CONTRACT SPECIFICATIONS

For

CITY OF PLACERVILLE

PARDI/BIG CUT/SACRAMENTO STREET AREA WATERLINE REPLACEMENT PROJECT

City Project Number: 41109

City of Placerville
3101 Center Street
Placerville, CA 95667

For use in connection with California Department of Transportation, Standard Specifications **Dated 2015** and Revised Standard Specification Dated February 12, 2016, and Caltrans Standard Plans, City of Placerville Standard Plans, State of California Labor Surcharge and Equipment Rental Rates, and Director of Industrial Relations General Prevailing Wage Rates.

April 25, 2016

Domenichelli & Associates, Inc.
Civil Engineering
1101 Investment Blvd., Suite 115
Eldorado Hills, CA 95762
(916) 933-1997

CITY OF PLACERVILLE
PARDI / BIG CUT / SACRAMENTO STREET AREA
WATERLINE REPLACEMENT PROJECT

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CITY OF PLACERVILLE
PARDI / BIG CUT / SACRAMENTO STREET AREA
WATERLINE REPLACEMENT PROJECT

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CITY OF PLACERVILLE, CALIFORNIA\
DEVELOPMENT SERVICES DEPARTMENT
ENGINEERING DIVISION

Pardi/Big Cut/Sacramento Street Area Waterline Relocation Project

Project No. 41109

BIDDING REQUIREMENTS

April 25, 2016

CITY OF PLACERVILLE, CALIFORNIA\
DEVELOPMENT SERVICES DEPARTMENT
ENGINEERING DIVISION

SECTION 00020
NOTICE TO BIDDERS

NOTICE IS HEREBY GIVEN by the City of Placerville, State of California, that sealed bids for work in accordance with the Project Plans (Plans) and Contract Documents designated:

PARDI / BIG CUT / SACRAMENTO STREET AREA
WATERLINE REPLACEMENT PROJECT, PROJECT/CIP NO. 41109

below will be received at the 3rd floor front counter at City Hall, 3101 Center Street, Placerville, California 95667, until Tuesday, May 31, 2016 at 2:00 PM, at which time bids will be publicly opened and read aloud at the same address. No bid may be withdrawn after the time established for receiving bids or before the award and execution of the Contract, unless the award is delayed for a period exceeding sixty (60) calendar days. Bids shall be executed in accordance with the instructions given and forms provided in the bound Contract Documents furnished by the City of Placerville, Engineering Division. All bids must be clearly marked on the envelope:

PARDI / BIG CUT / SACRAMENTO STREET AREA
WATERLINE REPLACEMENT PROJECT, PROJECT/CIP NO. 41109

COST ESTIMATE (FOR BONDING PURPOSES): For bonding purposes, the anticipated project cost is less than $2,000,000.

MANDATORY PRE-BID CONFERENCE: A mandatory pre-bid conference will be held in the 3rd Floor Conference Room located at City Hall, 3101 Center Street, Placerville, California 95667. The conference will be held on May 11, 2016 at 2:00 P.M.

LOCATION/DESCRIPTION OF THE WORK: The project is located along sections of Pardi Way, Big Cut Road and Sacramento Street (Hwy 49, Caltrans Right-of-Way) in the City of Placerville, El Dorado County. The work to be done is shown on the Plans and described in the Specifications and generally consists of, but is not limited to:

- Construction and replacement of water mainline in City streets and Caltrans Right-of-Way, installing new service line, meters and meter boxes and/or relocation of existing water services on private property. Work includes soil excavation, rock excavation, backfilling, concrete, pipefitting, paving, demolition and site restoration, and traffic control.
- Project will require traffic control for equipment access and construction of the project by the Contractor and Subcontractor as shown within the Contract Documents.
- Coordination and compliance is also required by the Contractor with various regulatory agencies including the City of Placerville, Caltrans, County of El Dorado, and State Regional Water Quality Control Board.

COMPLETION OF WORK: All work shall be completed within 75 working days after the date of the written notice to proceed from the City. Work within City streets is anticipated to occur during normal working hours from the hours of 8 am to 5 pm, Monday through Friday. Work within

Caltrans Right-of-Way shall be performed as night work in compliance with Caltrans Encroachment Permit. No work shall be performed by the Contractor on Saturday or Sunday, or City designated holidays.

OBTAINING OR INSPECTING CONTRACT DOCUMENTS: The Contract Documents and Plans are available on Monday April 25, 2016 and may be examined at City of Placerville Engineering Division, 3101 Center Street, 3rd Floor, Placerville, CA 95667 and Domenichelli and Associates office at 1101 Investment Boulevard, El Dorado Hills, CA 95762.

The Contract Documents and Plans may be previewed and downloaded from http//cityofplacerville.org and clicking on the "Projects out to Bid" button or by visiting http://www.publicpurchase.com and searching RFP # 41109. Access www.publicpurchase.com or contact support at support@publicpurchase.com for assistance with free vendor registration and access to this digital project information.

In order to submit a bid on this project, the digital contract documents must be purchased for a cost of $100.00 through Public Purchase. This places you on the plan holders list and ensures receipt of addenda by email from publicpurchase.com Only bidders on the plan holders list that attend the mandatory pre-bid meeting may submit a bid. Bidder is solely responsible for printing and binding the bid documents from the digital format before submitting the bid.

This is a locally funded project; subject to local regulations, City of Placerville code and ordinances, including wage rates, civil rights, etc.

All bidders' questions shall be submitted in writing to the City or via email at the contact information provided below. No oral responses to any questions concerning the content of the Plans and Contract Documents will be given. All responses will be in the form of written addenda to the Contract Documents and Plans. Inquires or question about alleged patent ambiguity of the plans, specifications, or estimate must be submitted as a bidder inquiry before bid opening. Bid inquiries must be received by 4:00 pm on the seventh (7th) business day before bid opening. After this time, the City will not consider these questions as bid protests.

City of Placerville
Engineering Division
Attn: Rebecca Neves, City Engineer
3101 Center Street
Placerville, CA 95667
Email: rneves@cityofplacerville.org

CONTRACTOR'S LICENSE: In accordance with the Provisions of California Public Contract Code Section 3300, the City of Placerville has determined that the Contractor must possess a valid Class A General Engineering License and all other classes required by the categories and types of work included in this contract at the time of contract bid. Failure to possess the specified license shall render the bid as non-responsive and shall act as a bar to award of the contract to any bidder not possessing said license at the time of bid. The Contractor must possess a Class A license or a combination of Class C licenses that make up a majority of the work.

BUISNESS LICENSE: The Contractor must comply with all of the requirements of the City Business License Ordinance, where applicable, before beginning work and through Contract Acceptance.

GENERAL INFORMATION: Bids must be on unit price basis. The amount of bid for comparison purposes will be the total sum based on unit prices.

PREVAILING WAGE RATES: Pursuant to the Labor Code of the State of California, the Director of Industrial Relations has determined the general prevailing rate of wages and employer payments for health and welfare, vacation, pension, and similar purposes applicable to the work to be done. This rate and scale is available at the DIR website: http://www.dir.ca.gov/DLSR/PWD or from the City Clerk's office. The Contractor to whom the contract is awarded, and the subcontractors, must pay not less than these rates for this area to all workers employed in the execution of this contract.

DIR REGISTRATION: Effective March 1, 2015, all contractors and subcontractors shall be registered with DIR pursuant to Labor Code Section 1725.5 to be qualified to bid on this project or to be listed as a subcontractor for this project pursuant to Public Contract Code Section 4104. Bidders will be required to submit proof of registration for themselves and all listed subcontractors prior to award of the contract.

BID BOND: Each bid response shall be accompanied by the bid securities attachments provided at the end of these specifications and include cash, cashier's check, certified check, or Bidder's Bond made payable to the City of Placerville in the amount not less than ten percent (10%) of the total bid amount, such guaranty to be forfeited should the bidder to whom the contract is awarded fail to enter into the contract.

BONDS: The successful bidder will be required to furnish, prior to performance of any work hereunder, a payment bond in the amount equal to one hundred percent (100%) of the contract price, and a faithful performance bond in the amount of equal to one hundred percent (100%) of the contract price. The bonds must be approved by the City. As a condition precedent to the completion of this contract, the contractor shall furnish a Warranty Bond, in a form acceptable to the City in an amount of one hundred percent (100%) of the total contract price plus change orders, to hold good for a period of one year after the completion and acceptance of the work, to protect the City against the results of defective materials, quality of work, and equipment during that time. This bond shall be delivered to the City before the final payment under this contract will be made.

SUBSTITUTE SECURITIES FOR RETENTION MONEYS: In accordance with Part 5 (Section 22300), Division 2 of the Public Contract Code, a contractor may substitute securities for retention moneys withheld by a public agency to ensure performance under this contract. At the request and expense of the contractor, securities equivalent to the amount withheld shall be deposited with the City of Placerville, or with a state or federally chartered bank, as the escrow agent, who shall then pay such moneys to the contractor, and upon satisfactory completion of the contract, the securities shall be returned to the contractor.

SUBMISSION OF BIDS: The City Clerk will receive sealed bids until 2:00 pm on the bid open date at City Hall, 3rd Floor, and 3101 Center Street, Placerville, California. Bids received after this time will not be accepted. Bid proposals shall be sealed in an envelope plainly marked, "BID PROPOSAL FOR PARDI / BIG CUT / SACRAMENTO STREET AREA WATERLINE REPLACEMENT PROJECT, PROJECT/CIP NO. 41109". Bids will only be accepted from registered plan holders. Bids not properly marked will be considered nonresponsive. The City will immediately open and publically read the bids at the mentioned location after the specified closing time.

REJECTION AND PROTESTS OF BIDS: The City reserves the right to reject any or all bids or any parts thereof and waive any irregularities or informalities in any bid or in the bidding to the extent permitted by law and to make awards in all or part of the best interest of the City. No bidder may withdraw his bid for a period of sixty (60) days after the date set for the bid opening. Bid protests must be submitted in writing to the attention of the City Clerk before 4:00 pm of the 3rd calendar day following the bid opening.

By: Rebecca Neves Date: 4/20/16

Rebecca Neves, P.E. City Engineer
City of Placerville

SECTION 00100

INSTRUCTIONS TO BIDDERS

1.0 WORK TO BE DONE

It is the intention of the Owner to construct improvements as shown and set forth in the Contract Documents titled: Pardi/Big Cut/Sacramento Street Area Waterline Replacement Project, dated April 25, 2016 as prepared by Domenichelli & Associates, Inc. All of the work is particularly set forth in the permits, plans and specifications, and all of said work, together with all other work incidental thereto, and is included. The work includes the furnishing of all labor, materials, taxes, incidentals and equipment necessary for completion of the project. Codes and standards, definition of words and terms, and abbreviations shall be as specified in Section 01060, REFERENCES.

2.0 EXAMINATION OF CONTRACT DOCUMENTS

Each Bidder shall thoroughly examine and be familiar with those Contract Documents and addenda (if any). The submission of a bid shall constitute an acknowledgment upon which the Owner may rely that the Bidder has thoroughly examined and is familiar with the Contract Documents. The failure or neglect of a Bidder to receive or examine any of the Contract Documents shall in no way relieve it from any obligation with respect to its bid or to the Contract. No claim for additional compensation will be allowed which is based upon a lack of knowledge of any Contract Documents.

3.0 INSPECTION OF PROJECT SITE AND PRE-BID ACCESS TO THE SITE

Prior to submitting a bid, it will be the sole responsibility of each bidder to conduct any additional examination, investigation, exploration, test, study or other inquiry and to obtain any additional information pertaining to the physical conditions (including surface, subsurface, and underground utilities) at or near the Project site that may affect the cost, progress, or performance of the Project, and that the bidder deems are necessary to prepare its bid for performance of the Project in accordance with the bid package and contract documents. Bidders seeking any such additional examination or other inquiries or information concerning the Project will do so at the bidder's sole expense.

Bidders seeking to conduct any additional examination or other inquiry at the Project site must request site access from the Owner in writing at least five (5) days in advance. The location of any excavation, boring or other invasive testing will be subject to approval on behalf of the Owner and any other agencies with jurisdiction over such testing. Bidders may not conduct tests at the Project site prior to obtaining Owner approval and entering into an executed Indemnity and Release Agreement with the City which will include applicable insurance.

Bidders who intend only to observe site conditions and not conduct such examinations are not required to provide an executed Indemnity and Release Agreement or insurance information.

If, during the course of its site inspection, a Bidder finds conditions which appear to be in conflict with the letter or spirit of the Contract Documents, the Bidder may apply to the

Owner, in writing, for additional information and explanation at least seven (7) calendar days before the time specified for opening the bids.

Submission of a bid by the bidder shall constitute conclusive evidence that, if awarded the Contract, it has relied upon and is relying on its own examination of (1) the site of the work, (2) access to the site, (3) all other data and matters requisite to the fulfillment of the work and on its own knowledge of existing facilities on and in the vicinity of the site of the work to be constructed under the Contract, (4) the conditions to be encountered, (5) the character, quality and scope of the proposed work, (6) the quality and quantity of the materials to be furnished, and (7) the requirements of the Contract, the plans, the specifications, and other related information made available to Bidders by the Owner.

The information provided by the Owner is not intended to be a substitute for, or a supplement to the independent verification by the Bidder to the extent such independent investigation of site conditions is deemed necessary or desirable by the Bidder.

4.0 INTERPRETATION OF CONTRACT DOCUMENTS

No oral representations or interpretations will be made to any Bidder as to the meaning of the Contract Documents. Requests for an interpretation shall be made in writing and delivered by e-mail or U.S. Mail at least seven (7) business days before the time specified for opening the bids to:

City of Placerville
Engineering Division
Attn: Rebecca Neves, City Engineer
3101 Center Street
Placerville, CA 95667
FAX: 530-642-5568
Email: rneves@cityofplacerville.org

All questions submitted via electronic telecommunication (e-mail) shall be submitted in the time set forth herein. For e-mail to be effective, it shall have a date and time receipt acknowledgment from the Owner and shall be clearly identified with the following title in the Subject line:

"Pardi/Big Cut/Sacramento Street Area Waterline Replacement Project: Bidder Questions."

It is the Bidder's sole responsibility to ensure that the e-mail question is *received* by the Owner in a timely manner. Upon receipt of an e-mail question, the Owner shall provide acknowledgement of receipt within 1 business day. If the Bidder does not receive an acknowledgement of receipt of an e-mail question from the Owner within the above referenced timeframe, Bidder shall assume the e-mail transmission was not received by the Owner, and shall be responsible for resubmitting the same in a timely manner, and if necessary by an alternate allowable method of transmission allowing for confirmation of receipt (e.g., facsimile).

Requests to clarify the source of materials, equipment, suppliers or any other such matter which does not modify, change, increase, or decrease the scope of work requires no action by the Owner other than a response to the Bidder requesting the clarification.

Requests to clarify possible ambiguous or incomplete statements or designs, or any other such clarification which modifies, changes, increases or decreases the scope of work, requires issuance of an addendum signed by the Owner and transmitted to all recipients of complete sets of Contract Documents. No other interpretation or information concerning the Contract Documents issued prior to the date specified for opening of bids will be binding.

5.0 INFORMATION AVAILABLE TO BIDDERS – SUBSURFACE CONDITIONS

A subsurface investigation has been conducted at the site of the Work. The subsurface investigation and geotechnical report were developed for planning and design purposes only, and as such may not include necessary information for, any or all, construction related activities including, but not limited to, excavations, sheeting, shoring, bracing, boring and dewatering. The Contractor may not make claim against Owner or any of Owner's Consultants with respect to the completeness of this investigation and geotechnical report for Contractor's purposes with respect to the means, methods, techniques, sequences and procedures employed by Contractor, and safety precautions and programs incident thereto.

The resulting geotechnical report with the records of seismic refraction investigation made at the work site is entitled:

Waterline Replacement Project – Pardi Way/Big Cut Road/Sacramento Street Placerville, California, dated March 17, 2016, prepared by WRECO.

Copies of the Geotechnical Report of Subsurface and Physical Conditions are included as Appendix A of these specifications and made part of the contract documents.

It is expressly understood and agreed by Bidder or Contractor that neither the Owner nor the Consulting Engineers assume any responsibility whatsoever with respect to the sufficiency or accuracy of the investigations thus made, the records thereof, or of the interpretation set forth therein or made by the Consulting Engineers in their use thereof and there is no representation, warranty or guarantee, either express or implied, that the conditions indicated by such investigations or records thereof are correct or representative of those existing throughout such areas or any part thereof, or that unanticipated developments may not occur or that materials other than, or in proportions different from, those indicated may not be encountered.

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

The Owner disclaims responsibility for the Bidder's or Contractor's interpretation of data, such as, projecting or extrapolating from the test holes to other locations on the site of the Work, soil bearing values and profiles, and soil stability, as well as the presence,

level, and extent of underground water for subsurface conditions during construction operations.

6.0 INFORMATION AVAILABLE TO BIDDERS – SERVICE CONNECTIONS

A total of twelve (12) properties require relocation of the existing service. This requires the installation of in-tract service lines on the customer side of the meter. For these properties a Service Location Survey Sheet has been prepared which shows the reconnection as agreed upon with the property owner. Copies of these sheets are included in Appendix D. The customer contact information has been removed and will be provided once the contract is awarded. Property specific requirements are noted. The Contractor is responsible to do a field review of each location during bidding to ensure that all costs associated with connection and final property restoration are included.

All other properties require a new meter and meter box and shall be located as close as possible to the existing meter location. The Contractor shall reconnect the existing service per the plans and specifications.

7.0 POSTPONEMENT OF OPENING

The Owner reserves the right to postpone the date and time for receiving and/or opening of bids at any time prior to the date and time established in the Notice of Invitation to Bid. Postponement notices may be faxed or emailed and will subsequently be mailed to planholders of record in the form of addenda.

8.0 OPENING OF BIDS

All bids, irrespective of any irregularities or informalities, if received on time, will be opened and publicly read aloud at the time and place set forth in the Notice Inviting Bids, provided that, if a mandatory pre-bid conference and/or walk-through is prescribed in Section 00020, NOTICE TO BIDDERS, any bid from a Bidder who did not sign the sign-in sheet and attend the meeting and walk-through, will be returned to the Bidder unopened. Bidders, their representatives and other interested persons may be present at the opening and reading of bids.

Any bids received after the time for receiving and opening bids as set forth in the Notice to bidders or as postponed by addenda will not be opened. Any such bids will be returned, unopened, to the Bidder.

The public reading of each bid will include at least the following:

A. Name and address of bidder.
B. The total amount of bid.
C. The nature and amount of the security furnished with the bid.

Provided that a mandatory pre-bid conference and/or walk-through is prescribed in Section 00020**, NOTICE TO BIDDERS**, any bid from a Bidder who did not sign the sign-in sheet and attend the meeting will be returned to the Bidder unopened.

9.0 PREPARATION OF BID FORMS AND BIDDER'S CHECKLIST

Bids shall be made on the separately bound blank bid forms and must be submitted at the time and place stated in the Notice to Bidders. All blanks in the bid forms must be appropriately filled in, in permanent ink or typed, and all prices must be stated in figures.

All bids must be submitted in sealed envelopes bearing on the outside the name of the Bidder, its address, and the name of the project for which the bid is submitted. It is the sole responsibility of the Bidder to see that its bid is received before the time stipulated in the Notice Inviting Bids. A Bid will not be accepted after the date and time designated in the Notice Inviting Bids. Any Bid received after said date and time designated in the Notice Inviting Bids will be returned to the Bidder unopened. Owner shall not be responsible for errors or omissions in the bid. Bidders shall write their names on each bid form in the space provided.

The checklist shown below has been prepared and furnished to aid Bidders in including all necessary supporting information with their bid. Bidders' submittals should include, but are not limited to, the following:

	ITEM	CHECKED
1.	Proposal (Section 00310)	1._____
2.	Acknowledge Addenda (Section 00310)	2._____
3.	List of Subcontractors (Section 00310)	3._____
4.	Public Contract Code Questionnaire and Statements (Section 00310)	4._____
5.	Bidder's proof of DIR Registration	5._____
6.	Non-collusion Declaration (Section 00310)	6._____
7.	Power-of-Attorney for Surety's Agent to execute Bidder's Bond	7._____
8.	Authority to sign Proposal id signature if is by agent other than officer of corporation, partner, or Owner	8._____
9.	Certification of bidder's experience and qualification (Section 00420) [within 3 days following bid]	9._____

10.0 BIDDER'S SIGNATURE AND AUTHORITY

If the bid is made by an individual; bidder's name, signature, and post office address must be shown. If the bid is made by a firm or partnership; the name and post office address of the firm or partnership, a list of the partners, and the signature of at least one of the general partners must be shown. If the bid is made by a corporation; the bid shall show the name of the state under the laws of which the corporation is chartered, the

name and post office address of the corporation, and the title of the person who signs on behalf of the corporation. If the bid is made by a corporation; a certified copy of the bylaws or resolution of the Board of Directors of the corporation shall be furnished, showing the authority of the officer signing the bid, to execute Contract on behalf of the corporation. If the bid is made by a joint venture, the bid shall be signed by a representative of the sponsoring partner of the joint venture. Additionally, the bid shall include a copy of the resolution or agreement empowering the representative to execute the bid and bind the joint venture.

All signatures on the bid shall be in longhand. Signature stamps are unacceptable and shall not be used.

11.0 DESCRIPTION OF BID ITEMS

See Item 2.0 of **Section 01200 - MEASUREMENT AND PAYMENT** for complete description of each Bid Item.

12.0 ERASURES AND CORRECTIONS

The bid submitted must not contain any erasure, interlinear additions, or other corrections unless each such correction is authenticated. Authentication may be made by affixing in the margin, immediately opposite the correction, the signature of the person submitting the bid.

13.0 BID IRREGULARITIES

Changes in or additions to the bid form, recapitulations of the work bid upon, alternative bids, or any other modifications of the bid form which are not specifically called for in Section 00310 may result in rejection of the bid at the Owner's sole discretion. The Owner may treat all such bids as not being responsive to the Invitation to Bid. The Owner, at its' sole discretion may consider no oral, telephonic or email modification of any bid submitted.

14.0 MODIFICATION OF BID

Upon written request, a bid already received may be modified or withdrawn at any time before the time established for receiving bids. The request must be executed by the Bidder or its authorized representative as described in Paragraph 00100-8.0, **BIDDER'S SIGNATURE AND AUTHORITY**. Modifications shall be made in writing, executed, and submitted in the same form and manner as the original bid. Withdrawal of a bid does not prejudice a bidder's right to submit a new bid within the time designated for the submission of bids. No bid may be withdrawn after the time established for receiving bids except as provided in Paragraph 00100-13.0, **WITHDRAWAL OF BIDS**.

15.0 WITHDRAWAL OF BIDS

In accordance with California Public Contract Code 5103, a bidder may withdraw its bid with the consent of the Owner. A Bidder desiring to withdraw its bid, after the time of opening the bids, shall give written notice to the Owner within five (5) days after opening of the Bids (excluding Saturdays, Sundays, or Owner holidays) of the alleged mistake.

The Bidder shall provide documentation in accordance with California Public Contract Code 5103. Bids cannot be changed because of mistake.

16.0 BID PROTEST

The lack of a prompt procedure to resolve disputes regarding the bidding process would impair the Owner's ability to carry out its purpose of constructing this project in a timely manner. Therefore, to the maximum extent authorized by law and notwithstanding any other procedures specified in documents referenced herein, 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 project, the bidder agrees to comply with and to be bound by this procedure.

Any Bid protest must be submitted in writing to the City Engineer of the City of Placerville before 4:00 p.m. on the third (3rd) calendar day following Bid opening.

A. The initial protest document must contain a complete statement of the basis for the protest, and all supporting documentation.

B. 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. A party may not rely on the Bid protest submitted by another Bidder, but must timely pursue its own protest.

C. The protest must refer to the specific portion of the Contract Document which forms the basis for the protest.

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

E. 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.

F. The Owner will give the protested Bidder five (5) working 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 delivery to the Owner.

G. The procedure and time limits set forth in this paragraph are mandatory and are the Bidder's sole and exclusive remedy in the event of Bid protest. The Bidder's 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. A Bidder may not rely on a protest submitted by another Bidder, but must timely pursue its own protest.

H. If the Owner determines that a protest is frivolous, the protesting bidder may be determined to be non-responsible and that bidder may be determined to be ineligible for future contract awards.

