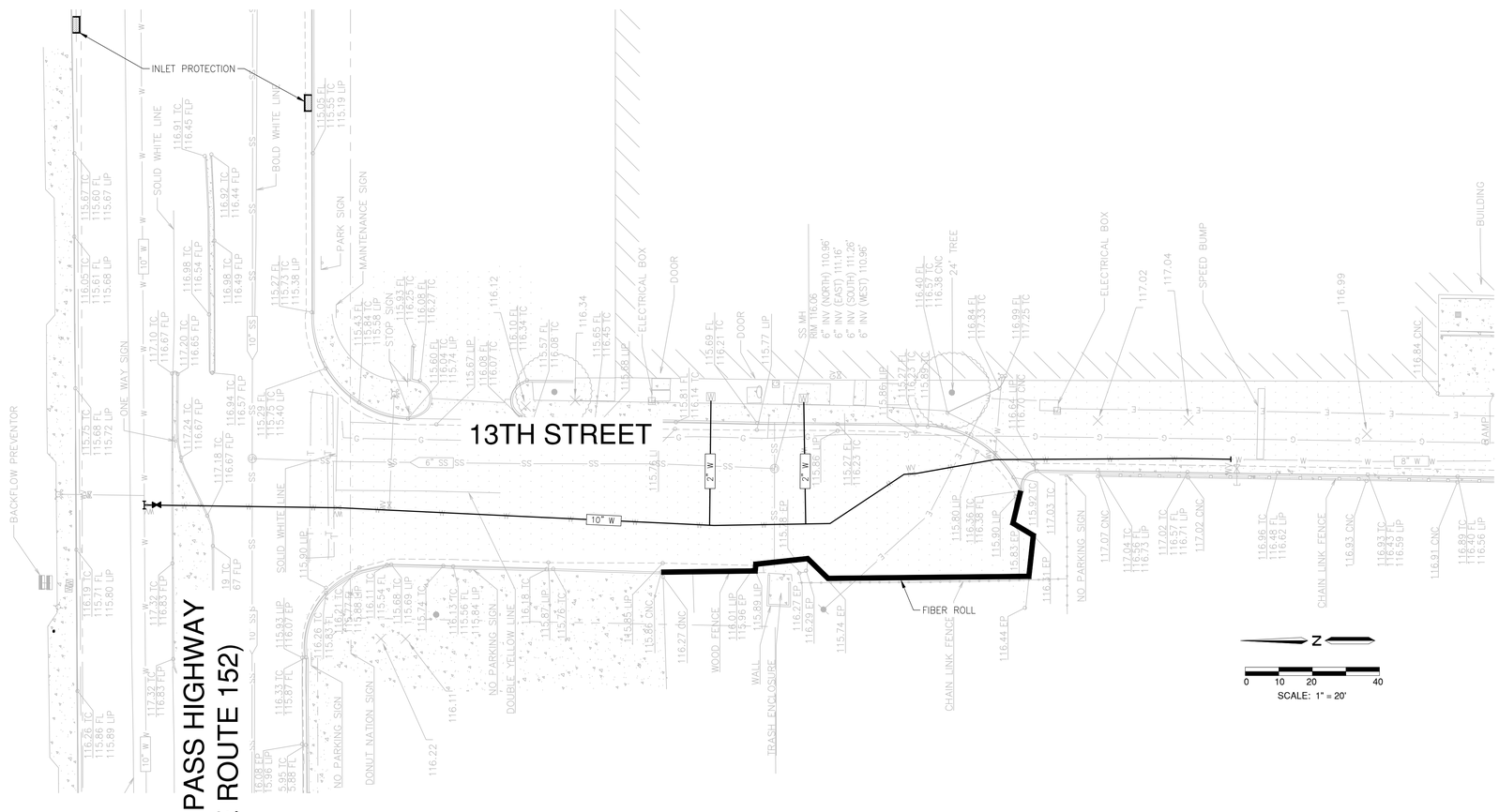




EROSION CONTROL NOTES:

THIS PLAN PROVIDES EROSION CONTROL AND SEDIMENTATION INFORMATION AND DESIGN USING THE FOLLOWING ASSUMPTIONS:
*GROUND HAS BEEN ROUGH GRADED

CONTRACTOR SHALL ADJUST THE SEDIMENTATION AND EROSION CONTROL METHODS AS THE PROJECT DEVELOPS. IT SHALL BE THE QUALIFIED SWPPP PRACTITIONER'S (QSP) RESPONSIBILITY TO ENSURE THAT THE INSTALLED EROSION CONTROL AND SEDIMENTATION IMPROVEMENTS ARE IN CONFORMANCE WITH THE STATE OF CALIFORNIA STORM WATER POLLUTION PREVENTION PLAN GUIDELINES AND THE CALIFORNIA BEST MANAGEMENT PRACTICES.