17.0 ADDENDA

Addenda issued during the time of bidding shall become a part of the documents furnished bidders for the preparation of bids, shall be covered in the bids, and shall be made a part of the Contract. Each bid shall include specific acknowledgment in the space provided of receipt of all Addenda issued during the bidding period. Failure to so acknowledge may result in the bid being rejected as not responsive. Failure of any bidder to receive such Addenda shall not be grounds for non-compliance with the terms of the instructions.

Addenda will be issued such that they should be received by each recipient of a complete set of Contract Documents no later than three (3) working days prior to the specified bid date. Addenda withdrawing the request for bids or postponing the bid deadline may be issued anytime prior to the specified bid deadline.

18.0 BID GUARANTY

The bid form shall be accompanied by a bid guaranty bond provided by a surety company authorized to carry on business in the State of California with a minimum "A" rating with Best's Rating Guide for payment to the Owner in the sum of at least ten percent (10%) of the total amount of the bid price, or, alternatively, by a certified or cashier's check, payable to the Owner in the sum of at least ten percent (10%) of the total amount of the bid price. The bid guaranty bond shall be provided on the form included in Section 00310, **PROPOSAL**, of this Project Document. The amount payable to the Owner under the bid guaranty bond, or the certified or cashier's check and the amount thereof, as the case may be, shall be forfeited to the Owner as liquidated damages in case of a failure or neglect of the bidder to furnish, execute, and deliver to the Owner the required performance and payment bonds, evidences of insurance; and to enter into, execute, and deliver to the Owner the Agreement on the form provided herewith, within ten (10) calendar days after receiving written notice from the Owner that the award has been made and the Agreement is ready for execution.

The bid guarantees of the three lowest Bidders will be retained until the Agreement is signed, evidence of insurance provided, and satisfactory bonds furnished or other disposition made thereof. The bid guarantees will be returned to all but the lowest three responsive bidders upon written request from the Bidder. The bid guarantees from the lowest three bids will be available for return at the time they are considered null and void per terms of the Bid Guaranty Bond.

19.0 QUALIFICATION OF BIDDER

Each bidder shall complete and submit with their bid Section 00420, **CERTIFICATION OF BIDDER'S EXPERIENCE AND QUALIFICATIONS**.

Upon the request of Owner, any bidder whose bid is under consideration for the award of the Contract shall promptly submit satisfactory evidence showing the bidder's financial resources, its construction experience, and its organization's availability for the performance of the Contract.

The bidder may be required to establish to the satisfaction of the Owner the reliability and responsibility of the persons or entities proposed to furnish and perform the work described in the Documents.

20.0 LOCAL BUSINESS LICENSE

The Contractor shall have a local business license for the work contemplated before the Contract can be executed. All subcontractors will be required to secure the appropriate local business license before they commence work on the project.

21.0 WORK PERCENTAGES

The Contractor shall perform at least fifty percent (50%) of the Contract Bid Amount. This portion of work shall encompass the performance of work by the Contractor's forces and equipment, the procurement of materials and equipment by the Contractor and field related general conditions required to support and supervise the construction effort. Subcontractors shall not be responsible for the performance of any work or procurement of materials or equipment within the above Contractor's work percentage allotment.

The value of the work subcontracted shall be determined by summing all of the percentages identified for the subcontractors listed in Section 00310**.** If the sum of such percentages exceeds fifty percent (50%), the Owner may treat the bid as nonresponsive and reject it on that basis.

22.0 SUBCONTRACTORS

In accordance with California Public Contract Code Section 4100, *et seq*., *"Subletting and Subcontracting Fair Practices Act,"* each general bid shall have listed in Section 00310, **PROPOSAL**, the name, California contractor license number, location of the place of business and the portion of work to be performed by each subcontractor who will perform work or labor or render service to the bidder in or about the construction of the work or improvement, or of any subcontractor licensed by the State of California who, under subcontract to the bidder, will specially fabricate and install a portion of the work or improvement according to detailed drawings contained in the plans and specifications, in an amount in excess of one-half of one percent of the bidder's total bid.

Failure to list subcontractors may render the bid non-responsive and may be grounds for rejection of the bid. Failure to comply with the provisions of the California "Subletting and Subcontracting Fair Practices Act" shall make the Contractor subject to the sanctions as set forth in the Act.

Alternate subcontractors shall not be listed for the same work.

23.0 SOLE-SOURCED ITEMS AND SUBSTITUTIONS DURING BIDDING

Bidders are advised that, in accordance with Public Contract Code Section 3400, the Owner has made a finding that particular materials, products, things or services are designated by specific brand or trade names in order to match other materials, products, things or services in use or to obtain necessary items available only from one source. By listing a sole-source vendor, Owner has only identified a particular product the supply

of which will conform to the Contract. Owner does not warrant in any respect the performance of any designated sole-source vendor. Owner shall not be responsible for, and Contractor shall not be excused for, any failure of a sole-source vendor to supply a conforming product in a timely fashion. Bidders shall refer to individual specification sections for specific requirements.

Contractors, manufacturers or suppliers of materials and equipment may offer an alternative product and request the alternatives to specified products be considered equal unless the Owner has sole-sourced a product in accordance with Public Contract Code 3400. Inclusion of such alternatives in the bid is the sole responsibility of the Contractor. Inclusion of the proposed alternative should only be considered if it is the Contractor's sole belief the offered alternative is equal in quality and performance to the specified product. After award of the Contract, such offers of alternative products will be reviewed and processed as a substitution as provided under Section 01330-11.0, **SUBSTITUTES OR "OR EQUAL" ITEMS AND PRODUCT OPTIONS**. If the material, equipment, process or article offered by the contractor is not, in the Owner's sole opinion, substantially equal or better in respect to that specified, then the contractor shall furnish that material, process or article specified or one that in the Owner's opinion is substantially equal or better in every respect.

24.0 BIDDERS INTERESTED IN MORE THAN ONE BID

No person, firm, or corporation, under the same or different name, shall make, file, or be interested in more than one bid for the same work unless alternate bids are called for. A person, firm, or corporation may, however, submit sub-proposals or quote prices on materials to more than one bidder.

Pursuant to Public Contract Code Section 7106, Bidders shall execute and furnish with their bids Section 00310, **NON-COLLUSION DECLARATION**. Reasonable grounds to believe that any individual, partnership, corporation, or combination is interested in more that one bid for the proposed work may cause rejection of all bids in which that individual, partnership, corporation, or combination is interested.

25.0 SHEETING, SHORING AND BRACING

Pursuant to the provisions of California Labor Code Section 6707, each bid submitted shall contain, in the bid item indicated, the amount included in its bid for adequate sheeting, shoring, and bracing, or equivalent method, for the protection of life and limb in trenches and open excavation, which shall conform to applicable safety orders. By listing this sum, the Bidder warrants that its action does not convey tort liability to the Owner, the Design Consultant, the Construction Manager, and their employees, agents, and subconsultants.

26.0 WAGE RATES

Pursuant to provisions of the Labor Code Section 1770, *et seq.*, of the State of California, the Director of the Department of Industrial Relations has ascertained the prevailing rate of per diem wages of the locality in which the Work is to be performed and applicable to the work to be done.

Bidders shall promptly notify the Owner, in writing, of any and all classifications of labor not listed in the prevailing wage determinations but necessary for the performance of the Work, before bids are submitted.

27.0 OFFER OF ASSIGNMENT OF ANTITRUST ACTIONS

As provided by Section 4552, et. seq., of the California Government Code, in submitting a bid to the Owner, the Bidder offers and agrees that if the bid is accepted, it will assign to the Owner all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Section 15) or under the Cartwright Act (Chapter 2 [commencing with Section 16700] of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, materials, or services by the Bidder for sale to the Owner pursuant to the bid. Such assignment shall be made and become effective at the time the Owner tenders final payment to the Bidder.

28.0 ASSIGNMENT OF CONTRACT

Any attempted assignment by the Contractor of any contract to be entered into hereunder, or any part thereof, or of funds to be received thereunder by the Contractor, is void unless such assignment has prior written approval of Owner, and the Surety has been given due notice of such assignment in writing and has consented thereto in writing.

29.0 REJECTION OF BIDS

The Owner reserves the right to reject any and all bids and further reserves the right to reject any bids which are nonresponsive, incomplete, obscure, or irregular; any bids which omit a bid on any one or more items on which the bids are required; any bids in which unit prices are unbalanced in the opinion of the Owner; any bids accompanied by insufficient or irregular bid guaranty; bids from Bidders who failed to perform properly or complete on time past City projects; and bids from Bidders who fail to meet the experience and qualification requirements set for in the Contract Documents as determined by the Owner.

The Owner also reserves the right to waive irregularities in a bid or bidding procedure.

30.0 EVALUATION OF BIDS AND AWARD OF CONTRACT

After the Proposals have been opened and read, they will be checked for accuracy and compliance with the Contract Documents. If a Contract is awarded, it will be to the lowest responsive, responsible, qualified Bidder whose bid complies with the specified requirements, as it may best serve the interests of the Owner. All bids will be compared on the basis of the Engineer's estimate of the quantities of work to be done. The selection of any or all alternates or bid schedules shall be at the sole discretion of the Owner. The Owner reserves the right to reject an unbalanced bid which is a bid having nominal prices for some bid items and enhanced prices for other bid items.

The criteria which will be used to determine the lowest responsive and responsible Bidder are as follows:

Responsive Bidder: Means a Bidder who has submitted a Bid which conforms in all material respects to the Bidding Documents.

Responsible Bidder: Means a Bidder who has the capacity and capability in all respects to perform fully the contract requirements and who has the integrity and reliability to assure good faith performance. Among factors to be considered in determining whether the Bidder meets these standards, are:

A. Financial, material, equipment, facility, and personnel resources and expertise necessary to meet contractual requirements;

B. A record of integrity;

C. A record of Successful Project Completions defined as:

1. Completion of project on time and without liquidated damages.
2. Completion of project without excessive defective work issues.
3. Completion of project without excess claims or disputes issues;

D. Qualified legally to contract with the OWNER, and;

E. Has not failed to supply any necessary information in connection with the inquiry concerning responsibility.

In the evaluation of any bid, the Owner shall have the right to consider information provided by sources other than Bidder.

Within sixty (60) days after the time of opening of the bids, the Owner will act either to accept a bid, to reject all bids or with the consent of the Bidders and their sureties to extend the time in which the Owner may act. The acceptance of a bid will be evidenced by a Notice of Award of Contract in writing, delivered in person or by mail to the Bidder whose bid is accepted. No other act of Owner will constitute acceptance of a bid. The Award of Contract shall obligate the Bidder whose bid is accepted to furnish performance and payment bonds and evidences of insurance, and to execute the Agreement in the form set forth in the Contract Documents. The Contract will require the completion of the work according to the Contract Documents.

Only one Contract will be awarded.

31.0 EXECUTION OF CONTRACT

The Agreement shall be executed by the successful bidder and returned, together with the Contract bonds and evidences of insurance, within fifteen (15) calendar days after receiving written Notice of Award of the Contract. Time is of the essence in this regard. After execution by Owner, one copy of the Agreement shall be returned to Contractor.

The failure to execute the Contract Documents or to furnish the bonds or insurance required by these instructions within fifteen (15) calendar days after receiving written notice of the Award of the Contract constitutes default. In case of default, the Owner may, at its sole discretion, award the Contract to the next lowest Bidder or may re-

advertise the project for new bids. If a more favorable bid is received by re-advertising, the defaulting Bidder shall have no claim against the Owner for a refund.

If a Bidder to whom an award is made fails or refuses for any reason to execute the Contract or fails to furnish any or all of the required insurance or Contract Bonds in proper form, within the time stated, it is agreed and stipulated between Owner and the Bidder to whom any award is made that damage has been and will be sustained by the Owner. It is further agreed by the Owner and any and all Bidders that it will be impractical and extremely difficult to fully ascertain and determine the actual damage that the Owner will sustain by such delay. Therefore, the Owner and all parties who submit a Bid under the Notice Inviting Bids shall be deemed to have jointly studied and attempted to estimate the damages suffered by the Owner by such delay under these circumstances and agree that the amount of the Bidder's bond or check is agreed to as the liquidated damages payable by such Bidder(s). This Bidder's bond or check will be collected and held by the Owner as the sole property of the Owner for full compensation for the damages suffered by the Owner as a result of the Bidder's failure to execute the Contract and furnish the Bonds and Insurance as required.

32.0 CONTRACT AND BONDS

The successful Bidder, simultaneously with the execution of the Agreement, will be required to furnish a Payment Bond equal to one hundred percent (100%) of the Contract Price, a Faithful Performance Bond equal to one hundred (100%) of the Contract Price, the **WORKERS' COMPENSATION INSURANCE CERTIFICATE** in Section 00645 and evidences of required insurance. Said insurance and bonds shall be secured from a surety company satisfactory to Owner with a minimum "A" rating with Best's Rating Guide.

The form of Agreement, as provided in Section 00510, **AGREEMENT** which the successful Bidder as Contractor will be required to execute, and the forms of bonds, which it will be required to furnish, shall be carefully examined by the Bidder. The Faithful Performance Bond is to secure the faithful performance of the Contract, and the Payment Bond is to secure payment for those to whom the Bidder may become legally indebted for labor, materials, tools, equipment, or services of every kind used or employed by the Bidder in performing the work.

33.0 LIST OF RECIPIENTS OF FULL SETS OF CONTRACT DOCUMENTS

Bidders may obtain a current listing of all recipients of complete sets of Contract Documents. This list will also include all plan rooms that were sent Contract Documents. To obtain a list, call the City of Placerville Engineering Division at 530-642-5250 or email your request to rneves@cityofplacerville.org.

*****END OF SECTION*****

SECTION 00310
PROPOSAL

To: CITY OF PLACERVILLE,
COUNTY OF EL DORADO,
STATE OF CALIFORNIA

For the construction of

PARDI/BIG CUT/SACRAMENTO STREET AREA WATERLINE REPLACEMENT PROJECT
PROJECT No. 41109

Bid Opening: May 31st, 2016 at 2:00 p.m.

NAME OF BIDDER .....

BUSINESS POST OFFICE BOX .....

CITY, STATE, ZIP .....

BUSINESS STREET ADDRESS .....
(PLEASE INCLUDE EVEN IF POST OFFICE BOX USED)

CITY, STATE, ZIP .....

TELEPHONE NO. AREA CODE (.....) .....

FAX NO. AREA CODE (.....) .....

The work for which this Proposal is submitted is for the construction in accordance with these Contract Documents (including the payment of not less than the State general prevailing wage rates or Federal minimum wage rates set forth herein), the Project Plans described below, including any addenda thereto, the Contract annexed hereto, and also in accordance with the California Department of Transportation Standard Plans and Standard Specifications, and the Labor Surcharge and Equipment Rental Rates in effect on the date the work is accomplished, and in accordance with the General Prevailing Wage rates. The Project Plans and Contract Documents for the work to be done are entitled:

PARDI/BIG CUT/SACRAMENTO STREET AREA WATERLINE REPLACEMENT PROJECT
PROJECT No. 41109

Bids are to be submitted for the entire work, including additive alternates, if any. The amount of the bid for comparison purposes will be the total of all the base and optional bid items.

The Bidder shall set forth for each unit basis item of work a unit price and a total for the item, and for each lump sum item a total for the item, all in clearly legible figures in the respective spaces provided for this purpose. In the case of unit basis items, the amount set forth under the "Item Total" column shall be the product of the unit price bid and the estimate quantity for the item.

In case of discrepancy between the item price and the total set forth for a unit basis item, the unit price shall prevail, except as provided in (a) or (b), as follows:

(a) If the amount set forth as a unit price is unreadable or otherwise unclear, or is omitted, or is the same as the amount as the entry in the item total column, then the amount set forth in the total column for the item shall prevail and shall be divided by the estimate quantity for the item and the price thus obtained shall be the unit price.

(b) (Decimal Errors) If the product of the entered unit price and the estimated quantity is exactly off by a factor of ten, one hundred, etc., or one-tenth, or one-hundredth, etc., from the entered total, the discrepancy will be resolved by using the entered unit price or item total, whichever most closely approximates percentage wise the unit price or item total in the Department's Final Estimate of Cost.

If this Proposal is accepted and the undersigned Bidder shall fail to enter into the Contract and furnish the two bonds in the sums required by the State Contract Act, with surety satisfaction to the City of Placerville within eight days, not including Sundays and legal holidays, after the bidder has received notice from the City of Placerville that the Contract has been awarded, the City of Placerville may, at its option, determine that the Bidder has abandoned the Contract, and thereupon this Proposal and the acceptance thereof shall be null and void and the forfeiture of such security accompanying this Proposal shall operate and the same shall be the property of the City of Placerville.

The undersigned, as Bidder, declares under penalty of perjury under the laws of the State of California that the only persons or parties interested in this Proposal, as principals, are those named herein; that this Proposal is made without collusion with any other person, firm, or corporation; that he has carefully examined the location of the proposed work, the annexed proposed form of Contract, and the Plans therein referred to; and he proposes, and agrees if this Proposal is accepted, that he will contract with the City of Placerville, in the form of the copy of the Contract annexed hereto, to provide all necessary machinery, tools, apparatus, and other means of construction, and to do all the work and furnish all the materials specified in the Contract, in the manner and time therein prescribed, and according to the requirements of the Engineer as therein set forth, and that he will take in full payment therefore the following item prices, to wit:

CONTRACTOR'S BID AND BID PRICE SCHEDULE

PARDI/BIG CUT/SACRAMENTO STREET AREA WATERLINE REPLACEMENT PROJECT
PROJECT No. 41109

ITEM NO.	BID ITEM	UNIT OF MEASURE	ESTIMATED QUANTITY	ITEM PRICE	LINE TOTAL
1	MOBILIZATION/DEMOBILIZATION	LS	1	$	$
2	CONSTRUCTION AREA SIGN	LS	1	$	$
3	TRAFFIC CONTROL SYSTEM	LS	1	$	$
4	WATER POLLUTION CONTROL PLAN	LS	1	$	$
5	NEW WATER SAMPLING STATION	EA	5	$	$
6	NEW FIRE HYDRANT	EA	9	$	$
7	NEW AIR AND VACUUM RELEASE VALVES	EA	5	$	$
8	4" SDR35 SANITARY SEWER AT CITY CORP YARD	LF	152	$	$
9	4" CLASS 51 DIP DISCHARGE PIPE AND FLOW SWITCH AT ABANDONED TREATMENT FACILITY	LS	1	$	$
	DEMOLITION AND ABANDONMENT				
10	MAINLINE PIPE ABANDONMENT	LS	1	$	$
11	REMOVE EXISTING FIRE HYDRANT	EA	7	$	$
12	ABANDON WATER METER SERVICES	EA	46	$	$
	MAINLINE CONSTRUCTION				
13	6" PVC C900 DR-14 PIPELINE	LF	144	$	$
14	12" PVC C900 DR-14 PIPELINE	LF	745	$	$
15	8" PVC C900 DR-18 PIPELINE	LF	1080	$	$
16	12" PVC C900 DR-18 PIPELINE	LF	1829	$	$
17	HARD ROCK EXCAVATION	CY	100	$	$
18	2" MAT GRIND AND PAVE - CALTRANS ROW	SF	25400	$	$
19	2" MAT GRIND AND PAVE - CITY STREETS	SF	7700	$	$
	VALVE INSTALLATION				
20	4" GATE VALVE	EA	1	$	$
21	6" GATE VALVE	EA	2	$	$
22	8" GATE VALVE	EA	5	$	$
23	12" GATE VALVE	EA	11	$	$
	TIE-IN TO EXISTING WATER SYSTEM				
24	TIE-IN TO EXISTING WATER SYSTEM	EA	14	$	$

	SERVICE LINES AND IN-TRACT PIPING				
25	1” TO 1-1/2" WATER SERVICE TO NEW METER AND METER BOX (IN SIDEWALK) CONNECT TO EXISTING IN-TRACT PIPING	EA	22	$	$
26	1” TO 1-1/2" WATER SERVICE TO NEW METER AND METER BOX (UNPAVED AREA) CONNECT TO EXISTING IN-TRACT PIPING	EA	9	$	$
27	1” TO 1-1/2" WATER SERVICE AND METER AND METER BOX CONNECT TO NEW IN-TRACT PIPING	EA	15	$	$
28	IN-TRACT PIPE, 1-INCH, < 50-100FT	EA	5	$	$
29	IN-TRACT PIPE, 1.5-INCH, 100-200FT	EA	6	$	$
30	IN-TRACT PIPE, 2-INCH 200-400FT	EA	2	$	$
31	1” PRESSURE REGULATING VALVE	EA	4	$	$
32	SUPPLEMENTAL WORK	LS	1	$ 50,000	$ 50,000
TOTAL (BASE BID ITEMS, FIGURE)		$			
	OPTIONAL BID ITEM				
33	12” PVC C900 DR-18 PIPE INSTALLATION BETWEEN CHAMBERLAIN STREET AND PACIFIC STREET	LF	340	$	$
34	NEW WATER SAMPLING STATION	EA	1	$	$
35	NEW FIRE HYDRANT	EA	1	$	$
36	12" GATE VALVE	EA	4	$	$
37	TIE-IN TO EXISTING WATER SYSTEM	EA	2	$	$
38	1” TO 1-1/2" WATER SERVICE TO NEW METER AND METER BOX (IN SIDEWALK) CONNECT TO EXISTING IN-TRACT PIPING	EA	5	$	$
39	MAINLINE PIPE ABANDONMENT	LS	1	$	$
40	REMOVE EXISTING FIRE HYDRANT	EA	1	$	$
41	ABANDON WATER METER SERVICES	EA	7	$	$
42	2" MAT GRIND AND PAVE - CALTRANS ROW	SF	7200	$	$
TOTAL (OPTIONAL BID ITEMS, FIGURE)		$			
TOTAL CONTRACT (FIGURE)		$			

TOTAL BASE BID AMOUNT (NOT INCLUDING OPTIONAL BID TEMS)_____

_____Dollars and _____ Cents.

AMOUNT IN WRITING

TOTAL BID AMOUNT (INCLUDING OPTIONAL BID TEMS)_____

_____Dollars and _____ Cents.
AMOUNT IN WRITING

Sign Here⇨_____Date:_____
CONTRACTOR

_____
PRINT SIGNATURE NAME AND TITLE OF BIDDER

(NOTICE: Bidder's failure to execute the questionnaires and statements contained in this Proposal as required by applicable laws and regulations, or the determinations by City of Placerville based upon those questionnaires and statements, may prohibit award of the subject Contract to the Bidder.)

BIDDER'S PROOF OF DIR REGISTRATION

The Bidder agrees that its Proof of DIR Registration pursuant to Labor Code Section 1725.5 is attached hereto and made a condition of this bid.

SUPPLEMENTAL INFORMATION TO BE SUBMITTED AFTER BID OPENING AND MADE A CONDITION OF THE BID

The Bidder understands that a Bidder will be ineligible for an award of Contract unless the Bidder has furnished the required financial credit rating information required in Item D of Section 00420-CERTIFICATION OF BIDDER'S EXPERIENCE AND QUALIFICATIONS within three (3) business days after the receipt of bids.

SUBCONTRACTORS LISTING

The Bidder shall list the name and address of each subcontractor to whom the Bidder proposes to subcontract portion of the work, as required by the provisions in "Required Listing of Proposed Subcontractors" in Section 2 of the Standard Specifications.

NAME	LOCATION OF BUSINESS	LICENSE No.	DBE (Y/N)	PORTION OR TYPE OF WORK

PUBLIC CONTRACT CODE SECTION 10285.1 STATEMENT

In conformance with Public Contract Code Section 10285.1 (Chapter 376, Stats. 1985), the bidder hereby declares under penalty of perjury under the laws of the State of California that the bidder has ☐, has not ☐ been convicted within the preceding three years of any offenses referred to in that section, including any charge of fraud, bribery, collusion, conspiracy, or any other act in violation of any state or Federal antitrust law in connection with the bidding upon, award of, or performance of, any public works contract, as defined in Public Contract Code Section 1101, with any public entity, as defined in Public Contract Code Section 1100, including the Regents of the University of California or the Trustees of the California State University. The term "bidder" is understood to include any partner, member, officer, director, responsible managing officer, or responsible managing officer, or responsible managing employee thereof, as referred to in Section 10285.1.

NOTE The bidder must place a check mark after "has" or "has not" in one of the spaces provided. The above Statement is part of the Proposal. Signing this Proposal on the signature portion thereof shall also constitute signature of this Statement. Bidders are cautioned that making a false certification may subject the certifier to criminal prosecution.

PUBLIC CONTRACT CODE SECTION 10162 QUESTIONNAIRE

In conformance with Public Contract Code Section 10162, the Bidder shall complete, under penalty of perjury, the following questionnaire:

Has the bidder, any officer of the bidder, or any employee of the bidder who has a proprietary interest in the bidder, ever been disqualified, removed, or otherwise prevented from bidding on, or completing a federal state, or local government project because of a violation of law or a safety regulation?

Yes ☐ No ☐

If the answer is yes, explain the circumstances in the following space:

PUBLIC CONTRACT CODE SECTION 10232 STATEMENT

In conformance with Public Contract Code Section 10232, the Contractor hereby states, under penalty of perjury, that no more than one final unappealable finding of contempt of court by a federal court has been issued against the Contractor within the immediately preceding two-year period because of the Contractor's failure to comply with an order of a federal court which orders the Contractor to comply with an order of the National Labor Relations Board.

NOTE: The above Statement and Questionnaire are part of the Proposal. Signing this Proposal on the signature portion thereof shall also constitute signature of this Statement and Questionnaire. Bidders are cautioned that making a false certification may subject the certifier to criminal prosecution.

NONCOLLUSION AFFIDAVIT
(Title 23 United States Code Section 112 and Public Contract Code Section 7106)

In conformance with Title 23 United States Code Section 112 and Public Contract Code Section 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 bidders 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.

NOTE: The above Noncollusion Affidavit is part of the Proposal. Signing this Proposal on the signature portion thereof shall also constitute signature of this Noncollusion Affidavit. Bidders are cautioned that making a false certification may subject the certifier to criminal prosecution.

BUSINESS AND PROFESSIONS CODE SECTION 7028.15 STATEMENT

In accordance with the Business and Professions Code Section 7028.15, the Contractor hereby states, under penalty of perjury, that he/she is licensed in accordance with an act providing for the State of California registration of Contractors,

License No._____, Classification(s)_____
Expiration Date _____

By my signature on this proposal, I certify, under penalty of perjury under the laws of the State of California, that the foregoing questionnaire and statements of Public Contract Code Section 10162, 10232, and 10285.1 are true and correct and that the bidder has complied with the requirements of Section 8103 of the Fair Employment and Housing Commission Regulation (Chapter 5, Title 2 of the California Administrative Code). By my signature on this proposal, I further certify, under penalty of perjury under the laws of the State of California and the United Statements of America, that the Noncullusion Affidavit required by title 23 United States Code Section 11 2 and Public Contract Code Section 7106 are true and correct.

Date: _____

SIGNATURE AND TITLE OF
BIDDER_____

NAME OF
FIRM_____

Accompanying this proposal is _____
(NOTICE: INSERT THE WORDS "CASH ($_____)", "CASSHIER'S CHECK", "CERTIFIED CHECK", OR "BIDDER'S BOND", AS THE CASE MAY BE)
in amount equal to at least ten percent (10%) of the total of the bid.

The names of all persons interested in the forgoing proposal as principals are as follows:

IMPORTANT NOTICE: If the Bidder or other interested person is a corporation, state legal name of corporation and place of incorporation, also names of the president, secretary, treasurer, and executive officer thereof; if a partnership, state name of partnership, also names of all individual partners; if Bidder or other interested person is an individual, state first and last names in full.

_____

_____

_____

Licensed in accordance with an act providing for the registration of Contractors,

License No._____ Classification(s)_____

!(A copy of the afore-referenced license must be attached hereto)!

ADDENDA:

RECEIPT OF COPIES OF THE FOLLOWING ADDENDA(S) IS HEREBY ACKNOWLEDGED.

ADDENDUM NO.	BIDDER'S SIGNATURE	DATE ACKNOWLEDGED
_____	_____	_____
_____	_____	_____
_____	_____	_____

By my signature on this proposal, I certify, under penalty of perjury under the laws of the State of California, that the foregoing questionnaire and statements of Public Contract Code Sections 10162, 10232, and 10285.1 are true and correct and that the Bidder has complied with the requirements of Section 8103 of the Fair Employment and Housing Commission Regulations (Chapter 5, Title 2 of the California Administrative Code). By my signature on this Proposal, I further certify, under penalty of perjury under the laws of the State of California and the United States of America that the Noncollusion Affidavit required by Title 23 United States Code, Section 112 and Public Contract Code Section 7106 are true and correct.

The person or persons executing this Proposal on behalf of a corporation or partnership shall be prepared to demonstrate by resolution, article, or otherwise, that such person is or that such persons are appropriately authorized to act in these regards for such corporation or partnership. Such authority shall be demonstrated to the satisfaction of the City of Placerville.

If the signature is by an agent other than an officer of a corporation or a member of a partnership, a power of attorney authorizing said act by the agent on behalf of his principal shall be submitted with the bid; otherwise, the bid may be disregarded as irregular and unauthorized.

The Bidder's execution on the signature portion of this Proposal shall constitute an endorsement and execution of those affidavits, declarations, and certifications which are part of this Proposal.

Executed this _____ day of _____, 2016

at _____ County, State of _____

_____

SIGN HERE ⇨ _____

Name and Title of Bidder _____

Name of Firm _____

***** END OF PROPOSAL *****

CITY OF PLACERVILLE

BIDDER'S BOND
! (this form MUST be used) !

KNOW ALL PEOPLE BY THESE PRESENTS, THAT WE
_____, as PRINCIPAL, and
_____as Surety are held and firmly bound unto the City of Placerville (Obligee) in the penal sum of TEN (10) PERCENT OF THE AMOUNT OF THE TOTAL BID PRICE of the Principal above named, submitted by said Principal to the Obligee for the work, for the payment of which sum in lawful money of the United States, well and truly to be made to the Obligee, we the Principal and surety bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents. In no case shall the liability of the surety hereunder exceed the sum of

$_____

THE CONDITION OF THIS OBLIGATION IS SUCH, THAT:

WHEREAS, the Principal has submitted the above-mentioned bid to the Obligee, as aforesaid, for certain construction specifically described as follows, for which bids are to be opened at Placerville, El Dorado County, California, on May 31st, 2016 at 2:00 p.m. for the construction of the

PARDI/BIG CUT/SACRAMENTO STREET AREA WATERLINE REPLACEMENT PROJECT
PROJECT No. 41109

NOW, THEREFORE, if the aforesaid Principal is awarded the Contract and, within the time and manner required under the Contract Documents, after the prescribed forms are presented to him for signature, enters into a written contract, in the prescribed form, in accordance with the Bid, and files two bonds with the City of Placerville, one to guarantee faithful performance and the other to guarantee payment for labor and materials, as required by law, then this obligation shall be null and void; otherwise, it shall remain in full force and virtue.

In the event suit is brought upon this bond by the Obligee and judgment is recovered, the Surety shall pay all costs incurred by the Obligee in such suit, including a reasonable attorney's fee to be fixed by the Court.

IN WITNESS WHEREOF, we have set our hands and seals on this _____ day of _____ 2016.

SIGNATURES

(SEAL) _____
Principal

(SEAL) _____
Surety

Address: _____

_____

(NOTE: Signature of those executing for the Surety shall be properly acknowledged, and accompanied by a Certificate of acknowledgment.)

SECTION 00420
CERTIFICATION OF BIDDER'S EXPERIENCE AND QUALIFICATIONS

PROJECT: Pardi/Big Cut/Sacramento Street Area Waterline Replacement Project

PROJECT NO.: 41109

The undersigned Bidder represents that it is competent, knowledgeable and has the special skills to perform the work required for this project. The Bidder further represents that it has evaluated and recognizes the requirements of the Project and the conditions and circumstances under which the Project is to be performed. The Bidder further acknowledges that these inherent conditions existent in the construction of particular facilities may create, during construction, unusual or unsafe conditions hazardous to persons and property. The Bidder expressly acknowledges that it is aware of such risks and that it has the skill and experience to foresee and to adopt protective measures to adequately and safely perform the construction work with respect to such hazards.

A. COMPANY EXPERIENCE- To be filled in and submitted with Bid.

The City will evaluate the Bidder's responsibility based on information included in or otherwise required by this Section 00420 and such additional information as the City may receive. The City will evaluate the Bidder's length and depth of experience with comparable Qualifying Projects. For the City to consider the Bidder properly experienced in work of similar nature to this project, the Bidder must list at least three (3) and not more than six (6) Qualifying Projects, with at least three (3) being public works contracted directly with the public entity as the owner, completed since 2009 meeting all of the following Qualifying Criteria:

1. The Project involved as the primary work pipe installation in roadways. The project also included reconnection and/or installation of new water services.
2. The Project required a Class A Contractor license to construct the project as the Prime Contractor.
3. The Prime Contractor self-performed at least fifty percent (50%) of the work on the Project.
4. The Total Project Cost (Prime Contract) exceeded $500,000.

The City may investigate and independently determine whether the listed Qualifying Projects meet the Qualifying Criteria. The Bidder may include only project(s) for which it was Prime Contractor and projects completed by its Project Manager, named below, working for other companies as Prime Contractor. For projects completed for other companies to be eligible to be Qualifying Projects, the Project Manager shall have worked on them in a capacity similar to that of this Project. The City may accept as a Qualifying Project a Bidder's listed project that does not meet all the Qualifying Criteria, provided that the Bidder adequately demonstrates with its Bid that the Qualifying Projects it has listed are sufficient to give it the necessary experience to be a responsible Bidder. The City's decisions as to responsibility will be based on an overall evaluation of all information received.

If the Bidder is a Joint Venture of two or more companies, each participant in the Joint Venture shall identify at least the minimum number of Qualifying Projects and provide project information for each Joint Venture participant in the format found below.

Qualifying Project # 1 Name: _____

Prime Contractor: _____

Project Manager: _____

Owner: _____

Construction Cost: $ _____

Construction Time: _____Calendar Days

Owner's Representative: _____

Owner's Representative Telephone No.: _____

Engineer or On-Site Construction Mgr.: _____

Engineer or On-Site CM's Telephone No.: _____

Date of Substantial Completion: _____

Qualifying Project # 2 Name: _____

Prime Contractor: _____

Project Manager: _____

Owner: _____

Construction Cost: $ _____

Construction Time: _____Calendar Days

Owner's Representative: _____

Owner's Representative Telephone No.: _____

Engineer or On-Site Construction Mgr.: _____

Engineer or On-Site CM's Telephone No.: _____

Date of Substantial Completion: _____

Qualifying Project # 3 Name: _____

Prime Contractor: _____

Project Manager: _____

Owner: _____

Construction Cost: $ _____

Construction Time: _____Calendar Days

Owner's Representative: _____

Owner's Representative Telephone No.: _____

Engineer or On-Site Construction Mgr.: _____

Engineer or On-Site CM's Telephone No.: _____

Date of Substantial Completion: _____

Qualifying Project # 4 Name: _____

Prime Contractor: _____

Project Manager: _____

Owner: _____

Construction Cost: $ _____

Construction Time: _____Calendar Days

Owner's Representative: _____

Owner's Representative Telephone No.: _____

Engineer or On-Site Construction Mgr.: _____

Engineer or On-Site CM's Telephone No.: _____

Date of Substantial Completion: _____

Qualifying Project # 5 Name: _____

Prime Contractor: _____

Project Manager: _____

Owner: _____

Construction Cost: $ _____

Construction Time: _____Calendar Days

Owner's Representative: _____

Owner's Representative Telephone No.: _____

Engineer or On-Site Construction Mgr.: _____

Engineer or On-Site CM's Telephone No.: _____

Date of Substantial Completion: _____

Qualifying Project # 6 Name: _____

Prime Contractor: _____

Project Manager: _____

Owner: _____

Construction Cost: $ _____

Construction Time: _____Calendar Days

Owner's Representative: _____

Owner's Representative Telephone No.: _____

Engineer or On-Site Construction Mgr.: _____

Engineer or On-Site CM's Telephone No.: _____

Date of Substantial Completion: _____

Total Construction Cost of listed Qualifying Project(s) above: $ _____

The City further requires disclosure of, and will evaluate, all instances of incomplete projects and pending disputes involving the Bidder. For this purpose, Bidder hereby discloses the following projects for which it was terminated for default at any time in the past five (5) years:_____
_____
_____.

Bidder shall identify on a separate sheet any claims filed in court or arbitration against Bidder in the past five years which concerned Bidder's work on a construction project. For each claim, if any, the Bidder shall provide the project name, date of the claim, name of the claimant, a brief description of the nature of the claim, the court in which the case was filed and a brief description of the status of the claim (pending or, if resolved, a brief description of the resolution). If there are any pending claims against Bidder that, should Bidder lose the claim(s),

would adversely affect Bidder's financial position or its ability to meet its obligations if awarded the contract for this Project, such claims shall also be disclosed on a separate sheet.

Bidder shall also identify on a separate sheet any claims filed in court or arbitration by Bidder against a project owner in the past five years concerning work on a project or payment for a contract. For each claim, if any, the Bidder shall provide the project name, date of the claim, name of the claimant, a brief description of the nature of the claim, the court in which the case was filed and a brief description of the status of the claim (pending or, if resolved, a brief description of the resolution). If there are any pending claims filed by Bidder against a project owner that, should Bidder lose the claim(s), would adversely affect Bidder's financial position or ability to meet its obligations if awarded the contract for this Project, such claims shall also be disclosed on a separate sheet.

B. PROJECT MANAGER EXPERIENCE- To be filled in and submitted with Bid.

The Bidder shall name below the Project Manager who will be assigned to this project and submit past related project experience of this person which must include successfully completing at least two (2) Qualifying Projects meeting the above Qualifying Criteria where this person held the role of Project Manager. The demonstrated experience of the Project Manager must have been within the last five (5) years. The Project Manager must be assigned to the Project site and be personally present on site full-time during Construction.

Name of Project Manager: _____

Number of Years of Total Construction experience as a Project Manager assigned to the types of projects as defined above: _____years

Number of Years as a Project Manager for your Company: _____ years

List up to three Qualifying Projects as defined above where the individual named above held the position of Project Manager. At least one (1) of these projects shall have been public works contracted directly with the public entity as the owner.

Qualifying Project # 1 Name: _____

Prime Contractor: _____

Owner: _____

Construction Cost: $ _____

Construction Time: _____Calendar Days

Owner's Representative: _____

Owner's Representative Telephone No.: _____

Engineer or On-Site Construction Mgr.: _____

Engineer or On-Site CM's Telephone No.: _____

Date of Substantial Completion: _____

Qualifying Project # 2 Name: _____

Prime Contractor: _____

Owner: _____

Construction Cost: $ _____

Construction Time: _____Calendar Days

Owner's Representative: _____

Owner's Representative Telephone No.: _____

Engineer or On-Site Construction Mgr.: _____

Engineer or On-Site CM's Telephone No.: _____

Date of Substantial Completion: _____

Qualifying Project # 3 Name: _____

Prime Contractor: _____

Owner: _____

Construction Cost: $ _____

Construction Time: _____Calendar Days

Owner's Representative: _____

Owner's Representative Telephone No.: _____

Engineer or On-Site Construction Mgr.: _____

Engineer or On-Site CM's Telephone No.: _____

Date of Substantial Completion: _____

This form is to be fully completed and submitted by the Bidder with the bid. Bidder is not allowed to provide a substitute form of similar information.

The City will check project references listed to verify information provided along with skills and capacity represented by Bidder. It is very important that the Bidder verify that all contact information is current for each name listed above.

Failure of the Bidder to provide current and valid project contact information and/or failure of the Bidder to meet both the pre-requisite Company and Project Manager experience may be grounds for the City to determine the Bidder as non-responsible and ineligible for contract award.

C. SAFETY QUALIFICATION INFORMATION- To be filled in and submitted with Bid.

Has CAL OSHA cited and assessed penalties against your firm for any "serious," "willful" or "repeat" violations of its safety or health regulations in the past five years?

NOTE: If you have filed an appeal of a citation, and the Occupational Safety and Health Appeals Board has not yet ruled on your appeal, you need not include information about it.

☐ Yes ☐ No

If "yes," attached a separate signed page describing the citations, including information about the dates of the citations, the nature of the violation, the project on which the citation(s) was or were issued, the amount of penalty paid, if any. If the citation was appealed to the Occupational Safety and Health Appeals Board and a decision has been issued, state the case number and the date of the decision.

Has the federal Occupational Safety and Health Administration cited and assessed penalties against your firm in the past five years?

NOTE: If you have filed an appeal of a citation and the Appeals Board has not yet ruled on your appeal, or if there is a court appeal pending, you need not include information about the citation.

Experience Modification Rate (EMR).

Enter your firm's EMR for the last three complete years (this information is provided by your workers' comp. insurance carrier).

Year	EMR
1-	
2-	
3-	
Three Year Average=	

Are the above rates interstate or intrastate? _____

If intrastate, which state? _____

Is your firm Self-Insured for Workers' Compensation Insurance in California?

☐ Yes ☐ No

If YES, Self-Insurance No. _____ and attach certification to Bid.

Name of Workers' Comp. Insurance Carrier(s):

_____

Address: _____

Agent Name: _____Telephone No.: _____

If the Bidder's Three Year Average EMR is greater than 1.00 (100%), Bidder is required to furnish the following additional information to the EMR information listed above:

Calculate your firm's LWIR for the past three (3) complete years. The lost workday information is listed on your OSHA forms no. 300 and 300A and is available from your workers' comp. insurance carrier.

LWIR = Total number of lost workday incidents X 200,000
Total employee hours worked

Year	Lost Workday Incidents	Total Employee Hours Worked	Lost Workday Incident Rate
1-			
2-			
3-			
Totals			

Average Recordable Incident Rate (RIR). Calculate your firm's RIR for the past three (3) complete years. The Incident Rate information is listed on your OSHA forms no. 300 and 300A and is available from your workers' comp. insurance carrier.

RIR = Total number of recordable incidents X 200.000
Total employee hours worked

Year	Recordable Incidents	Total Employee Hours Worked	Recordable Incident Rate
1-			
2-			
3-			
Totals			

D. FINANCIAL INFORMATION- To be submitted by the three lowest bidders within three (3) business days following the bid opening date.

Provide evidence that the Bidder has sufficient financial resources to provide all work necessary to complete the project including construction, start-up, and warranty services.

A. Bidder must provide one or more of the following to assist the City in determining the Bidder's financial condition:

1. Copy of a reviewed or audited financial statement with accompanying notes and supplemental information. A financial statement that is not either reviewed or audited is not acceptable.
2. A certified Credit Report, current within 30 days of the date proposals are due. This credit report shall show a Dun & Bradstreet, or equal, credit risk category rating.
3. A letter from the Bidder's bank certifying their opinion of the Bidder's credit risk category rating and Bidder's current available line of credit.

B. Bidder must provide a letter from its Surety or Surety Broker which certifies that Bidder's current bonding capacity is sufficient for this Project based on the Bidder's Bid.

All financial information provided by Bidder that is marked "Confidential" or "Proprietary" shall be handled by the City in accordance with Section 00700.

The undersigned hereby states that all representations regarding the Bidder's Company Experience, Project Manager Experience and Safety Qualification Information are correct and true.

Signed this _____ day of _____, 20____

_____
Bidder's Name

_____ _____
Authorized Signature Date

_____
Title of Signator

*****END OF SECTION*****

CITY OF PLACERVILLE, CALIFORNIA\
DEVELOPMENT SERVICES DEPARTMENT
ENGINEERING DIVISION

Pardi/Big Cut/Sacramento Street Area Waterline Relocation Project

Project No. 41109

CONTRACT FORMS AND REQUIREMENTS

April 25, 2016

SECTION 00500
NOTICE OF AWARD

Date: _____

To: _____
(Name of Bidder)

Address: _____

_____

Project: Pardi/Big Cut/Sacramento Street Area Waterline Replacement Project

Project No.: 41109

You are notified that your Bid dated _____ for the above Contract has been considered. You are the Successful Bidder and are awarded a Contract for the construction and completion of waterline replacement along the alignment described on the Contract Drawing for the City. Main Line construction includes, but is not limited to: piping, fittings, valves, fire hydrant reconnections/replacements, connections to the existing City facilities, and all appurtenances as required. Service Line construction includes, but not limited to: the construction of service laterals starting with saddle or tee at the main to the meter, connection from the meter to the existing house or service lateral, abandonment of the existing service connection as approved by the City, repair of landscaping and private property (including and concrete) disturbed/damaged during construction, and the placement of meters and meter boxes including all appurtenances necessary to complete the service.

(Indicate total Work, alternates or sections of Work awarded.)

The Contract Price of your Contract is _____ Dollars ($_____).

Two (2) copies of each of the proposed Section 00510, Agreement for Construction accompany this Notice of Award.

You must comply with the following conditions precedent within fifteen (15) days of the date you receive this Notice of Award.

1. Deliver to City of Placerville – Engineering Division two (2) signed copies of the Agreement, as found in Section 00510, leaving the date blank.

2. Deliver with the Agreement an appropriate Certificate of Authorization.

3. Deliver with the Agreement the Contract Bonds as specified in Section 00100, INSTRUCTIONS TO BIDDERS and Section 00700 City of Placerville Special Provisions.

4. Deliver with the Agreement a signed Certification of Drug-Free Workplace found in Section 00640.

5. Deliver with the Agreement a signed Workers' Compensation Insurance Certificate found in Section 00645.

6. Deliver with the Agreement all required original Insurance Certificates and endorsements as required in the City of Placerville Special Provisions.

7. Other conditions precedent:

   NONE

Failure to comply with these conditions within the time specified will entitle Owner to consider you in default, annul this Notice of Award and declare your Bid security forfeited.

Within ten (10) calendar days after you comply with the above conditions, Owner will return to you one fully executed Agreement for your records.

CITY OF PLACERVILLE

By: _____

Its: _____

Copy to Owner's Representative

Construction Manager

Engineer

*****END OF SECTION*****

SECTION 00510
CONTRACT (AGREEMENT)

CITY OF PLACERVILLE
PARDI/BIG CUT/SACRAMENTO STREET AREA WATERLINE REPLACEMENT PROJECT

PROJECT NO.: 41109

THIS AGREEMENT ("Agreement") approved by the City Council this _____ day of _____, in the year of 2016, made and concluded, in duplicate, between the CITY OF PLACERVILLE, a political subdivision of the State of California, by the Development Services Department hereinafter called "City," and _____ hereinafter called "Contractor."

WITNESSETH:

WHEREAS, City has caused the above-captioned project to be let to formal bidding process, and

WHEREAS, Contractor has duly submitted a bid response for the captioned project upon which City has awarded this contract;

NOW, THEREFORE, the parties hereto have mutually covenanted and agreed, and by these presents do covenant and agree, each with the other, as follows:

Article 1. THE WORK

The Contractor shall complete the Work as specified or indicated under the Bid Schedule(s) of the City's Contract Documents entitled:

PARDI/BIG CUT/SACRAMENTO STREET AREA WATERLINE REPLACEMENT PROJECT
PROJECT NO.: 41109

The project is located in the City of Placerville in El Dorado County in the State of California. The Work to be done is shown on the Plans, described in the Special Provisions.

Article 2. CONTRACT DOCUMENTS

The Contract Documents consist of: the Notice to Bidders; the bid forms which include the accepted Proposal, Bid Price Schedule and Total Bid, Subcontractors Listing, Section 10285.1 Statement, Section 10162 Questionnaire, Section 10232 Statement, Noncollusion Affidavit, Bidder's Bond; the Contract which includes this Agreement, Workers Compensation Certificate, Performance Bond, and Payment Bond; the drawings listed and identified as the Project Plans; the Special Provisions and all Addenda incorporated in those documents before their execution, and all Contract Change Orders issued in accordance with the Contract Documents which may be delivered or issued after the Effective Date of this Agreement and are not attached hereto; the prevailing Labor Surcharge And Equipment Rental Rates (when required) as determined by the Department of Industrial Relations to be in effect on the date the Work is accomplished; and all the obligations of City and of Contractor which are fully set forth and described therein; all Contract Documents which are hereby specially referred to and by such reference made a part hereof. All Contract Documents are intended to cooperate so that any work called for in one and not mentioned in the other is to be executed the same as if mentioned in all Contract Documents. Contractor agrees to perform all of its promises, covenants, and conditions set forth in the Contract Documents, and to abide by and perform all terms and conditions set forth therein. In case of conflict between this Agreement and any other contract document, this Agreement shall take precedence.