WINTERIZATION NOTES

ALL MATERIALS NECESSARY FOR WINTERIZATION SHALL BE AVAILABLE AT THE SITE COMPLETED BY OCTOBER 15.

WINTERIZATION SHALL BE INSTALLED ACCORDING TO THIS PLAN AND AS DIRECTED BY THE QUALIFIED SWPPP PRACTITIONER (QSP).

FILL SLOPES: AVOID LEAVING SHINY, SMOOTH GRADED SURFACES. THE LAST GRADING OPERATION SHALL BE TO WALK A TRACK-TYPE TRACTOR UP AND DOWN THE SLOPE, CREATING CLEAT MARKS ON THE SLOPE WITH CONTOURS. THESE WILL PROVIDE SEED AND FIBER COLLECTION POINTS.

CUT SLOPES: AVOID LEAVING SHINY, SMOOTH GRADED SURFACES. THE LAST GRADING OPERATION SHALL LEAVE THE SLOPE IN A ROUGHENED CONDITION WITH 2 INCHES OF LOOSENED MATERIAL FOR SEEDING.

EACH FIBER ROLL SHALL BE SECURELY HELD WITH 1"X1"X18" STAKES.

IF ANY GRAVEL BAGS ARE MOVED AND/OR RELOCATED IN GAINING ACCESS TO THE SITE DURING THE WINTER MONTHS, THEY SHALL BE REPLACED IF THEY ARE NO LONGER STABLE. ONCE INSTALLED, ALL WINTERIZATION MATERIALS SHOULD BE CHECKED BEFORE EACH WEEKEND AND EACH STORM.

THIS PLAN IS INTENDED TO BE USED FOR EROSION CONTROL ONLY. OTHER INFORMATION SHOWN HEREIN MAY NOT BE THE MOST CURRENT.

AFTER THE UNDERGROUND STORM DRAIN SYSTEM IS INSTALLED, THE CATCH BASINS WILL BE INSTALLED (AS SOON AS PRACTICAL) AND THE SEDIMENT CONTROL DEVICE WILL BE PLACED AROUND THOSE CATCH BASINS AS SHOWN ON THIS PLAN AND IN THE DETAIL ON THE SHEET UNTIL THE SITE IS PAVED.

SEDIMENT CONTROL DEVICES

CONTRACTOR TO PROVIDE TEMPORARY SEDIMENT CONTROL DEVICE AT CATCH BASINS AS SHOWN IN DETAIL. CONTRACTOR MAY SUBSTITUTE OTHER SEDIMENT CONTROL DEVICES (GRAVEL BAGS, SILT TRAPS, ETC.) UNDER THE DIRECTION OF THE QSP. MODIFICATIONS TO THIS PLAN NEED TO BE APPROVED BY QSD, AND LOGGED IN THE SWPPP AMENDMENT LOG.

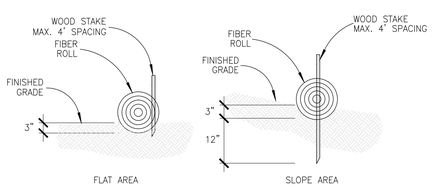
DUST CONTROL MEASURES

CONTRACTOR TO PRACTICE DUST CONTROL MEASURES IN ACCORDANCE WITH THE CITY OF LOS BANOS STANDARDS THROUGHOUT CONSTRUCTION.

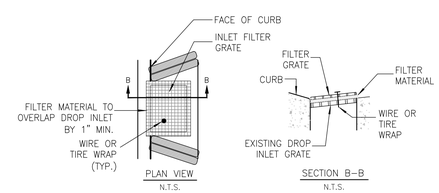
EROSION CONTROL LEGEND

= FIBER ROLL

= SEDIMENT CONTROL DEVICE AT CURB INLET



ENTRENCHMENT DETAIL FOR FIBER ROLL
NOT TO SCALE



SEDIMENT CONTROL DEVICE @ CURB INLET
NOT TO SCALE

PLAN REVISIONS

NO.	DATE	REVISION
NO.		

O'DELL ENGINEERING
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Modesto, CA 95350
Ph 209.571.1765 odellengineering.com

IMPROVEMENT PLAN
13TH STREET WATER EXTENSION

LOS BANOS CALIFORNIA

EROSION CONTROL PLAN

REGISTERED PROFESSIONAL ENGINEER
MICHAEL F. PIERSAT
No. C44908
Exp. 12/31/16
CIVIL
STATE OF CALIFORNIA

APPROVED:

DESIGNED:	MP
DRAWN:	SC
CHECKED:	MP
SCALE:	1" = 20'
DATE:	03/05/2015
JOB NO.:	27913
FILE NO.:	27913-EC.dwg

SHEET NO.
5
OF
5

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800.227.2600

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