Article 3. COVENANTS AND CONTRACT PRICE

The City hereby promises and agrees with the said Contractor to employ, and does hereby employ, the said Contractor to provide the material and to do the Work according to the terms and conditions of the Contract Documents herein contained and referred to, for the prices hereinafter set forth, and hereby contracts to pay the same at the time, in the manner and upon the conditions herein set forth; and the said parties for themselves, their heirs, executors, administrators, successors and assigns, do hereby agree to the full performance of the covenants herein contained. The City shall pay the Contractor for the completion of the Work in accordance with the Contract Documents in current funds the Contract Prices named in the Contractor's Bid and Bid Price Schedule, a copy of which is attached hereto as Exhibit “A”.

Article 4. COMMENCEMENT AND COMPLETION

The Work to be performed under this Contract shall commence on the date specified in the Notice to Proceed by the City, and the Work shall be fully completed within the time specified in the Notice to Proceed pursuant to the Special Provisions.

The City and the Contractor recognize that time is of the essence of the Agreement and that the City will suffer financial loss if the Work is not completed within the time specified in the Special Provisions annexed hereto, plus any extensions thereof allowed in accordance with the Special Provisions. They also recognize the delays, expense, and difficulties involved with proving in a legal proceeding the actual loss suffered by the City if the Work is not completed on time. Accordingly, instead of requiring any such proof, the City and the Contractor agree that as liquidated damages for delay (but not as a penalty) the Contractor shall pay the City the sum of five thousand dollars ($5,000.00) for each calendar day the Work remains uncompleted after the time specified herein for the completion of the Work.

Article 5. INDEMNITY

To the fullest extent of the law, the Contractor shall defend, indemnify, and hold the City and its employees harmless against and from any and all claims, suits, losses, damages, and liability for damages, including attorney's fees and other costs of defense brought for or on account of injuries to or death of any person, including but not limited to, workers and the public, or on account of injuries to or death of City employees, or damage to property, or any economic consequential or special damages which are claimed or which shall in any way arise out of or be connected with Contractor's services, operations or performance hereunder, regardless of the existence or degree of fault or negligence on the part of the City, the Contractor, subcontractors or employee of any of these, except the active, or sole, negligence of the City, its officers and employees, where expressly prescribed by statute.

The duty to indemnify and hold harmless the City specifically includes the duties to defend set forth in Section 2778 of the Civil Code. The insurance obligations of the Contractor are separate, independent obligations under the Contract Documents, and the provision of this defense and indemnity are not intended to modify nor should they be construed as modifying or in any way limiting, the insurance obligations set forth in the Contract Documents.

Article 6. GUARANTEES

Contractor shall repair or replace any or all work provided hereunder which is defective due to faulty materials, poor workmanship, or defective equipment at no expense to the City, ordinary wear or tear and unusual abuse or neglect excepted, during the term of the contract and for a period of one year from the date of final accept the Work.

Contractor shall be required to repair or replace any and all adjacent facilities or areas which have been damaged or displaced due to contractor work performed under this Agreement at no expense to the City during the term of this Agreement and for a period of one year from the date of final acceptance of the Work.

The parties agree that this guarantee and the rights and obligations accruing therefrom shall be in addition to, and not by way of limitation in any manner whatsoever to, the rights, obligations, warranties or remedies otherwise provided for by law.

In the event of Contractor's failure to comply with the above mentioned conditions within ten (10) calendar days after being notified in writing by the City, Contractor hereby authorizes City to proceed to have said defects repaired and made good at Contractor's expense, and Contractor will honor and pay all costs and charges therefore upon written demand.

Article 7. DISPUTES RESOLUTION

a. CONTINUE WORK DURING DISPUTE: In the event of any dispute between the City and the Contractor, the Contractor will not stop Work but will prosecute the work diligently to completion in the manner directed by the City, and the dispute shall be resolved by a court of law after completion of the Work. However, all disputes must be submitted by Contractor in accordance with subsequent provisions of this section.

b. CITY'S REVIEW OF CLAIM: The City shall review the facts pertinent to the claim, secure assistance from legal and other advisors, coordinate with the contract administrators, and within the time stipulated in subsection “c” herein, render a written decision on the claim. A copy of the decision shall be furnished to the Contractor by certified mail, return receipt requested, or any other method that provides evidence of receipt. The decision of the City shall be made final and conclusive except as is otherwise provided herein.

c. REQUIREMENTS FOR FILING A CLAIM: For any Claim Subject to this section, the following requirements apply: The claim shall be in writing and include the documents necessary to substantiate the claim. Claims must be filed on or before the date of final payment. Nothing in this subdivision is intended to extend the time limit or supersede notice requirements otherwise provided by contract for the filing of claims.

    1. For claims of less than fifty thousand dollars ($50,000), the City shall respond in writing to any claim within 45 days of the receipt of the claim or may request, in writing, within 30 days of receipt of the claim, any additional documentation supporting the claim or relating to defenses or claims the City may have against the claimant. If additional information is thereafter required, it shall be requested and provided pursuant to this subdivision, upon mutual agreement of the City and the claimant. The City's written response to the claim, as further documented, shall be submitted to the claimant within 15 days after the receipt of the further documentation or within a period of time no greater than that taken by the claimant in producing the additional information, whichever is greater.

    2. For claims of fifty thousand dollars ($50,000) or more, but less than or equal to three hundred seventy-five thousand dollars ($375,000), the City shall respond in writing to all written claims within 60 days of the receipt of the claim or may request, in writing, within 30 days of receipt of the claim, any additional documentation supporting the claim or relating to defenses or claims the City may have against the claimant. If additional information is thereafter required, it shall be requested and provided pursuant to this subdivision, upon mutual agreement of the City and the claimant. The City's written response to the claim, as further documented, shall be submitted to the claimant within 30 days after the receipt of the further documentation or within a period of time no greater than that taken by the claimant in producing the additional information, whichever is greater.

    3. If the claimant disputes the City's written response, or the City fails to respond within the time prescribed, the claimant may so notify the City, in writing, either within 15 days of the City's response or within 15 days of the City's failure to respond within the time prescribed, respectively, and demand an informal conference to meet and confer for the settlement of

the issues in dispute. Upon a demand, the City shall schedule a meet and confer conference within 30 days for settlement of the dispute.

4. If following the meet and confer conference the claim or any portion remains in dispute, the claimant may file a claim pursuant to Chapter 1 (commencing with Section 900) and Chapter 2 (commencing with Section 910) of Part 3 of Division 3.6 of Title 1 of the Government Code. For the purpose of these provisions, the running of the period of time within which a claim must be filed shall be tolled from the time the claimant submits a written claim pursuant to subdivision (a) until the time the claim is denied as a result of the meet and confer process, including any period of time utilized by the meet and confer conference.

d. CLAIMS EXEMPT FROM REVIEW: The procedures and remedies provided in this Article 7 do not apply to:

1. Any claims by the City.

2. Any claims for or respecting personal injury or death or reimbursement or other compensation arising out of or resulting from liability for personal injury or death.

3. Any claim or dispute relating to stop payment requests or stop notices.

4. Any claim related to the approval, refusal to approve, or substitution of subcontractors, regardless of tier, and suppliers.

e. PROCEDURE TO RESOLVE CIVIL CLAIMS: The City and Contractor shall follow procedures established for all civil actions filed to resolve claims pursuant to Section 20104.4 of the Public Contract Code.

f. PAYMENT OF UNDISPUTED PORTION OF CLAIM: Payment by City of undisputed portion of claim; interest on arbitration award or judgment.

1. City shall pay such portion of a claim which is undisputed except as otherwise provided in the Contract.

2. In any suit filed under Section 20104.4, of the Public Contract Code, the City shall pay interest at the legal rate on any arbitration award or judgment. The interest shall begin to accrue on the date the suit is filed in a court of law.

g. SUIT IN EL DORADO COUNTY ONLY: Any litigation arising out of this Contract shall be brought in El Dorado County and the Contractor hereby waives the removal provisions of California Code of Civil Procedure Section 394.

Article 8. ASSIGNMENT OF ANTITRUST ACTIONS

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

If an awarding body or public purchasing body receives, either through judgment or settlement, a monetary recovery for a cause of action assigned under this chapter, the assignor shall be entitled to receive reimbursement for actual legal costs incurred and may, upon demand, recover from the public body any portion of the recovery, including treble damages, attributable to overcharges that were paid by the assignor but were not paid by the public body as part of the

bid price, less the expenses incurred in obtaining that portion of the recovery. Upon demand in writing by the assignor, the assignee shall, within one year from such demand, reassign the cause of action assigned under this part if the assignor has been or may have been injured by the violation of law for which the cause of action arose and (a) the assignee has not been injured thereby, or (b) the assignee declines to file a court action for the cause of action."

Article 9. TERMINATION BY OWNER FOR CONVENIENCE

The City reserves the right to terminate the Contract at any time upon determination by the City's Representative that termination of the Contract is in the best interest of the City. City shall issue the Contractor a written notice specifying that the Contract is to be terminated.

Upon receipt of said written notice, Contractor shall stop all work under the Contract except: (1) work specifically directed to be completed prior to termination, (2) work the Inspector deems necessary to secure the project for termination, (3) removal of equipment and plant from the site of the Work, (4) action that is necessary to protect materials from damage, (5) disposal of materials not yet used in the Work as directed by the City, and (6) cleanup of the site.

If the Contract is terminated for the City's convenience as provided herein, all finished or unfinished work and materials previously paid for shall, at the option of City, become its property. Contractor shall be paid an amount which reflects costs incurred for work provided to the date of notification of termination. In addition, Contractor shall be paid the reasonable cost, as solely judged by City, and without profit, for all work performed to secure the project for termination.

Article 10. TERMINATION BY OWNER FOR CAUSE

If the Contractor is adjudged as bankrupt or insolvent, or makes a general assignment for the benefit of its creditors or if a trustee or receiver is appointed for the Contractor or for any of its property, or if Contractor files a petition to take advantage of any debtor's act, or to reorganize under the bankruptcy or applicable laws, or on more than one occasion fails to supply sufficient skilled workmen or suitable material or equipment, or on more than one occasion fails to make prompt payments to subcontractors for labor, materials, or equipment, or disregards the authority of the City's Representative, or the Engineer, if one is appointed, or otherwise violates any provision of the Contract Documents, then the City may, without prejudice to any other right or remedy and after giving the Contractor and its Surety a minimum of 10 days from delivery of a written termination notice, terminate the services of the Contractor and take equipment and machinery thereon owned by the Contractor and finish the Work by whatever method the City may deem expedient. In such case, the Contractor shall not be entitled to receive any further payment until the Work is finished.

Without prejudice to other rights or remedies the City may have, if the Contractor fails to begin delivery of materials and equipment, to commence Work within the time specified, to maintain the rate of delivery of material, to execute the Work in the manner and at such locations as specified, or fails to maintain a work program which will ensure the City's interest, or, if the Contractor is not carrying out the intent of the Contract, an Inspector's written notice may be served upon the Contractor and the Surety on its faithful performance bond demanding satisfactory compliance with the Contract. If the Contractor or its Surety does not comply with such notice within 5 days after receiving it, or after starting to comply, fails to continue, the City may exclude it from the premises and take possession of all material and equipment, and complete the Work by City's own forces, by letting the unfinished Work to another Contractor, or by a combination of such methods.

Where the Contractor's services have been so terminated by the City, said termination shall not affect any right of the City against the Contractor then existing or which may thereafter accrue. Any retention or payment of monies by the City due the Contractor will not release the Contractor from compliance with the Contract Documents.

If the unpaid balance of the Contract price exceeds the direct and indirect costs of completing the Work, including compensation for additional professional services, such excess shall be paid to the Contractor. If the sums under the Contract are insufficient for completion, the Contractor or Surety shall pay to the City within 5 days after the completion, all costs in excess of the Contract price. In any event, the cost of completing the Work shall be charged against the Contractor and its Surety and may be deducted from any money due or becoming due from the City.

If the Surety assumes any part of the Work, it shall take the Contractor's place in all respect for that part and shall be paid by the City for all Work performed by it in accordance with the Contract. If the Surety assumes the entire Contract, all money due the Contractor at the time of its default shall be payable to the Surety as the work progresses, subject to the terms of this Contract.

The provisions of the section shall be in addition to all other rights and remedies available to the City under law.

If after notice of termination, it is determined for any reason that the Contractor was not in default, the rights and obligations of the parties shall be the same as if the notice of termination had not been issued. The Contract shall be equitably adjusted to compensate for such termination.

Article 11. WORKERS COMPENSATION CERTIFICATION

Contractor warrants and represents that he is aware of the provisions of Section 3700 of the California Labor Code which require every employer to be insured against liability for workers compensation or to undertake self-insurance in accordance with the provisions of that Code. Pursuant to the provisions of California Civil Code sections 1860, 1861, and prior to commencement of work, the Contractor shall sign and file with the City Project Administrator a certification in the form prescribed in section 1861.

Article 12. WARRANTY

The Contractor warrants to the City that materials and equipment furnished for the Work will be good quality and new, unless otherwise required or permitted under the Contract Documents, that the Work will be free from defects or flaws and is of the highest quality of workmanship and that the Work will conform with the requirements herein. Work not conforming to these requirements, including substitutions not properly approved and authorized, shall be considered defective.

Article 13. RETAINAGE AND FINAL PAYMENT

The retention from payment is set forth in Section 8 "Measurement and Payment" of the Standard of the Special Provisions. The Contractor may elect to receive 100 percent of payments due as set forth in the Contract Documents, without retention, by depositing securities of equivalent value with the City, in accordance with, and as set forth in Section 22300 of the Public Contract Code.

Final Payment to the Contractor in accordance with the final estimate is contingent upon the Contractor furnishing the City with a signed written release of all claims against the City arising by virtue of the Contract. The Contractor, from the operation of the release, may specifically exclude disputed Contract claims in stated amounts. The release shall be in substantially the following form:

WAIVER AND RELEASE UPON FINAL PAYMENT

The undersigned has been paid in full by the City for all labor, services, equipment, and material furnished to the City on the _____ (name of Project) located at _____ and does hereby waive and release the City, its officers, agents, and employees from all claims and liability to the Contractor arising out of, or in any way connected with, the Contract, except for the disputed contract claims specified below:

Notice of Disputed Claim and Amount

$ _____

Date _____

_____
Name, Title

_____
Name of Contractor

Article 14. AUTHORIZED SIGNATURES

The parties hereto represent that the undersigned individuals executing this Agreement on behalf of their respective parties are fully authorized to do so by law or other appropriate instrument and to bind upon said parties the obligations set forth herein.

IN WITNESS WHEREOF, the said Department of Public Works of the City of Placerville, State of California, has caused this Agreement to be executed by the City Council of the City of Placerville, in its behalf, and the said Contractor has signed this Agreement the day and year written below.

CITY OF PLACERVILLE

Dated _____ _____
City Manager, City of Placerville

CONTRACTOR

Dated _____ _____
Name of Company

By _____ _____ _____
Authorized Representative **License No.** **Federal Employer Identification No.**

NOTE: If Contractor is a corporation, the legal name of the corporations shall be set forth above together with the signature of the officer or officers authorized to sign contracts on behalf of the corporation; if Contractor is a co-partnership, the true name of the firm shall be set forth above together with the signature of the partner or partners authorized to sign contracts in behalf of the co-partnership; and if Contractor is an individual, his/her signature shall be placed above. Contractor executing this document on behalf of a corporation or partnership shall be prepared to demonstrate by resolution, article, or otherwise that they are appropriately authorized to act in

these regards. For such corporation or partnership, such authority shall be demonstrated to the satisfaction of City. If signature is by an agent, other than officer of a corporation or a member of a partnership, an appropriate Power of Attorney shall be on file with the City prior to signing this document.

Mailing Address: _____

Business Address: _____

City, Zip: _____

Phone: _____ **Fax:** _____

ATTACHMENT: EXHIBIT "A", Contractors Bid and Bid Price Schedule

END OF CONTRACT

INSERT EXHIBIT A
TO THE CONTRACT AGREEMENT
(ATTACH CONTRACTOR'S BID AND PLAN SCHEDULE)

CITY OF PLACERVILLE
COUNTY OF EL DORADO, STATE OF CALIFORNIA
DEVELOPMENT SERVICES DEPARTMENT

PAYMENT BOND

Bond No. _____

WHEREAS, the City of Placerville, Department of Public Works, hereafter referred to as "Obligee", has awarded to Contractor _____ hereafter referred to as "Principal"' a contract for the work described as follows:

Pardi/Big Cut/Sacramento Street Area Waterline Replacement Project
Project No.: 41109

AND, WHEREAS, said Principal is required to furnish a bond in connection with said contract, guaranteeing the faithful performance thereof: NOW, THEREFORE, we the undersigned Principal and Surety are held and firmly bound unto the Obligee, in the sum of _____Dollars ($_____) to be paid to the Obligee, for which payment we bind ourselves, jointly and severally.

THE CONDITION OF THIS OBLIGATION IS SUCH,

That is said Principal or its subcontractors shall pay any of the persons named in Civil Code Section 3181, or amounts required to be deducted, Unemployment Insurance Code with respect to work or labor performed by such claimant, or any amounts required to be deducted, withheld, and paid over to the Franchise Tax Board from the wages of employees or the Principal and his subcontractors pursuant to Section 18806 of the Revenue and Taxation Code, with respect to such work an labor, that the surety herein will pay for the same in an amount not exceeding the sum specified in this bond, otherwise the above obligation shall be void. In case suit is brought upon this bond, the surety will pay a reasonable attorney's fee to be fixed by the court.

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

Dated: _____, 20_____.

Correspondence or Claims relating to this bond should be sent to the Surety at the following address:

_____ _____
PRINCIPAL

_____ _____
SURETY

_____ _____
ATTORNEY-IN-FACT

NOTE: Signatures of those executing for the surety must be properly acknowledged and a Power of Attorney attached.

CERTIFICATE OF ACKNOWLEDGEMENT

State of California, County of _____.

On this _____day of _____ in the year of _____, before me _____, personally appeared _____, personally known to be (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to this instrument as the attorney in fact of _____, and acknowledged to me that he subscribed the name of the said company thereto as surety, and his own name as attorney-of-fact.

(SEAL) Notary Public

CITY OF PLACERVILLE
COUNTY OF EL DORADO, STATE OF CALIFORNIA
DEVELOPMENT SERVICES DEPARTMENT

PERFORMANCE BOND

Bond No._____

KNOW ALL MEN BY THESE PRESENT, that we, _____ the Contractor in the Contract hereto annexed, as Principal, and _____ as Surety, are firmly bound unto the City of Placerville, a Political Subdivision of the State of California, hereinafter called the "Obligee" in the sum of _____ DOLLARS ($_____) lawful money of the United States, for which payment, well and truly to be made, we bind ourselves, jointly and severally, firmly by these present.

Signed, sealed and dated: _____

The condition of the above obligation is that if said Principal as Contractor in the Contract hereto annexed shall faithfully perform each and all of the conditions of said Contract to be performed by him, and shall furnish all tools, equipment, apparatus, facilities, transportation, labor and material, other than material, if any, agreed to be furnished by the Obligee, necessary to perform and complete, and to perform and complete in a good and workmanlike manner, the work of ***Pardi/Big Cut/Sacramento Street Area Waterline Replacement Project, Project No. 41109*** in strict conformity with the terms and conditions set forth in the Contract hereto annexed, then this obligation shall be null and void,; otherwise bond shall remain in full force and effect and the said Surety will complete the Contract work under its own supervision by Contract or otherwise, and pay all costs thereof for the balance due under terms of the Contract, and the said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the work to be performed thereunder shall in any wise affect its obligation on this bond, and it does hereby waive notice of any such change, extension or time, alteration of addition to the terms of the Contract or to the work.

In the event suit is brought upon this bond by the Obligee and judgment is recovered, the Surety shall pay all costs incurred by the Obligee in such suit, including a reasonable attorney's fee to be fixed by the court.

This guarantee shall insure the Obligee during the work required by any Contract and for a period of one (1) year from the date of acceptance of the work against faulty of improper materials or workmanship that may be discovered during that time.

No right of action shall accrue under this bond to of for the use of any person other than the Obligee named herein.

Dated: _____, 20_____.

Correspondence or Claims relating to this bond should be sent to the Surety at the following address:

_____ _____

PRINCIPAL

_____ _____

SURETY

_____ _____

ATTORNEY-IN-FACT

NOTE: Signatures of those executing for the surety must be properly acknowledged and a Power of Attorney attached.

CERTIFICATE OF ACKNOWLEDGEMENT

State of California, County of _____.

On this _____day of _____ in the year of _____, before me _____, personally appeared _____, personally known to be (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to this instrument as the attorney in fact of _____, and acknowledged to me that he subscribed the name of the said company thereto as surety, and his own name as attorney-of-fact.

(SEAL) _____ Notary Public

END OF SECTION

SECTION 00550
NOTICE TO PROCEED

Date: _____

To: _____
(Name of Contractor)

Address: _____

_____

Project: Pardi/Big Cut/Sacramento Street Area Waterline Replacement Project

Project No.: 41109

You are notified that the Contract Times under the above contract will commence to run on (THIS SHOULD BE THREE CALENDER DAYS AFTER DATE OF NTP.) On that date, you are to start performing your obligations under the Contract Documents. In accordance with Section 00800-1.1, **Times Allowed for Completion,** the date of Final Completion is _____.

Before you may start any Work at the Site, you must:

1. Submit certified Safety Program as required by California Code of Regulations, Title 8, General Industry Safety Orders and other related regulatory requirements.
2. Submit copies of applicable permits (Example: Cal OSHA Annual Trench Excavation Permit) Submit approved fire protection plan, if applicable
3. Attend Pre-Construction conference.

CITY OF PLACERVILLE

By: _____

Its: _____

Copy to Owner's Representative

Construction Manager

Engineer

*****END OF SECTION*****

CITY OF PLACERVILLE, CALIFORNIA\
DEVELOPMENT SERVICES DEPARTMENT
ENGINEERING DIVISION

Pardi/Big Cut/Sacramento Street Area Waterline Relocation Project

Project No. 41109

SPECIAL PROVISIONS AND SUPPLEMENTARY CONDITIONS

April 25, 2016

SECTION 00700
SPECIAL PROVISIONS

SECTION A – DESCRIPTION OF PROJECT

The location and scope of work for this project are as described in the Technical Specifications.

1. Contract Documents: The work shall be done in accordance with the following documents which, by reference, are incorporated into the contract:

   A. Notice to Contractors (Section 00020) As contained herein and published in periodicals of the local area.

   B. Instructions to Bidders (Section 00100) As contained herein and used by bidder in preparing formal proposal to do work.

   C. Proposal (Section 00310) Including the bond required therewith, all as contained in blank form herein, used by the bidder making formal proposal to do the work.

   D. Contract (Section 00510) The formal agreement between the City of Placerville and the Contractor, including the Faithful Performance Bond, and the Payment (Labor and Materials) Bond.

   E. Standards – Except as stated in the Technical Specifications all work and materials shall be in accordance with the El Dorado Irrigation District Design and Construction Standards current edition, El Dorado County Community Development Agency, Design and Improvement Standards Manual and Standard Construction Specifications, current editions, the City of Placerville Design and Improvement Standards Manual, current edition, and the Standard Specifications of the State of California, current edition, which said documents are specifically referred to and by such reference made in part hereof.

   F. Specifications for the Work – These specifications, including all references.

   G. Document Precedence -- The component Contract documents are intended to provide explanation for each other. Any work shown on the Plans and not in the Specifications, or vice versa, is to be executed as if indicated in both. In case of a conflict in the Contract, the following order of precedence will govern interpretation of the Contract:

      1) Field Instruction or other written directives

      2) Addenda

      3) Technical Specifications

      4) Special Provisions

      5) Project Plans

      6) City Design and Improvement Standards Manual

7) County and EID Standard Drawings

8) County and EID Standard Specifications

9) State Standard Drawings

10) State Standard Specifications

2. Changes in the Work

A. Form of Change:

1) The City may, at any time, by written order, make changes in the Work as deemed necessary by the Engineer. Such changes include, but are not limited to, changes:

a) In the Specifications or Plans;

b) In the sequence, method or manner of performance of the Work;

c) In the owner-furnished facilities, equipment, materials, services or site; or

d) Directing acceleration of the Work.

2) If such changes cause an increase or decrease in the Contractor's cost of, or time required for, performance of the Contract, an equitable adjustment will be made and the Contract modified in writing accordingly.

a) Change Orders. A change pursuant to this Section A-2B will be in the form of a Contract Change Order which will set forth the work to be done or the method by which the change and cost adjustment, if any, will be determined, and the time of completion of the work.

Upon receipt of a Contract Change Order, the Contractor shall proceed with the ordered work. If ordered in writing by the Engineer, the Contractor shall proceed with the work so ordered prior to actual receipt of a Contract Change Order. A Contract Change Order executed by the Contractor and approved by the Engineer is an executed Contract Change Order as that term is used throughout this Section.

b) Change Order Protests. A Contract Change Order may be issued to the Contractor at any time. Should the Contractor disagree with any terms or conditions set forth in a Contract Change Order which the Contractor has not executed, the Contractor shall submit a written protest to the Engineer within fifteen (15) days after the receipt of such Contract Change Order. The protest shall state the points of disagreement and, if possible, the quantities and cost involved. If a written protest is not submitted, payment will be made as set forth in the Contract Change Order. Such payment shall constitute full compensation for all work included therein or required thereby. Such unprotested Contract Change

Orders shall be considered as executed Contract Change Orders.

Where the protest concerning a Contract Change Order relates to compensation, the compensation payable for all work specified or required by the Contract Change Order to which such protest relates will be determined in the same manner as provided in Section A-2B. The Contractor shall keep full and complete records of the cost of such work and shall permit the Engineer to have such access thereto as may be necessary to assist in the determination of the compensation payable for such work. Where the protest concerning a Contract Change Order relates to the adjustment of time and the completion of the Work, the time to be allowed therefore will be determined as provided in this Section.

The consent of the Contractor's sureties shall not be required as to any change or Extra Work, and the liability of the Contractor's Bonds shall be increased or decreased accordingly without notice to the sureties.

B. Procedures and Allowable Costs on Changes and Additions to Work

1) Forms of Payment

If the change in, or addition to, the Work will result in an increase in the contract sum, the City shall have the right to require the performance thereof. The compensation to be paid for any such work shall, in the City's sole discretion, be determined in one or more of the following ways:

a) By agreed unit prices, if unit prices are required by the City's bid form and provided with contractor's bid;

b) By proposal and acceptance of an agreed upon lump sum; or

c) On a time and materials basis.

Until one of the above methods is agreed on, or if the Work is to be paid for on a time and materials basis, the Contractor shall keep full and complete records of the cost of such work in the form and manner prescribed by the Engineer and shall permit the Engineer to have access to such records as may be necessary to assist in the determination of the compensation payable for such work.

2) Lump Sum Payment

The City, in its sole and absolute discretion, may request a lump sum proposal by Contractor to perform the change in, or addition to, the Work performed. Such lump sum proposal shall be submitted by the Contractor within ten (10) days of the City's request therefor. Request for a lump sum proposal by City shall not be deemed an election by City to have the Work performed on a lump sum basis. Costs of preparing the proposal shall not be compensable.

a) Contents of Lump Sum Proposal. The Contractor's proposal shall be itemized and segregated by labor and materials for the various components of the change (no aggregate labor total will be acceptable). The proposal shall be accompanied by signed proposals of any

Subcontractors which will perform any portion of the change, and of any persons who will furnish materials or equipment for incorporation therein. The proposal shall also include the Contractor's estimate of the time required to perform the changes or additional work.

b) Computation of Labor Costs. The portion of the proposal relating to labor, whether by the Contractor's forces or the forces of any of its Subcontractors, may include the projected wages of the reasonably anticipated Site labor, including foremen, who will be directly involved in the change in the Work. These projected wages shall not include charges for assistant superintendents, superintendents, office personnel, timekeepers and maintenance mechanics.

Labor costs may also include Contractor's overhead and profit which shall be computed by adding to the labor costs either up to fifteen percent (15%) of the projected wages, but not payroll costs, or the labor surcharge set forth in the California Department of Transportation publication entitled Labor Surcharge And Equipment Rental Rates, which is in effect on the date upon which the Work is accomplished and which is a part of the Contract. The method of computing the overhead and profit shall be solely within the discretion of the City.

The labor surcharge, if used, shall constitute full compensation for all payments imposed by State and Federal laws and for all other payments made to, or on behalf of, the worker, other than actual wages as defined above or travel and subsistence payments as provided by Labor Code Section 1773.8. No time or charges will be allowed except when the workers are actually engaged in the proper, efficient and diligent performance or completion of the extra work as authorized. Overtime shall not be worked without prior approval of the Engineer.

c) Computation of Equipment and Materials Costs. The portion of the proposal relating to materials may include the reasonably anticipated direct costs to the Contractor or to any of its Subcontractors of materials to be purchased for incorporation in the change in the Work. This portion of the proposal may also include transportation and applicable sales or use taxes. Up to fifteen percent (15%) of these direct costs may be included as overhead and profit for the Contractor or any such Subcontractor (such overhead and profit to include all small tools).

This portion of the proposal may further include the Contractor's and any of its Subcontractors' reasonably anticipated costs for the rental and operation of prime construction and automotive equipment furnished and used in connection with the change in the Work. The equipment rental and operation rates used shall be the current edition of the Department of Transportation, Division of Construction, Equipment Rental Rates. These costs shall not include charges for listed equipment or major tools with a new cost of $500.00 or less. No time charges shall be allowed except for equipment actually used for the proper and efficient performance or completion of the authorized change in the Work.

d) Subcontractors. The lump sum proposal may include up to five percent

(5%) of the amount which the Contractor will pay to any of its Subcontractors for the change in the Work as allowable overhead and profit to the Contractor.

e) Failure to Submit Lump Sum Proposal. In the event that the Contractor fails to submit its proposal within the designated period, the Engineer may direct the Contractor to proceed with the change or addition to the Work and the Contractor shall so proceed. The Engineer shall unilaterally determine the reasonable costs and time to perform the work in question, which determination shall be final and binding upon the Contractor.

f) Failure to Agree on Lump Sum Amount. In the event that the parties are unable to agree as to the reasonable costs and time to perform the change in or addition to the Work based upon the Contractor's proposal and the Engineer and City do not elect to have the change in the Work performed on a time and material basis, the Engineer and City shall make a unilateral determination of the reasonable cost and time to perform the change in the Work, based upon their own estimates, the Contractor's submission or combination thereof. In such instances, a Change Order shall be issued for the amount of costs and time determined by the Engineer and the City and shall become binding upon the Contractor unless the Contractor submits its protest in writing to the City within thirty (30) days of the issuance of the Change Order.

The City has the right to direct the Contractor in writing to perform the change in the Work which is the subject of the Change Order.

Failure of the parties to reach agreement regarding the costs and time of the performing the change in the Work and/or any pending protest shall not relieve the Contractor from performing the change in the Work promptly and expeditiously.

3) Payment by Unit Prices

If any of the items included in the lump sum proposal are covered by unit prices contained in the contract document, the City may, if it requires the change in the Work to be performed on a lump sum basis, elect to use these unit prices in lieu of the similar items included in the lump sum proposal in which event an appropriate deduction will be made in the lump sum amount prior to the application of any allowed overhead and profit percentages. No overhead and profit shall be applied to any unit prices.

4) Payment on a Time and Material Basis

If the City elects to have the change or addition to the Work performed on a time and material basis, the Work shall be performed, whether by the Contractor's forces or the forces of any of its Subcontractors or Sub- subcontractors, at actual costs to the entity or entities performing the change in the Work. Actual costs shall not include any charge for administration, clerical expense, supervision or superintendence of any nature whatsoever, including foremen, or the costs, use or rental of tools or plant.

Contractor may add fifteen percent (15%) thereof as the total overhead and profit to the entity or entities actually performing the change. This fifteen percent (15%), however, shall not be applied against any payroll costs as defined in Section A-2B with respect to lump sum proposals. If the entity or entities actually performing the work are Subcontractors or Sub-subcontractors, the Contractor shall be allowed five percent (5%) of the total charge of the performing entity or entities (including mark-up) as Contractor's mark-up. No other mark-ups shall be allowed hereunder.

The Contractor shall submit to the City daily work and material tickets, to include the identification number assigned to the change in the Work, the location and description of the change in the Work, the classification of labor employed (and names and social security numbers), the material used, the equipment rented (not tools) and such other evidence of cost as the City may require. The City may require authentication of all time and material tickets and invoices by persons designated by the City for such purpose. The failure of the Contractor to secure any required authentication shall, if the City elects to treat it as such, constitute a waiver by the Contractor of any claim for the cost of that portion of the Change in the Work covered by a non-authenticated ticket or invoice; provided, however, that the authentication of any such ticket or invoice by the City shall not constitute an acknowledgment by the City that the items thereon were reasonably required for the Change in the Work.

5) Limitations on Changes

The Contractor shall not be entitled to any amount for indirect costs, damages or expenses of any nature, including, but not limited to, so- called "impact" costs, labor inefficiency, wage, material or other escalations beyond the prices upon which the proposal is based and to which the parties have agreed pursuant to the provisions of this Section, and which the Contractor, its Subcontractors and Sub-subcontractors or any other person may incur as a result of delays, interferences, suspensions, changes in sequence or the like, for whatever cause, whether reasonable or unreasonable, foreseeable or unforeseeable, or avoidable or unavoidable, arising from the performance of any and all changes in the work performed pursuant to this Section. It is understood and agreed that the Contractor's sole and exclusive remedy in such event shall be recovery of its direct costs as compensable hereunder and an extension of the time of the Contract, but only in accordance with the provisions of the Contract Documents.

It is expressly agreed that Contractor shall not be entitled to claim damages for anticipated profits on any portion of the Work that may be deleted. The amount of any adjustment for work deleted shall be estimated at the time deletion of work is ordered and the estimated adjustment will be deducted for the subsequent monthly pay estimates. The City reserves its rights under Section A-2H to audit Contractor's as- bid profit in connection with any deductive change, to arrive at a final adjustment. Contractor's as-bid profit shall be reduced pro rata according to the proportion of the original contract value less as-bid profit, represented by the work deleted.

The City reserves the right to contract with any person or firm other than the Contractor for any or all Extra Work.

C. Unilateral Change in or Addition to the Work. Notwithstanding the above, the City, directly or through the Engineer, may direct the Contractor in writing to perform changes in or additions to the scope of the Contract. The Contractor shall perform such work and the parties shall proceed pursuant to the provisions of Section A-2B.

D. Changes in Character of Work. If an ordered change in the Plans or Specifications materially changes the character of the Work of a Contract item from that upon which the Contractor based its bid price, and if the change increases or decreases the actual unit costs of such changed item as compared to the actual or estimated unit cost of performing the Work of the item in accordance with the Specifications and Plans originally applicable thereto, in the absence of an executed Contract Change Order specifying the compensation payable, an adjustment in compensation therefor will be made in accordance with the following:

1) The basis of such adjustment in compensation will be the difference between the Contract unit-price to perform the work of the item or portion thereof involved in the change as originally planned and the actual unit cost of performing the work of the item or portion thereof involved in the change, as changed. Actual unit costs will be as agreed upon by the Contractor and the Engineer. If they cannot agree or if there is no unit- price for the subject work, then the costs of the work will be determined by the Engineer in the same manner as if the work were to be paid for on the time and material basis as provided in Section A-2B. Any such adjustment will apply only to the portion of the work of the item actually changed in character.

2) Failure of the Engineer to recognize the change in character of the work at the time the Contract Change Order is issued shall in no way be construed as relieving the Contractor of its duties and responsibility of filing a written protest within the ten (10) day limit as herein above provided.

E. Differing Site Conditions. The Contractor shall promptly, and before the following conditions are disturbed, notify the City in writing of any:

1) Material that the Contractor believes may contain hazardous waste, as defined in Section 25118 of the Health and Safety Code, that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with provisions of existing law; or

2) Subsurface or latent physical conditions at the Site differing from those indicated in the Contract Documents; or

3) Unknown conditions at the Site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract.

The Engineer shall thereupon promptly investigate the conditions. If the Engineer finds that they do involve hazardous waste, or do materially differ and cause and decrease or increase in the Contractor's cost of time of performance, the Engineer will issue and change order as appropriate. Any increase or decrease of cost resulting from such changes shall be adjusted in the manner provided in Section A-2B for adjustments as to extra and/or additional work and changes. However, neither the City nor the Engineer shall be liable or responsible for additional work, costs or changes to the Work due to material

difference between actual conditions and any geotechnical, soils and other reports, surveys and analyses made available for the Contractor's review. In the event that a dispute arises between the City and the Contractor, whether the conditions materially differ, or involve hazardous waste, or cause and decrease or increase 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 by the Contract, but shall proceed with all work to be performed under the Contract, the procedures applicable to claims for extra costs shall then apply.

F. Civil Action Procedures

The following procedures shall apply to all civil actions filed to resolve claims under this contract.

1) Non-Binding Mediation

Within sixty (60) days, but no earlier than thirty (30) days, following the filing of responsive pleadings, the court shall submit the matter to non- binding mediation unless waived by mutual stipulation of both parties. The mediation process shall provide for the selection within fifteen (15) days by both parties of a disinterested third person as mediator, shall be commenced within thirty (30) days of the submittal, and shall be concluded within fifteen (15) days from the commencement of the mediation unless a time requirement is extended upon a good cause showing to the court or by stipulation of both parties. If the parties fail to select a mediator within the fifteen-(15) day period, any party may petition the court to appoint the mediator.

2) Judicial Arbitration

a) If the matter remains in dispute, the case shall be submitted to judicial arbitration pursuant to Chapter 2.5 (commencing with Section 1141.10) of Title 3 of part 3 of the Code of Civil Procedure, notwithstanding Section 1141.11 of that code. The Civil Discovery Act of 1986 (Article 3 commencing with Section 2016) of Chapter 3 of Title 3 of Part 4 of the Code of Civil Procedure) shall apply to any proceeding brought under this subsection consistent with the rules pertaining to judicial arbitration.

b) Notwithstanding any other provision of law, upon stipulation of the parties, arbitrators shall be experienced in construction law. Upon stipulation of the parties, mediators and arbitrators shall be paid necessary and reasonable hourly rates of pay not to exceed their customary rate, and such fees and expenses shall be paid equally by the parties, except in the case of arbitration where the arbitrator, for good cause, determines a different division. In no event shall these fees or expenses be paid by state or county funds.

c) In addition to Chapter 2.5 (commencing with Section 1141.10) of Title 3 of part 3 of the Code of Civil Procedure, any party appealing an arbitration award who does not obtain a more favorable judgment shall, in addition to payment of costs and fees under that chapter, also pay the attorney's fees of the other party arising out of the appeal.

3) Intent

a) It is the intention of this Section that the differences between the parties, arising under and by virtue of the Contract, be brought to the attention of the Engineer at the earliest possible time in order that such matters may be settled, if possible, or other appropriate action promptly taken. The Contractor hereby agrees that it shall have no right to additional compensation for any claim that may be based on any act, failure to act, event, thing or occurrence for which no written notice of potential claim, as herein required, was timely filed.

b) In the event of an emergency endangering life or property, the Contractor shall act as stated in Section B-3E herein, and after execution of the emergency work shall present an accounting of labor, materials and equipment in connection therewith. The procedure for any payment that may be due to for emergency work will be as specified in Section A-2 herein.

c) The City shall pay money as to any portion of a claim which is undisputed, except as otherwise provided in the contract.

d) In any suit filed under this section, the City shall pay interest at the legal rate on any arbitration award or judgment. The interest shall begin to accrue on the date the suit is filed in a court of law.

G. Claims for Extra Costs

1) Notice of Potential Claims

a) It is hereby mutually agreed that the Contractor shall not be entitled to the payment of any additional compensation for any cause, including any act, or failure to act, by the Engineer, or the happening of any event, thing or occurrence, unless the Contractor provides the Engineer with written notice of the potential claims as hereinafter specified. Compliance with this section, however, shall not be a prerequisite as to matters within the scope of the protest provisions in Section A-2A.

b) The written notice of potential claims shall set forth the reasons for which the Contractor believes additional compensation will or may be due, the nature of the costs involved, and, insofar as possible, the amount of the potential claim. The notice as above required shall be given to the Engineer prior to the time that the Contractor commences performance of the Work giving rise to the potential claim for additional compensation, if based on an act or failure to act by the Engineer, or in all other cases within ten (10) days after the happening of the event, thing or occurrence giving rise to the potential claim.

2) Construction Claims

a) The Contractor may submit a claim to the Engineer concerning any matter for which a protest under Section A-2A, or a notice of potential claim, is filed. Such claims, or potential claims, shall be submitted to the Engineer

within ten (10) calendar days following the submission of the protest or notice, unless, due to the nature of the claim or the uncompleted state of the Work, it is impracticable to determine the amount or the extent of the claim within such period. In such cases, claims shall be submitted at the earliest practicable time in which such a determination can be made. In any event, all claims shall be filed on or before the date of the final release by the Contractor as provided for in Section B-8I. The contractor waives his rights to submit a claim if the notice of potential claims process or protest process is not followed per their respective sections

b) All claims shall be in writing and shall set forth clearly and in detail, for each item of additional compensation claimed, the reasons for the claim, reference to applicable provisions of the Specifications, the nature and the amount of the cost involved, the computations used in determining such costs, all pertinent factual data and all the documents necessary to substantiate the claim. The Contractor shall maintain complete and accurate records of the cost or any portion of the Work for which additional compensation is claimed, and shall provide the Engineer with copies thereof, as required.

c) The contractor waives his rights to submit a claim if the notice of potential claims process or protest process is not followed per their respective sections.

3) Resolution of Constructions Claims $50,000 or Less

a) The City will respond in writing to all written claims for less than or equal to fifty thousand dollars ($50,000) within forty-five (45) days of receipt of the claim, or may request, in writing, within thirty (30) days of receipt of the claim, any additional documentation supporting the claim or relating to defenses or claims the City may have against the claimant.

b) If additional information is thereafter required, it shall be requested and provided pursuant to this subdivision, upon mutual agreement of the City and the claimant.

c) The City's written response to the claim, as further documented, shall be submitted to the claimant within fifteen (15) days after receipt of the further documentation or within a period of time no greater than that taken by the claimant in producing the additional information, whichever is greater.

4) Resolution of Claims Greater than fifty thousand dollars ($50,000) and Less than or Equal to three hundred and seventy-five thousand dollars ($375,000).

a) The City will respond in writing to all written claims for of over fifty thousand dollars ($50,000) and less than or equal to three hundred seventy-five thousand dollars ($375,000) within forty-five (45) days of receipt of the claim, or may request, in writing, within thirty (30) days of receipt of the claim, any additional documentation supporting the claim or relating to defenses or claims the City may have against the claimant.

b) If additional information is thereafter required, it shall be requested and

provided pursuant to this subdivision, upon mutual agreement of the City and the claimant.

c) The City's written response to the claim as further documented, shall be submitted to the claimant within thirty (30) days after receipt of the further documentation, or within a period of time no greater than that taken by the claimant in producing the additional information or requested documentation, whichever is greater.

5) Resolution of Claims Greater than three hundred and seventy-five thousand dollars ($375,000).

The Engineer shall, within a reasonable time after the presentation of any claim in excess of three hundred and seventy-five thousand dollars ($375,000), make a decision in writing on such claim.

All decisions of the Engineer shall be final unless the Contractor, within ten (10) days after receipt of the Engineer's decision, files a written protest with the Engineer stating clearly and in detail the basis of the protest.

Such protest shall be forwarded promptly by the Engineer to the City Council, who will issue a decision on such protest. It is hereby agreed that the Contractor's failure to protest the Engineer's determination or instruction within ten (10) days after such determination or instruction is transmitted to the Contractor shall constitute a waiver by the Contractor of all rights to further protest, judicial or otherwise.

6) Meet and Confer Conference

a) If the claimant disputes the City's written response, or the City fails to respond within the time prescribed, the claimant may so notify the City, in writing, either within fifteen (15) days of receipt of the City's response or within fifteen (15) days of the City's failure to respond within the time prescribed, respectively, and demand an informal conference to meet and confer for settlement of the issues in dispute. Upon a demand, the City will schedule a meet and confer conference within thirty (30) days for settlement of the dispute.

b) If, following the meet and confer conference, the claim or any portion thereof remains in dispute, the claimant may file a claim pursuant to Chapter 1 (commencing with Section 900) and Chapter 2 (commencing with Section 910) of Part 3 of Division 3.6 of Title 1 of the Government Code. For purposes of those provisions, the running of the period of time within which a claim must be filed shall be tolled from the time the claimant submits its written claim pursuant to subdivision (1) until the time the claim is denied, including any period of time utilized by the meet and confer conference.

7) Contractor’s Duty During Claim Resolution

The Contractor shall proceed with the Work in accordance with the plans and specifications and determinations and instructions of the Engineer during the

resolution of any claims disputes.

H. City's Right to Audit and Preservation of Records

1) The Contractor shall maintain books, records and accounts of all costs in accordance with generally accepted accounting principles and practices. The City and its authorized representatives shall have the right to audit the books, records and accounts of the Contractor under any of the following conditions:

   a) The Contract is terminated for any reason in accordance with the provisions of the Contract Documents in order to arrive at equitable termination costs;

   b) In the event of a disagreement between the Contractor and the City over the amount due the Contractor under the terms of the Contract;

   c) To check or substantiate any amounts invoiced or paid which are required to reflect the costs of the Contractor, or the Contractor's efficiency or effectiveness under this Contract or in connection with extras, changes, claims, additions, backcharges, or others, as may be provided for in this Contract; and/or

   d) If it becomes necessary to determine the City's rights and the Contractor's obligations under the Contract or to ascertain facts relative to any claim against the Contractor which may result in a charge against the City;

   e) To determine any difference in cost occasioned by a permissible substitution; and /or

   f) For any other reason in the City's sole judgment.

2) Contractor shall provide the City (or its representatives), unlimited, reasonable access during working hours to the Contractor's books and records. The City's audit rights shall be liberally construed in the City's favor.

3) The Contractor, from the effective date of final payment or termination hereunder, shall preserve and make available to the City for a period of three (3) years thereafter, at all reasonable times at the office of the Contractor (but without any charge to the City), all its books, records, documents, photographs, micro-photographs, and other evidence bearing on the costs and expenses of the Contractor under this Contract and relating to the Work hereunder.

4) The City will make all payments required of it under this Contract subject to audit, under circumstances stated above, which audit may be performed at the City's option, either during the Contract time period or during the record retention time period. Regardless of authorization, approval or acceptance, signatures or letters which are given by the City and are part of the City's control systems or are requested by the Contractor, the payments made under this Contract shall not constitute a waiver or agreement by the City that it accepts as correct the billings, invoices or other charges on which the payments are based. If the City's audit produces a claim against the

Contractor, the City may pursue all its legal remedies even though it has made all or part of the payments required by this Contract.

5) If any audit by the City or its representative discloses an underpayment by the City pursuant to the terms of the Contract Documents, the City shall have the duty to pay any amount found by the audit to be owed to the Contractor. If such audit discloses an overpayment, the Contractor shall have the obligation to reimburse the City for the amount of the overpayment. The City's right to claim reimbursement from the Contractor of any overpayment shall not be terminated or waived until three years after the completion of the City's audit or upon the termination of audit rights under subparagraph (f), below, whichever date is later. The obligation of the Contractor to make reimbursements hereunder shall not terminate except as provided by law.

6) The City's right to audit and the preservation of records shall terminate at the end of three (3) years after the date final payment is made or termination of the Contract. The Contractor shall include this "Right to Audit and Preservation of Records" clause in all subcontracts issued by it and it shall require the same to be inserted by all Sub-subcontractors in their subcontracts, for any portion of the work. Should Contractor fail to include this clause in any such contract or Sub-subcontractor contract, or otherwise fail to insure the City's rights hereunder, Contractor shall be liable to the City for all costs, expenses and attorney's fees which the City may have to incur obtaining or attempting to obtain an audit or inspection of or the restoration of records which otherwise would have been available to the City from the persons under this clause. The City or its authorized representative may conduct such audit.

3. Equal Employment Opportunity. During the performance of this contract, the Contractor agrees as follows:

That the Contractor will not, because of race, religious creed, color, sex, national origin or ancestry of any person, refuse to hire or employ any applicant or to bar or discharge any employee from employment, or to discriminate against any employee in compensation, or in terms, conditions or privileges of employment and that the Contractor will take affirmative action to insure that every applicant for employment and every employer will receive equal opportunity for employment and shall be granted equal treatment with respect to compensation, terms, conditions or other privileges of employment, without regard to any employee's race, religious creed, color, sex, national origin or ancestry.

SECTION B – GENERAL REQUIREMENTS

1. Definitions and Terms

A. Standard Specifications – The Standard Specifications of the State of California, Department of Transportation, Division of Highways, 2015 edition. Any reference therein to a State Agency or officer shall be interpreted as the corresponding City office or officer acting under this contract with address at City Hall, Placerville, California 95667.

B. City – The City of Placerville.

C. City Council – The governing body of the City.

D. City Specifications – The El Dorado Irrigation District, Design and Construction Standards, current edition. Any reference therein to a County Agency or officer shall be interpreted as the corresponding City office or officer acting under this contract with address at City Hall, Placerville, California 95667.

E. Engineer –City Engineer of the City of Placerville or his/her authorized agent who shall represent the City during the term of the contract.

F. Laboratory – The laboratory of the City of Placerville to the extent of its capability; otherwise as defined in the Standard Specifications.

2. Proposal Requirements and Conditions

A. General – The bidder's attention is directed to the provisions of Section 2 of the Standard Specifications, as supplemented herein, for the requirements and conditions which he/she must observe in the preparation of the proposal form and the submission of the bid.

B. Proposal Forms – The proposal forms are bound in these Specifications which may be obtained from the office of the City of Placerville Engineering Division City Hall, 3101 Center Street, Placerville, California, as advertised in the 'Notice to Bidders.

C. Disqualification of Bidders – In addition to the other requirements the bidder must declare in the proposal that he/she has not accepted any bid from any Subcontractor or vendor through any bid depository, By-Laws, Rules and Regulations of which prohibit or prevent the Contractor from considering any bid from any Subcontractor or vendor which is not processed through said bid depository or which prevent any Subcontractor or vendor from bidding to any Contractor who does not use the facilities of or accept bids from or through such bid depository as to their ability, financial responsibility and experience in order to be eligible for consideration of their proposal.

E. Non-Collusion – In accordance with Public Contract Code Section 7106, a Non-collusion Affidavit is included in the proposal. Signing the proposal shall also constitute signature of the Non-collusion Affidavit.

3. Award and Execution of Contract, and Insurance Requirements

A. General – The bidder's attention is directed to the provisions of Section 3 of the Standard Specifications, as supplemented herein, for the requirements of the Contract.

B. Award of Contract

1) The City reserves the right to accept or reject any and all Bids for a period of sixty (60) days after the date of opening, and to waive any minor informality or irregularity in any Bid. No Bid can be withdrawn during that period.

2) The City reserves the right to reject any or all Bids, including, without limitation, the right to reject any non-conforming, non-responsive, unbalanced, or conditional bids.

C. Contract Bonds

The successful bidder shall furnish with the Contract a FAITHFUL PERFORMANCE BOND and a PAYMENT (LABOR AND MATERIALS) BOND, each in the amount of 100% of the total bid, on the forms prescribed by the City.

D. Responsibility of Contractor, Hold Harmless & Indemnity Agreement

The contractor shall take all responsibility for the work and shall defend, indemnify, release and hold harmless the City, its officers, officials, employees, agents and volunteers, from all claims, loss, damage, injury, and liability of every kind, nature, and description, directly or indirectly arising from the performance of the contract of work regardless of responsibility for negligence (including costs and expenses, which include attorney's fees, incurred in connection therewith) and from any and all claims, loss, damage, injury, and liability, howsoever the same may be caused, resulting directly or indirectly from the nature of the work covered by the contract, regardless of responsibility for negligence (including costs and expenses, which include attorney's fees, incurred in connection therewith), but excluding liability due to the sole negligence or willful misconduct of the City.

The City, pursuant to this contract and indemnity agreement, may, at the time of preparing and certifying the final voucher, an as a condition of preparing and certifying the same, require the Contractor to continue his/her bond or any part thereof, as security against any such unsatisfied claims, for a time not exceeding the time when such claims would be legally barred. Approval of the insurance under this hold harmless and responsibility clause.

E. Insurance and Liability

1) Insurance

Contractor shall procure and maintain for the duration of the contract insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the Work hereunder by the Contractor, its agents, representatives, employees or Subcontractors. The cost of such insurance shall be included in the Contractor's bid.

a) Neither the Contractor nor any Subcontractor shall commence any work until all required insurance has been obtained at their own expense. Such insurance must have the approval of the City as to limit, form, and amount, and shall be placed with insurers with a current A.M. Best's rating of no less than A:VII.

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

c) Prior to execution of the Contract, the Contractor shall furnish the City with original endorsements effecting coverage for all policies required by the Contract. The Contractor shall not permit any Subcontractor identified in the Designation of Subcontractors form to commence work on this Project until such Subcontractor has furnished the City with original endorsements effecting coverage for all insurance policies required by the Contract. The endorsements are to be on forms provided or approved by the City. The City may require the Contractor or any Subcontractor to furnish complete certified copies for all insurance policies

affecting the coverage required by the Contract.

d) All of the Contractor's policies shall contain an endorsement providing that written notice shall be given to the City at least sixty (60) calendar days prior to termination, cancellation, or reduction of coverage in the policy.

e) Any policy or policies of insurance that the Contractor elects to carry as insurance against loss or damage to its construction equipment and tools shall include a provision therein providing a waiver of the insurer's right to subrogation against the City or its officers.

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

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

h) The Contractor and all Subcontractors shall, at their expense, maintain in effect at all times during the performance of work under the Contract not less than the following coverage and limits of insurance, which shall be maintained with insurers and under forms of policy satisfactory to the City. The maintenance by the Contractor and all Subcontractors of the following coverage and limits of insurance is a material element of this Contract. The failure of the Contractor or any Subcontractor to maintain or renew coverage or to provide evidence of renewal may be treated by the City as a material breach of this contract.

I. Worker's Compensation and Employer's Liability Insurance

(a) Worker Compensation

The Contractor and all Subcontractors shall maintain insurance to protect the Contractor or Subcontractor from all claims under Worker's Compensation and Employer's Liability Acts, including Longshoremen's and harbor Workers' Act. Such coverage shall be maintained, in type and amount, in strict compliance with all applicable State and Federal statutes and regulations. The Contractor shall execute a certificate in compliance with Labor Code Section 1861, on the form provided in the Contract Documents.

(b) Claims Against City

If an injury occurs to any employee of the Contractor or any of the Subcontractors for which the employee or its dependents, in the event of its death, may be entitled to compensation from the City under the provisions of the Acts, or for which compensation is claimed from the City, there will be retained out of the sums due the Contractor under this Contract, an amount sufficient to cover such compensation as fixed by the Acts, until such compensation is paid or it is determined that no compensation is due. If the City is required to pay such compensation, the amount so paid will be deducted and retained from such sums due, or to become due, the Contractor.

II. Commercial General and Automobile Liability Insurance

The Contractor shall maintain in effect at all times during the performance of the work hereunder not less than the following coverages and limits of Commercial General and Automobile Liability insurance:

(a) Form and Amount

The insurance shall include, but shall not be limited to, protection against claims arising from death, bodily injury, personal injury, or damage to property resulting from actions, failures to act, operations or equipment of the insured, or by its employees, agents or consultants, or by anyone directly or indirectly employed by the insured. The amount of insurance coverages shall not be less than the limits stated in the Appendix section of this document. Any deductibles must be declared to and approved by the City. At the option of the City, either: the insurer shall reduce or eliminate such deductibles as respects the entity, its officers, officials, employees and volunteers; or the Contractor shall procure a bond guaranteeing payment of losses and related investigations, claim administration expenses, and defense expenses.

The commercial general and automobile liability insurance coverage shall also include the following:

(b) Additional Requirements

i) Provisions or endorsement naming the City, the Engineer and the City's consultants, and each of their officers, employees, and agents, as additional insureds with respect to any potential liability arising out of the performance of any work under the Contract, and providing that such insurance is primary insurance as respects the interest of the City and the Engineer, and its consultants, and each of their officers, employees, and agents and that any other insurance, risk pool membership, or other liability protection maintained by the City or maintained by the Engineer is excess to the insurance required hereunder, and will not be called upon to contribute to any loss.

ii) "Cross Liability" or "Severability of Interest" clause.

iii) Broad Form Property Damage, Personal Injury, Contractual Liability, Protective Liability, and Completed Operations coverages, and elimination of any exclusion regarding loss or damage to property caused by explosion or resulting from collapse of buildings or structures or damage to property underground, commonly referred to by insurers as the "XCU" hazards.

iv) Provision or endorsement stating that such insurance, subject to all of its other terms and conditions, applies to the liability assumed by the Contractor under the Contract, including, without limitation, that set forth in Section B-3E(2), Indemnity and Litigation Costs.

v) Provisions or endorsement stating that any failure to comply with reporting or other provisions of the policies, including breaches of warranties, shall not affect coverage provided to the City, its officers, officials, employees, or volunteers.

vi) 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.

III. Builder's Risk or Installation Floater "All-Risk" Insurance

If required, before commencement of the Work, the Contractor shall submit written evidence that it has obtained for the period of the Contract, Builder's Risk "All-Risk" Completed Value Insurance and/or Inland Marine "All-Risk" Installation Floater Insurance, as may be applicable, upon the entire Project which is the subject of this Contract, including completed work and work in progress. The policy or policies of insurance shall name the Contractor, City, and Engineer as insured as their respective interests may appear, and shall include an insurer's waiver of subrogation rights in favor of each. Such insurance may have a deductible clause, but the amount of the deductible shall be subject to the approval of the City, except that the deductible on earthquake coverage may be in accordance with the underwriter's requirements.

2) Indemnity and Litigation Cost

a) Promptly upon execution of the Contract, the Contractor specifically obligates itself and hereby agrees to protect, hold free and harmless, defend and indemnify the City, the Engineer and its consultants, and each of their officers, employees and agents, from any and all liability, penalties, costs, losses, damages, expenses, causes of action, claims or judgments, including attorney's fees, which arise out of or are in any way connected with the Contractor's, or its Subcontractors' or suppliers', performance of work under this Contract or failure to comply with any of the obligations contained in the Contract. This indemnity shall imply no reciprocal right of the Contractor in any action on the contract pursuant to California Civil Code section 1717 or section
1717.5. To the fullest extent legally permissible, this indemnity, defense and hold harmless agreement by the Contractor shall apply to any and all acts or omissions, whether active or passive, on the part of the Contractor or its agents, employees, representatives, or Subcontractor's agents, employees and representatives, resulting in claim or liability, irrespective of whether or not any acts or omissions of the parties to be indemnified hereunder may also have been a contributing factor to the liability, except such loss or damage which was caused by the active negligence, the sole negligence, or the willful misconduct of the City.

b) In any and all claims against the City, the Engineer and each of their consultants, officers, employees and agents by any employee of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, the indemnification obligation under this Section shall not be limited in way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any Subcontractor under Workers' Compensation statutes, disability benefit statutes or other employee benefit statutes.

c) This indemnity shall not apply to fees and costs incurred by the City in prosecuting or defending against the Contractor in any proceeding under Sections A-2F and A-2G of these Special Provisions.

3) Protection of Work

a) The Contractor shall be responsible for the care of all the Work until its completion

and final acceptance. The Contractor shall, at its own expense, replace damaged or lost material and repair damaged parts of the Work or the City may do the same at the Contractor's expense and the Contractor and its sureties shall be liable therefor. The Contractor shall make its own provisions for properly storing and protecting all material and equipment against theft, injury, or damage from any and all causes. Damaged material and equipment shall not be used in the Work. The Contractor shall take all risks from floods and casualties except as provided by law, and shall make no charge for the restoration of such portions of the work as may be destroyed or damaged by flood or other casualties or because of danger from flood or other casualties or for delays from such causes. The Contractor may, however, be allowed a reasonable extension of time on account of such delays, subject to the conditions herein before specified. The Contractor shall not be responsible for the cost, in excess of five percent (5%) of the contracted amount, of repairing or restoring damage to the Work, if the damage was proximately caused by an earthquake in excess of a magnitude of 3.5 on the Richter Scale or by tidal waves; provided that the Work damaged was built in accordance with accepted and applicable building standards, and the plans and specifications of the City.

b) The Contractor shall effectively secure and protect adjacent property and structures, livestock, crops and other vegetation. If applicable, the Contractor shall open fences on or crossing the right-of-way and install temporary gates of sound construction thereon so as to prevent the escape of livestock. Adjacent fence posts shall be adequately braced to prevent the sagging or slackening of the wire. Before such fences are opened, the Contractor shall notify the owner or tenant of the property and, where practicable, the opening of the fence shall be in accordance with the wishes of the owner or tenant. The Contractor shall be responsible that no loss or inconvenience shall accrue to the owner or tenant by virtue of their fences having been opened or the gate not having been either shut or attended at all times. Where special types of fences are encountered, the Contractor shall install temporary gates made of similar materials and of suitable quality to serve the purposes of the original fences. In all cases where the Contractor removes fences to obtain workroom, the Contractor shall provide and install temporary fencing as required, and on completion of construction shall restore the original fence to the satisfaction of the Engineer. All costs of providing, maintaining and restoring gates and fencing shall be home by the Contractor. The Contractor shall provide and maintain all passageways, guard fences, lights and other facilities for protection required by public authority or local conditions.

c) The Contractor shall use extreme care during construction to prevent damage from dust to crops and adjacent property. The Contractor, at its own expense, shall provide adequate dust control for the right-of- way and take other preventative measures as directed by the Engineer.

d) The Contractor shall be responsible for all damage to any property resulting from trespass by the Contractor or its employees in the course of their employment, whether such trespass was committed with or without the consent or knowledge of the Contractor.

e) The Contractor shall see that the Site is kept drained and free of all ground water and any other water which may impede the progress or execution of the Work.

f) The Contractor shall be responsible for any damage caused by drainage or water

runoff from construction areas and from construction plant areas.

g) In an emergency affecting the safety of life, the Work, or adjoining property, the Contractor, without special instruction or authorization from the Engineer, is hereby permitted to act at its discretion to prevent such threatened loss or injury, and the Contractor shall so act without appeal if so instructed or authorized. Any compensation claimed by the Contractor on account of emergency work shall be determined as specified under Section A-2. Should the Engineer deem an emergency condition to exist, the Contractor shall immediately do those things and take those steps ordered by the Engineer. The decision of the Engineer in this respect shall be final and conclusive. Any claims for compensation made by the Contractor on account of emergency work shall be determined as specified under Section A-2.

h) Except as provided by Government Code Section 4215, the Contractor shall be responsible for the removal, relocation and protection of all public and private utilities, including irrigation facilities in the nature of utilities, located on the site of the construction Project if and to the extent that the same are identified in the Contract Documents, and the Contractor shall not be entitled to any extension of time or claim for damages for extra compensation in connection therewith. If and to the extent that such utilities or facilities are not identified in the Contract Documents, as between the Contractor and the City, the City will be responsible for the cost of their removal, relocation or protection, as the case may be, but the Contractor shall perform any such work in conformance with applicable provisions of Sections A-2A and A-2B, if so directed by the Engineer. In such situations the Contractor shall not be responsible for delay in completion of the Project caused by the failure of the City or the owner of the utility to provide for such removal or relocation. If the Contractor, while performing the Contract, discovers utility or irrigation facilities not identified by the City in the Contract Documents, the Contractor shall immediately notify the Engineer in writing.

i) Subject to the provisions of this Section, where the Work to be performed under the Contract crosses or otherwise interferes with existing streams, watercourses, canals, farm ditches, pipelines, drainage channels, or water supplies, the Contractor shall provide for such watercourse or pipelines and shall perform such construction during the progress of the Work so that no damage will result to either public or private interests, and the Contractor shall be liable for all damage that may result from failure to so provide during the progress of the Work.

4) Accidents

a) The Contractor shall provide and maintain, in accordance with Labor Code Section 6708 and OSHA requirements, adequate emergency first-aid treatment for its employees and anyone else who may be injured in connection with the Work.

b) The Contractor shall 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 caused death, personal injury, or property damage, giving full details and statements of witnesses. In addition, if death or serious injury or serious damage is caused the accident shall be reported immediately by telephone or messenger to the City and the Engineer.

c) 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.

5) No Personal Liability

Neither the City, the Engineer, nor any of their other officers, agents, or employees shall be personally responsible for any liability arising under the Contract, except such obligations as are specifically set forth herein.

F. Exclusions – This insurance does not cover tools owned by mechanics, any tools, equipment, scaffolding, staging, towers, and forms rented or owned by the Contractor, the capital value of which is not included in the cost of the work or any shanties or other structures erected for the sole convenience of the workers.

G. Beginning of Work, Time of Completion and Liquidated Damages – Time is of the essence on this contract. The Contractor shall show evidence that all necessary materials have been ordered within TEN (10) working days from the date the Notice to Proceed is issued by the Engineer or a stop work notice will be issued and any applicable working days will be charged.

The Contractor shall begin work on or before the tenth (10^{th}) working day after the date of the Notice to Proceed, and shall diligently prosecute the same to completion within the **Time of Completion** specified in the Technical Specifications.

It is understood that failure of the Contractor to complete the work within the stipulated number of days will or may subject the City to serious loss or damage.

Should the Contractor fail to complete the work provided for herein, within the time fixed for such completion, due allowance being made for unavoidable delays, he/she shall become liable to the City for the amount specified under **Liquidated Damages** in the Technical Specifications, for each day said work remains incomplete beyond the time for completion, as and for liquidated damages and not as a penalty, agreed upon by the parties to the contract, it being expressly stipulated that it would be impracticable and extremely difficult to fix the actual amount of damage. If it appears to the Contractor that he/she will not complete the work provided in this contract in the time agreed, he/she shall make written application to the City at least FIVE (5) CALENDAR DAYS PRIOR TO THE EXPIRATION OF THE TIME FOR COMPLETION, stating the reason why and amount of extension which he/she believes should be granted. The City may then, in its discretion, grant or deny, such extension.

Any money due, or to become due, the Contractor may be retained to cover the said liquidated damages, and should such money not be sufficient to cover such damages, the City shall have the right to recover the balances from the Contractor, or his/her sureties.

4. Scope of the Work

A. General – Attention is directed to the Division I – General Provisions, Section 4 of the Standard Specifications, as supplemented herein, for the requirements and conditions concerning the scope of the work.

B. Increased and Decreased Quantities – All items of work will be paid for at the

respective prices listed in the proposal or bid for any quantities of such work done and accepted by the City. No adjustments to unit prices will be made for any increase or decrease of actual, final quantities from the Engineer's estimated bid sheet quantities.

The first and second paragraphs of Section 4-1.05, "Changes and Extra Work," of the Standard Specifications are amended to read:

> The City reserves the right without changing the scope of work, to make such alterations deviations, additions to or deletions from the plans and specifications, including but not limited to, the right to add or delete any portion of the work to be done with no additional compensation or change in lump sum or unit bid prices. The City also reserves the right without changing the scope of work, to increase or decrease the quantity of any item (BY UP TO 100%) or portion of the work, as may be deemed by the Engineer to be necessary or advisable and to require such extra work as may be determined by the Engineer to be required for the proper completion or construction of the whole work contemplated.
>
> Engineer Estimate quantities are approximate only and will be used as a basis for a comparison of bids.

C. Hours of Work – Regular working hours are 8:00 a.m. to 5:00 p.m., Monday through Friday, excluding holidays observed by the City. No work outside of the regular working hours shall be done unless previously requested by the contractor in writing and approved by the Engineer. The Contractor shall be responsible for reimbursement to the City for the cost of providing inspection outside the normal workday or on weekends or holidays. All inspection work outside the regular work hours shall be charged at each inspector's current overtime rate with applicable overhead.

All existing pits, excavations, trenches, and openings in the road surface shall be backfilled and paved to produce a level and smooth surface. All barricades and barriers shall be removed from traffic lanes, unless authorized by the Engineer. Only emergency repairs will be permitted during the holiday season (Monday of Thanksgiving week through week of January 1). Unless otherwise stipulated in the Contract documents, the holiday season as described above is accounted for in the original contract duration, and Working Days will continue to be counted during this suspension period. Baseline and progress schedules shall include this suspension period if applicable.

5. Control of the Work – Attention is directed to the Division I, Section 5 of the Standard Specifications for the requirements and conditions concerning control of the work.

6. Control of Materials – Attention is directed to the Division I, Section 6 of the Standard Specifications for the requirements and conditions concerning the control of materials.

7. Legal Relations and Responsibility

A. General – Attention is directed to the Division I, Section 7 of the Standard Specifications, as supplemented herein, for the requirements and conditions concerning legal relations and responsibility.

B. Hours of Labor – Eight hours labor constitutes a legal day's work. The Contractor shall

forfeit, as a penalty, to the City, $25.00 for each work person employed in the execution of the contract by the Contractor or any Subcontractor under him/her for each calendar day during which such work person is required or permitted to work more than 8 hours in any one calendar day and 40 hours in any one calendar week in violation of provisions of the Labor Code of the State of California, Section 1810 to Section 1815.

C. Public Convenience and Safety – Public Convenience and Safety shall be in accordance with Section 6-12 Public Convenience and Safety of the El Dorado County Standard Construction Specifications.

D. Damage to Private Property – Any damage to private property caused by the Contractor and adjudged to be the responsibility of the Contractor by the Engineer shall be rectified to the satisfaction of the Engineer within a reasonable time, depending on the extent of the damage. Said reasonable time shall be as determined by the Engineer, and if the condition is not rectified, the Engineer shall have the power and authority to rectify said damage and the cost thereof to be paid for by the Contractor, either by direct payment to the City of Placerville, or by deducting said amount from moneys due the Contractor.

8. Measurement and Payment

A. Measurement of Quantities

1) Where the Contract provides for payment on a “Lump Sum” or “Job” basis shall result in a complete structure, operating plant or system in satisfactory working condition in respect to the functional purposes of the installation, and no extra compensation will be allowed for anything omitted but fairly implied.

2) Payment for all work bid at a price per unit of measurement will be based upon the actual quantities of work as measured upon completion. The City does not expressly or by implication agree that the actual amount of work or materials of any class will correspond to the estimated quantities given in the proposal. The Contractor shall make no claim nor receive any compensation for anticipated profits, for loss of profit, for damages, or for any extra payment whatever because of any difference between the amount of work actually done and materials furnished and the estimated amount.

3) All quantities of work computed under the Contract shall be based upon measurements in accordance with the United States Measurements and Weights.

4) Methods of measurement are specified herein and in the Technical Specifications.

B. Scope of Payment

1) The Contractor shall accept the compensation provided in the Contract as full payment for furnishing all labor, materials, tools, equipment, and incidentals necessary to the completed work and for performing all work contemplated and embraced under the Contract; also for loss or damage arising from the nature of the work, or from the action of the elements, or from any unforeseen difficulties which may be encountered during the prosecution of the Work until the acceptance by the City and for all risks of every description connected with the

prosecution of the Work, also for all expenses incurred in consequence of the suspension or discontinuance of the work as provided in the Contract; and for completing the Work according to the Specifications and Plans. Neither the payment of any estimate nor of any retained percentage shall relieve the Contractor of any obligation to make good any defective work or material.

2) No compensation will be made in any case for loss of anticipated profits. Increased or decreased work involving supplemental agreements will be paid for as provided in such agreements.

3) The Work includes the preparatory work and operations needed for mobilization and demobilization of the Project.

C. Progress Estimate

For each pay period of Contract work, the Contractor shall prepare a written progress estimate of the value of all work performed under the Contract, including any amounts due the Contractor for Extra Work and Change Orders. In arriving at the value of the work done, the Contractor shall give consideration to the value of labor and materials which have been incorporated into the permanent work during the preceding month. Consideration will not be given to preparatory work done or for materials or equipment on hand. The Contractor shall verify the estimated quantities of all pay items with the City's Inspector prior to submitting a final Progress Payment Request to the Engineer.

To assist the Engineer in reviewing Progress Payment Requests, all Progress Payment Requests submitted by Contractor shall be accompanied by sufficient documentation to validate payable quantities for the preceding pay period. Documentation shall include, but is not limited, Quantity Sheets for each bid item, in a form approved by the Engineer, summarizing the daily quantity placed/installed with dimensions and location (with centerline station to station references and left or right indicated) and copies of invoices and/or trucking delivery tags.

Additional documentation may be requested by the Engineer to adequately verify any bid item quantity.

D. Progress Payments

1) The City will pay the Contractor ninety-five percent (95%) of the amount of each progress estimate within 30 days after receipt of an undisputed and properly submitted progress estimate from the Contractor. If the City fails to pay an undisputed progress estimate within the allotted thirty (30) days, the City shall pay interest to the Contractor equivalent to the legal rate set forth in subdivision (a) of section 685.010 of the Code of Civil Procedure. Five percent (5%) of the amount of each estimate shall be retained by the City until final completion and acceptance of all work under the Contract.

2) Upon receipt of a payment request, the City shall act in accordance with both of the following:

a) Each payment request shall be reviewed by the City as soon as practicable after receipt for the purpose of determining that the progress estimate is a proper payment request.

b) Any payment request determined not to be a proper payment request suitable for

payment shall be returned to the Contractor as soon as practicable, but not later than seven (7) days, after receipt. A request returned pursuant to this Section shall be accompanied by a document setting forth in writing the reasons why the payment request is not proper.

3) The number of days available to the City to make a payment without incurring interest pursuant to this Section shall be reduced by the number of days by which the City exceeds the seven-(7) day return requirement set forth in paragraph (ii) of subdivision (b).

4) The Contractor may, in accordance with the provisions of Public Contracts Code section 22300, substitute securities for any monies, which the City may withhold to ensure performance under the Contract.

5) When, in the judgment of the Engineer, the Work is not proceeding in accordance with the provisions of the Contract, or when in the Engineer's judgment the total amount of the Work done since the last estimate amounts to less than one thousand dollars ($1,000), no pay estimate will be prepared and no progress payment will be made.

6) No progress estimate or payment shall be considered to be an approval or acceptance of any work, materials or equipment. Estimated amounts and values of work done and materials and equipment furnished will be conformed to actual amounts and values as they become available in subsequent progress estimates, progress payments and the final estimate and payment. All estimates and payments will be subject to correction in subsequent progress estimates and payments and the final estimate and payment.

7) It is mutually agreed between the parties to the Contract that no payments made under the Contract, including progress payments and the final payment shall be evidence of the performance of the Contract, either wholly or in part, and no payment shall be construed to be an acceptance of any defective or incomplete work or improper materials.

E. Liens and Stop Notices

The Contractor agrees to keep the Work, the site of the Work and all monies held by the City free and clear of all liens and stop notices related to labor and materials furnished in connection with the Work, if permitted by law. Furthermore, the Contractor waives any right it may have to file any type of lien or stop notice in connection with the Work. Notwithstanding anything to the contrary contained in the Contract Documents, if any such lien or stop notice is filed or there is evidence to believe that lien or stop notice may be filed at any time during the progress of the Work or within the duration of this Contract, the City may refuse to make any payment otherwise due the Contractor or may withhold any payment due the Contractor a sum sufficient in the opinion of the City to pay all obligations and expenses necessary to satisfy such lien or stop notice. The City may withhold such payment unless or until the Contractor, within ten (10) days after demand therefor by the City, shall furnish satisfactory evidence that the indebtedness and any lien or stop notice in respect thereof has been satisfied, discharged and released of record, or that the Contractor has legally caused such lien or stop notice to be released of record pending the resolution of any dispute between the Contractor and any person or persons filing such lien or stop notice. If the Contractor shall fail to furnish such satisfactory evidence within ten (10) days of the demand therefor, the City may discharge such indebtedness and deduct the amount thereof, together with any and all losses, costs and damages suffered or incurred by the City from any sum payable to the

Contractor under the Contract documents, including but not limited to final payment and retained percentage. This Section shall be specifically included in all Subcontracts and purchase orders entered into by the Contractor.

F. Final Estimate

As soon as possible after the completion of the work and receipt of all documentation required to be submitted by the Contractor is received, the Engineer shall make up the final estimate of the total amount of work done, segregated as to contract item quantities and contract change order work, and the value of such work; and this amount, after deducting all previous payments and all amounts to be deducted and retained under the provisions of the contract, shall constitute the final payment. All prior estimates and payments shall be subject to correction in the final estimate.

Within fifteen (15) calendar days after the proposed final estimate is submitted to the Contractor, the Contractor shall submit to the Engineer the Contractor's written approval of said estimate or a written statement of the Contractor's exceptions thereto. If the Contractor files a statement of exceptions, it shall be in sufficient detail to enable the Engineer to ascertain the basis and amount of said claims. If the Contractor fails to file a statement within the time allowed, it shall be construed to be acceptance of the final estimate as submitted to the Contractor. Any claim of the Contractor or the Contractor's subcontractors or suppliers with respect to the performance or breach of the contract or any alterations thereof (except for payment of the balance of the contract price as set forth in the final estimate) not specifically set forth in such a statement is waived by the contractor.

G. Right to Withhold Payments

1) In addition to all other rights and remedies of the City hereunder and by virtue of the law, the City may withhold or nullify the whole or any part of any partial or final payment to such extent as may reasonably be necessary to protect the City from loss on account of:

   a) Defective work not remedied, irrespective of when any such work be found to be defective;

   b) Claims or liens filed or reasonable evidence indicating probable filing of claims or liens including, but not limited to claims under Sections 1775, 1776, or 1777.7 of the Labor Code;

   c) Failure of the Contractor to make payments properly for labor, materials, equipment, or other facilities, or to Subcontractors and/or suppliers;

   d) A reasonable doubt that the Work can be completed for the balance then unearned;

   e) A reasonable doubt that the Contractor will complete the Work within the agreed time limits;

   f) Costs to the City resulting from failure of the Contractor to complete the Work within the proper time; or

   g) Damage to work or property.

2) Whenever the City shall, in accordance herewith, withhold any monies otherwise due the

Contractor, written notice of the amount withheld and the reasons therefor will be given the Contractor. After the Contractor has corrected the enumerated deficiencies, the City will promptly pay to the Contractor the amount so withheld. When monies are withheld to protect the City against claims or liens of mechanics, materialmen, Subcontractors, etc., the City may at its discretion permit the Contractor to deliver a surety bond in terms and amount satisfactory to the City, indemnifying the City against any loss or expense, and upon acceptance thereof by the City, the City shall release to the Contractor monies so withheld.

H. Final Payment

On the expiration of thirty-five (35) days from the date of acceptance of the contract and filing a Notice of Completion with the Office of the County Recorder, the difference between the final estimate and all payments theretofore made to the Contractor shall be due and payable to the Contractor, subject to any requirements concerning the furnishings of a maintenance bond, and excepting only such sum or sums as may be withheld or deducted in accordance with the material furnished to the City on the located at provisions of this Contract. All prior certifications upon which partial Payments may have been made, being merely estimates, shall be subject to correction in the final certificate.

I. Final Release

Final payment to the Contractor in accordance with the final estimate is contingent upon the Contractor furnishing the City with a signed written release of all claims against the City arising by virtue of the Contract. The Contractor, from the operation of the release, may specifically exclude disputed Contract claims in stated amounts. The release shall be in substantially the following form:

WAIVER AND RELEASE UPON FINAL PAYMENT

The undersigned has been paid in full by the City for all labor, services, equipment and material furnished to the City on the _____(name of Project) located at _____and does hereby waive and release the City, its officers, agents, and employees, from all claims and liability to the Contractor arising out of, or in any way connected with, the Contract, except for the disputed contract claims specified below:

Notice of Disputed Claim Amount of Claim

$_____

_____ _____

Date Name, Title

_____

Name of Contractor

J. Waiver of Interest

The City shall have no obligation to pay and the Contractor hereby waives the right to

recover interest with regard to monies, which the City is required to withhold by reason of judgment, order, statute or judicial process.

9. Antitrust Claim Assignment

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

10. Prosecution and Progress

Attention is directed to the provisions of the Standard Specifications for the requirements and conditions concerning the prosecution and progress of the work and the assignment of the contract.

11. Permits and Code

A. The Contractor shall give all notices required by and comply with all applicable laws, ordinances and codes of the City of Placerville. All construction work and/or utility installations shall comply with all applicable ordinances and codes including all written waivers. Before installing any work, the Contractor shall examine the Drawings and Technical Specifications for compliance with applicable ordinances and codes and shall immediately report any discrepancy to the City Engineer of the City of Placerville. Where requirements of the Drawings and Technical Specifications fail to comply with such applicable ordinances and codes, the City of Placerville will adjust the contract by Change Order to conform to such ordinances and codes (unless waivers in writing covering the differences have been granted by the governing body or department) and make appropriate adjustment in the contract price or stipulated unit prices.

Should the Contractor fail to observe the foregoing provisions and proceed with the construction and/or install any utility variance with any applicable ordinance or Code including any written waivers (not with-standing the fact that such installation is in compliance with the Drawings and Technical Specifications) the Contractor shall remove such work without cost to the City and a Change Order will be issued to cover only the excess cost the Contractor would have been entitled to receive if the change had been made before the Contractor commenced work on the items involved.

B. The Contractor shall comply with applicable laws and ordinances governing the disposal of surplus excavation, materials, debris and rubbish on or off the project area and commit no trespass on any public or private property in any operation due to or connected with the improvements embraced in this contract.

12. Apprenticeship Requirements

California Labor Section 1777.5 requires in the employment of apprentices in public works contracts:

A. Only registered apprentices within a written agreement in an approved apprentice-training program providing no less than 2,000 hours of continuous employment and education are eligible for employment on public works (in compliance with Labor Section 3077).

B. A contractor is no longer required to submit Form DAS-7, but must submit award information to the local applicable joint apprenticeship committee. The award information must include:

1) an estimate of the journeyman hours;

2) the number of apprentices to be employed; and

3) the approximate dates of apprentice employment.

C. The minimum statutory 1:5 hourly ratio of work stipulates that no less than one hour of apprentice work for every five hours of journeyman labor on any day of work. (Any journeyman work performed beyond 8 hours per day or 40 hours per week shall not be used to calculate the hourly ratio.)

This section shall not apply to specialty contractors or general contractors whose contracts involve less than Thirty Thousand Dollars ($30,000.00) or 20 working days.

The Division of Apprenticeship Standards may grant a certificate exempting the contractor from the minimum 1:5 hourly ratio under any one of the following:

1) Unemployment exceeds an average of 15% in the area for the previous 3-month period;

2) The number of apprentices in training in such area exceeds a ratio of 1:5;

3) The apprentice able craft or trade is replacing at least one-thirtieth of its journeymen annually through apprenticeship training, either locally or statewide;

4) The specific task would jeopardize the apprentice's life or public safety or no training can be provided to an apprentice by a journeyman for the specific task.

D. Apprentices employed on public works projects can only be assigned to perform work of the craft or trade to which the apprentice is registered.

E. All contractors with employees in any apprentice able occupation, regardless of the actual employment of journeymen or apprentices for the awarded public work, must either contribute to the local training trust fund or to the California Apprenticeship Council, P.O. Box 603, San Francisco, CA 94101 (as set forth in Section 227).

F. Any person who violates Section 1777.5 shall pay a civil penalty of Fifty Dollars ($50.00) for each calendar day of noncompliance.

Any person who willfully violates Section 1777.5 shall pay the Fifty Dollars ($50.00) fine for each calendar day of noncompliance and shall be denied the right to bid on, or to receive, any public works contract for a period of up to one year for the first

violation and up to three years for any additional violations.

Compliance disputes arising under Section 1777.5 shall be adjudicated under 8 California Code of Regulations, Article 1.

G. Within five (5) days of a public works contract award, the awarding agency must send a copy of the award to the Division of Apprenticeship Standards under Section 1773.3.

Within five (5) days of finding any discrepancy regarding the hourly ratio of apprentices to journeymen, the awarding agency shall notify the Division of Apprenticeship Standards.

H. The Contractor shall be responsible for compliance for all requirements for occupations subject to apprenticeships as provided by this Contract and/or applicable law.

13. Subcontracting

Attention is directed to the provisions in Section 5-1.13, "Subcontracting" of the Standard Specifications and these Special Provisions.

Installation of traffic signals shall be considered a "Specialty Item" as defined in Section 7 of the Caltrans Standard Specifications.

In accordance with the requirements of Sections 4100 and 4113, inclusive, of the Public Contract Code, each bidder shall list in his proposal all the names and business address of each subcontractor to whom the bidder proposes to subcontract work and shall list each subcontractor licensed by the State of California. Said list shall include a description of the portion of the work which will be done by each subcontractor.

A sheet for listing the subcontractors, as required, is included in the proposal.

14. Performance of Subcontractors and Suppliers

The Subcontractors and suppliers listed in the Proposal shall perform the work and supply the materials for which they are listed unless the Contractor has received prior written authorization from the Engineer to perform the work with other forces or to obtain the materials from other sources.

Authorization to utilize other forces or sources of materials may be requested for the following reasons:

A. The listed subcontractor, after having had a reasonable opportunity to do so fail or refuses to execute a written contract, when such written contract, based upon the general terms, conditions, plans and specifications for the project, or on the terms of such subcontractor’s or supplier’s written bid, is presented by the Contractor.

B. The listed subcontractor becomes bankrupt or insolvent.

C. The listed subcontractor fails or refuses to perform his subcontract or furnish the listed materials.

D. The Contractor stipulated that a bond was condition of executing a subcontract and the listed subcontractor fails or refuses to meet the bond requirements of the Contractors.

E. The work performed by the listed subcontractor is substantially unsatisfactory and is not in substantial accordance with the plans and specifications, or the subcontractor is substantially delaying or disrupting the progress of the work.

F. It would be in the best interest of the City.

The Contractor shall not be entitled to any payment for such work or material unless it is performed or supplied by the listed subcontractor or by other forces (including those of the Contractor) pursuant to prior written authorization of the Engineer.

15. Permits and Licenses

Attention is directed to Section 5-1.20B, "Permits, Licenses, Agreements, and Certificates" of the Standard Specifications and these Special Provisions.

The California Environmental Quality Act of 1970 (Chap. 1433, Stats. 1970), as amended by Chapter 1154, Stats. 1972, may be applicable to permits, licenses and other authorizations which the Contractor must obtain from local agencies in connection with performing the work of the contract. The Contractor shall comply with the provisions of said statutes in obtaining such permits, licenses and other authorizations and they shall be obtained in sufficient time to prevent delays to the work.

In the event that the City has obtained permits, licenses or other authorizations, applicable to the work, in conformance with the requirements in said California Environmental Quality Act of 1970, the Contractor shall comply with the provisions of said permits, licenses, and other authorizations.

16. Statistical Testing

Moving average requirements are waived.

17. Highway Construction Equipment

Attention is directed to Sections 7-1.02O, "Vehicle Code" and 5-1.33, "Equipment" of the Standard Specifications and these Special Provisions.

Pursuant to the authority contained in Section 591 of the Vehicle Code, the Department has determined that, within such areas as are within the limits of the project and are open to public traffic, the Contractor shall comply with all of the requirements set forth in Divisions 11, 12, 13, 14, and 15 of the Vehicle Code. Attention is directed to the statements in Section 591 that this section shall not relieve the contractor or any person from the duty of exercising due care. The Contractor shall take all necessary precautions for safe operation of his/her equipment and the protection of the public from injury and damage from such equipment.

18. Equipment Rental Rates

The requirements concerning equipment rental rates in Section 9-1.04D, "Equipment Rental" and Section 9-1.04D(3), "Equipment Not On the Job Site Work and Not Required for the Original- Contract Work", of the Standard Specifications are modified as follows:

The Contractor will be paid for the use of equipment at the rental rates listed for such equipment in the Department of Public Works, Division of Highway's publication Section 9-1.03A (3), "Equipment Not On the Job Site and Not Required for Original-Contract Work" of the Standard Specifications is amended by adding the following:

When extra work, other than work specifically designated as extra work in the plans and specifications, is to be paid for on a Force Account basis and the Engineer determines that such extra work required the Contractor to move on to the work equipment which could not reasonably have been expected to be needed in the performance of the contract, the Engineer may authorize payment for the use of such equipment at equipment rental rates in excess of those listed as applicable for the use of such equipment subject to the following additional conditions:

A. The Engineer shall specifically approve the necessity for the use of particular equipment on such work.

B. The Contractor shall establish to the satisfaction of the Engineer that such equipment cannot be obtained from his/her normal equipment source or sources and those of his/her subcontractors.

C. The Contractor shall establish to the satisfaction of the Engineer that the proposed equipment rental rate for such equipment from his/her proposed source is reasonable and appropriate for the expected period of use.

D. The Engineer shall approve the equipment source and the equipment rental rate to be paid by the State before the Contractor begins work involving the use of said equipment.

19. Sound Control Requirements

The Contractor shall comply with all local sound control and noise level rules, regulations and ordinances, which apply to any work performed pursuant to the contract.

Each internal combustion engine, used for any purpose on the job or related to the job, shall be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine shall be operated on the project without said muffler.

The noise level from the Contractor's operations, between the hours of 9:00 p.m. and 7:00 a.m. shall not exceed 50 dBA and between the hours of 7:00 a.m. and 9:00 p.m. shall not exceed 80 dBA at a distance of 50 feet.

Said noise level requirement shall apply to all equipment on the job or related to the job, including but not limited to trucks, transit mixers or transient equipment that may or may not be owned by the Contractor. The use of loud sound signals shall be avoided in favor of light warnings except those required by safety laws for the protection of personnel.

Full compensation for conforming to the requirements of this section shall be considered as included in the prices paid for the various contract items of work involved and no additional compensation will be allowed therefor.

20. Hazardous Waste in Excavation

If the Contractor encounters material in excavation that the contractor has reason to believe may be hazardous waste as defined by Section 25117 of the Health and Safety Code, the contractor shall immediately so notify the Engineer in writing. Excavation in the immediate area of the suspected hazardous material shall be suspended until the Engineer authorizes it to be resumed. If such suspension delays the current controlling operation, the Contractor shall be granted an extension of time as provided in Section 8-1.10, "Liquidated Damages", of the Standard Specifications.

If such suspension delays the current controlling operation by more than 2 working days, the delay shall be considered a right of way delay and the Contractor shall be compensated for such delay as provided in Section 8-1.07, " Delays", of the Standard Specifications.

The City reserves the right to use other forces for exploratory work to identify and determine the extent of such material and for removing hazardous material from such area.

21. Referenced Specifications

The references to Federal specifications and other specifications for the various materials to be furnished by the Contractor shall include, in addition to the basic specifications referred to, all applicable amendments to the specifications and all emergency alternate specifications which have been promulgated and are in effect on the date bids are received. When more than one reference specification is referred to for a material, the material used shall be the one of the highest grade or standard.

22. Safety

A. General

1) The Contractor shall be solely and completely responsible for the conditions of the job Site, including safety of all persons and property during performance of the Work. This requirement shall apply continuously and not be limited to normal working hours. Safety provisions shall conform to all applicable Federal, State, and local laws, ordinances, and codes, and to the rules and regulations established by the California Division of Industrial Safety, and to other rules of law applicable to the Work.

2) The services of the Engineer in conducting construction review of the Contractor’s performance is not intended to include review of the adequacy of the Contractor’s work methods, equipment, bracing or scaffolding or safety measures, in on, or near the construction site, and shall not be construed as supervision of the actual construction nor make the Engineer or the City responsible for providing a safe place for the performance of work by the Contractor, Subcontractors, or suppliers; or for access, visits, use work, travel or occupancy by any person.

3) The Contractor shall carefully instruct all personnel working in potentially hazardous work areas as to potential dangers and shall provide such necessary safety equipment and instruction as is necessary to prevent injury to personnel and damage to property. Special care shall be exercised relative to electrical work, work involving excavation and in sump pump work.

4) All work and material shall be in strict accordance with all applicable State, Federal and local laws, rules, regulations, and codes

5) Nothing in this Contract is to be construed to permit work not conforming to governing law. When Contract Documents differ from governing law, the Contractor shall furnish and install the higher standards called for without extra charge. All equipment furnished shall be grounded and provided with guards and protection as required by safety codes. Where law requires vapor-tight or explosion-proof electrical installation, this shall be provided.

6) The Contractor shall submit a safety plan and/or narrative description to the Engineer prior to commencement of the Work. This safety plan and/or narrative description shall describe all first aid, safety clothing, etc. to be used at Project Site.

B. Shoring and Trench Safety Plan

1) Attention is directed to Section 832 of the Civil Code of the State of California relating to lateral and subjacent support. The Contractor shall comply with this and other applicable laws including Public Contract Code section 7104.

2) **In accordance with Section 6705 of the State Labor Code, the Contractor shall submit to the City specific plans to show details of provisions for worker protection from caving ground. Not less than thirty (30) days before beginning excavation for any trench or trenches five feet or more in depth required under this Contract, the Contractor shall furnish to the Engineer working drawings of its trench safety plan.** The trench safety plan working drawings shall be detailed plans showing the design of the shoring, bracing, sloping or other provisions to be made for worker protection from the hazard of caving ground. If such plan varies from shoring system standards established by the Construction Safety Orders of the California Division of Industrial Safety or the Federal Safety and Health Regulations for Construction of the Occupational Safety and Health Administration, Department of Labor, the plan shall be prepared by a registered civil or structural engineer. In no event shall the Contractor use a shoring, sloping or protective system less than required by the Construction Safety Orders, or less effective than that required by the Federal Safety Standards. Submission of this plan in no way relieves the Contractor from the requirement to maintain safety in all operations performed by itself or its Subcontractors.

23. Warranty Bond

As a condition precedent to the completion of this contract, the Contractor shall furnish in triplicate a bond of a surety company authorized to do business in the State of California acceptable to the owner in an amount of one hundred percent (100%) of the total contract price plus change orders, to hold good for a period of one year after the completion and acceptance of the work, to protect the City against the results of defective materials, work quality and equipment during that time. This bond shall be delivered to the City before the Engineer shall recommend the acceptance of the work to the City Council.

SECTION C – WAGE AND EQUIPMENT RATES

1. Prevailing Wage Rates – In accordance with the provisions of Section 1770 of the Labor Code of the State of California, the Director of the Department of Industrial Relations has determined the general prevailing rate of per diem wages applicable to the work to be done, and a current copy of said prevailing wages is on file with the City Clerk. Should the minimum Federal Wage Rate be higher than the rate determined by the Director of the Department of Industrial Relations, then the Federal Wage Rate Determination shall govern.

   The successful bidder will be required to post a copy of these general prevailing rates of per diem wages in a conspicuous place at the job site forthwith upon undertaking the public work called for herein.

   In addition, the City of Placerville requires that the Contractor and all his/her Subcontractors shall pay their employees on said work a salary or wage at least equal to the prevailing salary or wage for work of similar character in the locality in which the public work is performed. The Contractor shall, as a penalty, forfeit to the City the amount specified by law for each calendar day or portion thereof, for each employee paid less than the prevailing salary or wage for any public work done under the contract by him/her or any subcontractor under him/her.

   The State Labor Code states that for violations of public works laws relating to payment of prevailing wages, the City of Placerville will be required to withhold from any progress payments owed to a contractor any amounts that have been forfeited as penalties, or as wages owed to employees, who have not been paid the prevailing wage for work performed. Effective 1/1/97, the City is required to directly transfer all withheld wages and penalties to the Labor Commissioner for disbursement in those cases where a contractor fails to bring a lawsuit for amounts withheld within 90 days after the completion of the public works contract and formal acceptance of the job by the City.

   Also, the Labor Commissioner is permitted to intervene in any lawsuit brought by the contractor against an awarding body for recovery of amounts withheld. In the event that the contract does not prevail in the lawsuit to recover the amounts withheld, the wages and penalties will then be forwarded to the Labor Commissioner for disbursement in the manner previously described.

2. Payroll Record – In accordance with the provisions of Section 1776 of the Labor Code of the State of California, the Contractor shall keep an accurate payroll record, showing the name, address, social security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker or other employee employed by the Contractor in connection with this project. This payroll record shall be certified and available for inspection at all reasonable hours at the principal office of the successful bidder and a certified copy shall be furnished within ten (10) days after receipt of a written request by the following parties:

   A. An employee or his/her authorized representative

   B. City's representative

   C. Representative of Labor Standard Enforcement and Division of Apprenticeship Standard of Department of Industrial Relations

   Any copy of the payroll record made available for inspection and furnished to the public through the above entities shall not disclose names, addresses or social security numbers of individual

employees except the name and address of the Contractor.

In the event of non-compliance with the requirement of this subdivision, the Contractor shall have ten (10) days in which to comply subsequent to receipt of written notices from the State or City. If the non-compliance is still evident after the ten-day period, the Contractor shall, as a penalty, forfeit to the City the amount specified by law for each calendar day, for each employee, until strict compliance is effectuated.

3. Equipment Rental Rates – Equipment rental will be paid for as provided under Section 9-1.03A of the State Standard Specifications at the rates listed in the EQUIPMENT RENTAL RATES TABLE of the State of California, Department of Public Works, Division of Highways, latest issue, for use in their Special Provisions, a copy of which Table of Rates is filed in the City Engineer's Office.

4. Employment of Apprentices – The Contractor's attention is directed to California Labor Code sections 1777.5, 1777.6 and 1777.7 pertaining to employment of indentured apprentices, which are hereby incorporated by reference into this Contract. As applicable, the Contractor or any subcontractor employed by it in the performance of the Contract work shall take such actions as necessary to comply with the provisions of sections 1777.5, 1777.6 and 1777.7.

5. Public Works Contractor Registration – In accordance with California Labor Code Section 1771.1(a), a contractor or subcontractor shall not be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code, or engage in the performance of any contract for public work, as defined in this Division 2, Part 7, Chapter 1 of the Labor Code (commencing with Section 1720), unless currently registered and qualified to perform public work pursuant to Section 1725.5 of the Labor Code. In accordance with Labor Code section 1771.4(a)(1), this project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

SECTION D – GENERAL CONSTRUCTION DETAILS

1. Scope of Work – For all work on this project the Contractor shall furnish all labor, materials, tools, equipment, transportation, appliances and services required to completely execute the work as set forth on the drawings and in these specifications. The subdivision of these specifications into divisions is not intended to strictly set forth or limit the scope of any subcontractor and shall not relieve the Contractor of the responsibility for executing all work on the project as a whole.

2. Reference – Specific reference is hereby made to the State of California Standard Specifications, Department of Transportation, Division of Highways, current edition; the El Dorado County Community Development Agency, Improvement Standards, current edition.

3. Pre-Construction Conference – The Contractor, City Engineer and other interested parties shall meet at a pre-construction conference to be scheduled after execution of the construction contract and prior to the start of construction. The purpose of this conference is to review job schedules, traffic control, affirmative action, and to discuss various other aspects of the work and to clarify procedures.

   The Contractor shall submit the following to the City Engineer by the date of the pre-construction conference:

   A. Detailed Construction Schedule for review and approval.

B. Detailed Traffic Control Plan for review and approval.

C. Erosion and Sediment Control Plan.

D. Any other material or required submittals for review and approval. All submittals shall be in writing.

E. "Notice" to homeowners and/or affected parties for review and approval.

4. Construction Schedule – The proposed construction schedule shall indicate the various subdivisions of work and the date of commencing and finishing of each. The Engineer, prior to the start of work, shall approve the form of the schedule. The schedule shall be considered as advisory to the Engineer of the Contractor's plans for completing the work within the Contract time and shall in no way be construed to operate as an agreement or guarantee by the Engineer, upon the acceptance of its form, of the Contractor's production. The Contractor shall be obligated to complete the work within the Contract time. At the Engineer's discretion, should the work not conform to the Contractor's progress schedule, the Engineer may request in writing a new schedule reflecting the work as currently progressing. The Contractor shall provide the new schedule within one week of the written request.

5. Weekly Statement of Working Days – The Engineer will furnish the Contractor a weekly statement showing the number of working days charged to the Contract for the preceding week, the number of working days of time extensions approved, the number of working days originally specified for the completion of the Contract, and the number of working days remaining to complete the Contract. The Contractor will be allowed 15 days from the issuance of the weekly statement of working days in which to file a written protest setting forth in what respects the Contractor differs from the Engineer, otherwise the decision of the Engineer shall be deemed to have been accepted by the Contractor as correct.

6. Verification of Conditions – The Contractor shall verify all existing conditions before commencing work. All discrepancies between the drawings and actual field conditions shall be immediately reported to the City Engineer in writing who shall determine if modifications in the work are necessary. The Contractor shall not modify the work without prior authorization from the City.

7. Substitutions – Any substitutions of materials, equipment, construction methods, etc. from those noted in the drawings and specifications must be approved in writing by the City Engineer prior (10 working days) to their use or application or installation in the field.

8. Underground Utilities – In accordance with Government Code section 4215, the Contractor shall be compensated for the costs of locating, repairing damage not due to the failure of the Contractor to exercise reasonable care, and removing or relocating existing main or trunk line utility facilities which are not indicated in the Contract Plans and Specifications with reasonable accuracy, and for the equipment on the Project necessarily idled during such work, provided that the Contractor shall first notify the Engineer before commencing work on locating, repairing damage to, removing or relocating such utilities. Contractor shall not be liable for liquidated damages or delays caused by the removal or relocating of utilities when such removal or relocations is the responsibility of the City or the owner of the utility pursuant to Government Code Section 4215.

9. Materials and Tests – All materials incorporated in the project shall meet the requirements of tests specified in the Standard Specifications and other minimum requirements specified herein or in these special provisions. Attention is directed to Section 6 of the Caltrans

Standard Specifications.

The Contractor shall furnish written laboratory reports from a reputable testing or inspection agency, or written certification from the manufacturer as to compliance with the Specifications as to the composition, durability and performance of the all materials used in the project. Certain specification sections may require special items or materials to be included in the submittal. Reference is made to the Technical Specifications for specific instructions.

These reports on any material must be submitted to the Engineer in writing and approved by the Engineer before incorporating that material in the work. All material shall be adequately identified by tags or other means as that material which has been tested and approved. Lack of proper identification shall be considered adequate cause for rejection of any material which cannot be properly inspected on the job.

The City reserves the right to make such additional inspections or tests as it may require prior to acceptance of any materials, and also reserves the right to reject any material previously approved because of serious defects or damage discovered subsequent to such approval. Any material rejected by the City shall immediately be removed from the job site, and no payment will be allowed therefor.

The Contractor shall bear the expense for all unsatisfactory tests and deductions will be made from any moneys due or to become due the Contractor, sufficient to cover the cost of the tests.

Full compensation for furnishing all labor, materials, tools, equipment and incidentals and for doing all the work involved for testing and sampling of material from any source shall be considered as included in the price paid for the contract item of work involving such material and no additional compensation will be allowed therefor.

10. City Furnished Materials – The City will furnish to the Contractor free of charge for use under these Specifications the materials specified as “City Furnished” in the Technical Specifications. Contractor shall furnish all other materials called for under this contract.

11. Sequence of Constructing to Maintain Traffic – Attention is directed to the Work Sequencing section of the Caltrans Standard Specifications. Restriction of parking on the street will be permitted only when authorized by the Engineer.

    The Contractor must submit a detailed schedule of operations to the City for its review and approval prior to starting work on the project to enable the City Engineer to ascertain that the intent of Section 10 of the Standard Specifications is being complied with and followed.

12. Obstructions – Attention is directed to the presence of water, fire alarms, telephone, sewer, drainage, gas lines, overhead utilities and underground power lines in the construction area.

    The work shall be conducted as to permit utility companies to maintain their services without interruption.

    Minor adjustments of pole lines, pipe lines, and other public improvements may be undertaken by the owners of these improvements during the progress of the work. The Contractor shall cooperate with the owners of the improvements during the progress of the work. The Contractor shall cooperate with the owners of the improvements and shall so coordinate his work as to avoid damage to any of these improvements.

    Abandoned utility pipe lines and conduits, if encountered, shall be removed and disposed

of off the job site by the contractor in accordance with the requirements of the Caltrans Standard Specifications.

Full compensation for conforming to the requirements of this Section not otherwise provided for, shall be considered as included in the prices paid for the various contract items or work, and no additional allowance will be made therefor.

13. Contractor's Responsibility – The Contractor shall be completely responsible for the care and condition of the project improvements in their entirety until completion of the maintenance period and acceptance by the City. The Contractor shall provide all watchmen, guards, and security devices, as he/she deems necessary. Also, the Contractor and all employees of the Contractor shall obey all applicable laws and City ordinances while performing work under this contract. Any fines assessed to the Contractor and all employees for not obeying the laws and ordinances of this City while performing work under this contract shall be the responsibility of the Contractor or employees to pay.

14. Construction Upon Private Property – The Contractor shall note that the work may be performed on or in the vicinity of private property. The Contractor shall, at all times, remove all litter, debris, and construction waste, minimize noise, dust, standing water, vibrations, hazardous conditions and provide safe access to these properties. The Contractor is prohibited from using any and all privately owned utilities. The Contractor's materials and equipment shall not be stored upon private property without written approval from the resident and/or owner.

    Construction on private property during overtime, weekend, holiday or any other irregular period shall be performed only when the Contractor has requested and received written approval from the adjacent residents and the City Engineer.

    Contractor's attention is directed to Section 6-21, "Preservation of Property," of the El Dorado County Standard Construction Specifications. The Contractor shall protect all on-site private improvements, not indicated for removal, from damage. On-site private improvements include but are not limited to trees, shrubbery, ground cover, structures, gates, fences, signs, utility facilities, and drainage facilities. If such objects are damaged, they shall be replaced, repaired and/or restored to a condition equal or better than when the Contractor entered upon the work, as determined by the Engineer. Any damaged materials deemed unsuitable by the Engineer shall become the property of the Contractor and shall be disposed of off the right of way, unless permitted by the City to be disposed of on the work site.

    Existing trees, shrubs and other plants, that are not to be removed as shown on the plans or specified elsewhere in these special provisions, and are injured or damaged by reason of the Contractor's operations, shall be replaced by the Contractor. Replacement planting shall conform to the requirements in Section 20-4, "Plant Establishment Work," of the State Standard Specifications.

    No separate payment shall be made for the above considerations. Full compensation for the above construction restrictions shall be considered as included in the price paid for the various items of work involved.

15. As-Built Drawings – Maintenance and submittal of Record Drawings by the Contractor shall be in accordance with Section 11-3 Record Drawings of the El Dorado County Standard Construction Specifications.

*****END OF SECTION*****

SECTION 00800
SUPPLEMENTARY CONDITIONS

1.0 MODIFICATIONS TO THE SPECIAL PROVISIONS

1.1 Time Allowed for Completion

In accordance with the provisions of Section 00700, the following milestone completions, substantial completion and final completion contract times shall be completed within the number of consecutive calendar days from the date established in the Notice of Proceed for the commencement of Contract Time.

Milestones

Contractual Completion Event	**Completion Time (# of calendar days from commencement)**
Milestone #1 – Placement of new main lines, fire hydrant and service laterals connected to the existing system, tested and accepted by City and all meters switched over to new system.	**45 working days**
Substantial Completion – Old facilities abandoned or removed (per plan and specifications) and new facilities in use. Pavement Restoration completed.	**60 working days**
Final Completion	**75 working days**

1.2 Damages for Delays

In accordance with the provisions of Section 00700, for the period of time that any portion of the work remains unfinished after the time fixed for an interim milestone and/or Substantial Completion in Section 00800-1.1, **Time Allowed for Completion**, as modified by extensions of time granted by the Owner, it is understood and agreed by the Contractor and the Owner that the Contractor shall pay the Owner the damages listed below.

Milestone	**Dollars Per Day Liquidated Damages (Amount in Dollars)**
1. Milestone #1	$1,000
2. Substantial Completion	$2,000

3. Final Completion $2,000

1.3 Weather Days

No weather days are included as part of this project.

1.4 Contract Administration

The following project representatives are hereby designated by the Owner:

A. Name of Owner Representative: Rebecca Neves, City Engineer

B. Name of Engineer: Domenichelli and Associates, Inc.

All communications to and from the Contractor shall be routed through the City Engineer. Wherever the Contract Documents indicate that the Contractor shall contact or notify the Engineer, Architect, Soils Engineer, Structural Engineer, etc., the Contractor shall route such communication through the City Engineer except when otherwise explicitly approved by the City Engineer.

2.0 LIABILITY AND INSURANCE

2.1 Insurance

Within ten (10) days after notice of award of the Contract, the Contractor shall promptly obtain, at its own expense, all the insurance required by Section 00800-2.0, **LIABILITY AND INSURANCE**, and submit coverage verification for approval by the Owner prior to the Owner's execution of the Contract. The insurance shall provide the minimum coverage and limits set forth below. Providing coverage in these stated minimum limits shall not be construed to relieve the Contractor from liability in excess of such limits. All deductibles and self-insured retentions must be disclosed and are subject to approval by the Contracting Agency. The cost of any claim payments falling within the deductible shall be the responsibility of the Contractor.

The Notice to Proceed with the Work under this Contract will not be issued, and the Contractor shall not commence work, until such insurance has been approved by the Owner. Such insurance shall remain in full force and effect at all times during the prosecution of the Work and until the final completion and acceptance thereof. In addition, the Commercial General Liability insurance shall be maintained for a minimum of one (1) year after final completion and acceptance of the Work. The Notice to Proceed does not relieve the Contractor of the duty to obtain such insurance as required herein.

The Contractor shall not allow any subcontractor to commence work on its subcontract until all similar insurance required of the subcontractor, except Builder's Risk Insurance, has been obtained and verified by the Contractor and submitted to the Construction Manager for the Owner's review and records. Subcontractors shall furnish original certificates and required endorsements as verification of insurance coverage. The insurance liability limits specified in Section 00800-2.1.1. b(2), **LIABILITY AND INSURANCE**, shall also apply for all subcontractors listed in Section 00430, **DESIGNATION OF SUBCONTRACTORS**. The Contractor shall designate the required insurance liability limits for all other subcontractors.

Companies writing the insurance under this article shall be licensed to do business in the State of California or be permitted to do business under the Surplus Line Law of the State of California. Insurance is to be placed with insurers with a current A.M. Best's rating of no less than A - :VII.

Each insurance policy required by this contract 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.

Contractor shall include all costs for insurance in its bids.

Nothing contained in these insurance requirements is to be construed as limiting the extent of the Contractor's responsibility for payment of damages resulting from its operations under this Contract. For any claims related to this project, the Contractor's insurance coverage shall be primary insurance as respects the Owner, the Engineer, The City of Placerville and the Construction Manager, and their officers, officials, employees, agents and volunteers. Any insurance or self-insurance maintained by the Owner, its officers, officials, employees, agents or volunteers shall be in excess of the Contractor's insurance and shall not contribute with it.

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

The Contractor shall take out, pay for, and maintain throughout the duration of this Contract and for such additional periods as more specifically required herein the following insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by the Contractor, the Contractor's agents, representatives, employees, subcontractors, suppliers, vendors or materialmen, of any tier.

2.1.1 Commercial General Liability and Automobile Liability Insurance - This insurance shall protect the Contractor from claims for bodily injury, personal injury and property damage which may arise because of the nature of the work or from operations under this Contract. The Commercial General Liability Insurance shall be maintained for one (1) year after final completion and shall provide coverage on an occurrence basis. Coverage shall be at least as broad as ISO forms CG 0001 10 93 and CA 0001 12 93.

a. Additional Insureds - The Commercial General Liability and Automobile Policies of insurance shall include as additional insureds or be endorsed to contain the following provisions: the City of Placerville, the Engineer and Construction Manager, and their officers, officials, employees, agents and volunteers are to be covered as insureds as respects: liability arising out of activities performed by or on behalf of the Contractor; products and completed operations of the Contractor; premises owned, occupied or used by the Contractor and or automobiles owned, leased, hired or borrowed by the Contractor. The coverage shall contain no special limitation on the scope of protection afforded to the City of Placerville, its officers, officials, employees, agents or volunteers; the Engineer, the Construction Manager and each of their partners, officers, officials, employees, agents and volunteers and coverage provided to such additional insured. This policy shall provide coverage to each of the said insureds with respect to said work. Said policy shall provide primary coverage to the full limit of liability stated in the declarations. If an additional insured endorsement is used, it shall provide coverage as least as broad as either ISO form CG 20 10 11 85 or the combination of CG 20 10 10 01 plus 20 37 10 01.

b.(1) Amount of Coverage(General Contractor)- The bodily injury, personal injury and property damage liability of the Commercial General Liability insurance shall provide coverage in the following limits of liability: $1,000,000 on account of any one occurrence for bodily injury and property damage, $1,000,000 personal and advertising injury limit with an annual general aggregate limit of not less than $5,000,000, and $5,000,000 products and completed operations aggregate, combined single limit. The Automobile Liability insurance policy shall provide minimum limits of $1,000,000 per accident for bodily injury and property damage arising out of the ownership, maintenance, or use of any owned or non-owned vehicles. The Commercial General Liability and Automobile Liability Coverages shall include per project aggregates in the above amounts equivalent to ISO form CG 25 03 11 85.

b.(2) Amount of Coverage **(SUBCONTRACTORS LISTED IN PROPOSAL)** - The bodily injury, personal injury and property damage liability of the Commercial General Liability insurance shall provide coverage in the following limits of liability: $1,000,000 on account of any one occurrence for bodily injury and property damage, $1,000,000 personal and advertising injury limit with an annual general aggregate limit of not less than $5,000,000, and 5,000,000 products and completed operations aggregate, combined single limit. The Automobile Liability insurance policy shall provide minimum limits of $1,000,000 per accident arising out of the ownership, maintenance, or use of any owned or non-owned vehicles.

c. Subcontractors – The bodily injury and property damage liability insurance shall not be deemed to require the Contractor to have its subcontractors named as insureds in the Contractor's policy, but the policy shall protect the Contractor from contingent liability which may arise from operations of its subcontractors.

d. Included Coverage - The above Commercial General Liability insurance shall also include the following coverages:

Premises - Operations

Independent Contractors

Products - Completed Operations

Personal Injury - (False Arrest, Libel, Wrongful Eviction, etc.)

Advertising Injury

Broad Form Property Damage, Including, Completed Operations

Separation of Insureds/Cross-Liability Provision

Duty to Defend all Insureds

Deletion of any Limitation on Coverage for Bodily Injury or Property Damage Arising out of Subsidence or Soil or Earth Movement

Separate Aggregate - A provision that the annual general aggregate and the products and completed operations annual aggregate shall apply separately to each project for which Contractor provides services away from premises owned by or rented to Contractor.

XCU - (Explosion, Collapse, Underground Damage) XCU may be deleted when not applicable to operations performed by the Contractor or its subcontractors.

Blanket Contractual Liability

e. Umbrella Policy - Contractor may use an umbrella or excess policy to meet the limits requirement of Section 2.1.1.b(1). However, any such umbrella/excess policy must be approved by the Owner and maintain a A.M. Best Rating of no less than A - :VII.

f. Professional Liability Coverage - The Engineer shall maintain, for the entire duration of this contract, such errors and omissions insurance as shall protect it from claims based on negligent errors, or omissions, which may arise from the Engineers operations under this contract, whether such operations be by the Engineer or by its employees, subcontractors, consultants or anyone else directly or indirectly employed by any of the foregoing. The amount of this insurance shall not be less than $1,000,000.

2.1.2 Workers' Compensation Insurance - In accordance with the provisions of Article 5, Chapter 1, Part 7, Division 2 (commencing with Section 1860) and Chapter 4, Part 1, Division 4 (commencing with Section 3700) of the Labor Code of the State of California, the Contractor is required to secure the payment of compensation to its employees and for that purpose obtain and keep in effect adequate Workers' Compensation Insurance. If the Contractor, in the sole discretion of the Owner, satisfies the Owner of the responsibility and capacity under the applicable Workers' Compensation Laws, if any, to act as self-insurer, the Contractor may so act, and in such case, the insurance required by this paragraph need not be provided.

The Contractor is advised of the provisions of Section 3700 of the Labor Code, which require every employer to be insured against liability for Workers' Compensation or to undertake self-insurance in accordance with the provisions of that code, and shall comply with such provisions and have Employers' Liability limits of $1,000,000 per accident and per employee, and in the aggregate for injury by disease, before commencing the performance of the work of this Contract.

Before the Notice to Proceed with the Work under this Contract is issued, the Contractor shall submit written evidence that the Contractor has obtained for the period of the Contract Workers' Compensation and Employer's Liability Insurance as required for all persons whom it employs or may employ in carrying out the work under this Contract. Such evidence of coverage shall be accompanied by an endorsement from the insurer agreeing to waive all rights of subrogation against the Owner, its officers, officials, employees, agents and volunteers, the Engineer, the Construction Manager and their agents, consultants and employees which might arise by reason of any payment under the policy. This insurance shall be in accordance with the requirements of the most current and applicable State Workers' Compensation Insurance Laws.

2.1.3 Builder's Risk Insurance - Not Required

2.1.4 Contractor's Pollution Legal Liability – Not Required

2.1.5 Proof of Coverage - Before the Notice to Proceed with the Work under this Contract is issued, the Contractor shall furnish the Owner with certificate(s) evidencing issuance of all insurance mentioned herein, copies of the policy declaration or information page(s) and additional insured endorsements. The certificate(s) and endorsements for each insurance policy are to be signed by a

person authorized by that insurer to bind coverage on its behalf. The endorsements are to be on general liability and automobile liability endorsement forms acceptable to the Owner. The certificate(s), policy declaration or information page(s), and endorsements are to be received and approved by the Owner before work commences. Except for the waiver of subrogation rights endorsements, as required under Sections 00800-2.1.2 and 00800-2.1.3, no other endorsements are required for Workers Compensation or Builder's Risk Insurance. Such certificates of insurance shall provide that the insurance policy shall be endorsed to state that coverage shall not be suspended, voided, cancelled by either party, reduced in coverage or limits except after thirty (30) days prior written notice by certified mail, return receipt requested, has been given to the Owner. Contractor shall also provide certificate(s) evidencing renewals of all insurance required herein, at least thirty (30) days prior to the expiration date of any such insurance.

Any deductibles or self-insured retentions 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 as respects the Owner, the Engineer and the Construction Manager and their officers, officials, employees, agents and volunteers; or the Contractor shall procure a bond guaranteeing payment of losses and related investigations, claim administration and defense expenses.

In the event of the breach of any provision of this paragraph, or in the event of any notices received which indicates any required insurance coverage will be diminished or canceled, Owner, at its option, may, notwithstanding any other provisions of this Agreement to the contrary, immediately declare a material breach of this Agreement and suspend all further work pursuant to this Agreement.

2.1.6 Indemnification

A. Contractor shall indemnify, defend with counsel acceptable to Owner and hold harmless to the full extent permitted by law, Owner, Caltrans, the Engineer and the Construction Manager, and their officers, officials, employees, agents and volunteers, (collectively "the Indemnified Parties"), from and against any and all liability, loss, damage, claims, expenses and costs (including, without limitation, attorney fees and costs and fees of litigation) (collectively, "Liability") of every nature arising out of or in connection with Contractor's performance of the Work or its failure to comply with any of its obligations contained in this Agreement, except such Liability caused by the sole negligence or willful misconduct of the Indemnified Parties. Such indemnification by the Contractor shall include, but not be limited to, the following:

1. Liability or claims resulting directly or indirectly from the negligence or carelessness of the Contractor, it subcontractors, employees, or agents in the performance of the Work, or in guarding or maintaining the same, or from any improper materials, implements, or appliances used in its construction, or by or on account of any act or omission of the Contractor, its employees, or agents;
2. Liability or claims arising directly or indirectly from bodily injury, occupational sickness or disease, or death of the Contractor's, or Supplier's own employees, or agents engaged in the Work resulting in actions brought against the Indemnified Parties;
3. Liability or claims arising directly or indirectly from or based on the violation of any Laws or Regulations, whether by the Contractor, its subcontractors, employees, or agents;
4. Liability or claims arising directly or indirectly from the use or manufacture by the Contractor, its subcontractors, employees, or agents in the performance of this

Agreement of any copyrighted or uncopyrighted composition, secret process, patented or unpatented invention, article, or appliance, unless otherwise specified stipulated in this Agreement.

5. Liability or claims arising directly or indirectly from the breach of any warranties, whether express or implied, made to the Owner or any other parties by the Contractor, its subcontractors, employees, or agents;
6. Liability or claims arising directly or indirectly from the willful misconduct of the Contractor, its subcontractors, employees, or agents;
7. Liability or claims arising directly or indirectly from any breach of the obligations assumed in this Agreement by the Contractor;
8. Liability or claims arising directly or indirectly from, relating to, or resulting from a hazardous condition created by the Contractor, Subcontractors, Suppliers, or any of their employees or agents, and;
9. Liability or claims arising directly, or indirectly, or consequentially out of any action, legal or equitable, brought against the Indemnified Parties, their consultants, subconsultants, and the officers, directors, employees, agents and volunteers of each or any of them, to the extent caused by the Contractor's use of any premises acquired by permits, rights of way, or easements, the Site, or any land or area contiguous hereto or its performance of the Work thereon.
10. Liability arising directly or indirectly from exposure to hazards in violation of the California Labor Code that may be asserted by any person or entity, including, but not limited to, the Contractor, arising out of or in connection with the negligent activities of the Contractor, its agents, employees or privities pursuant to this Contract, whether or not there is concurrent negligence on the part of the Indemnified Parties.

B. The Contractor shall reimburse the Indemnified Parties for all costs and expenses, (including but not limited to fees and charges of engineers, architects, attorneys, and other professionals and court costs of appeal) incurred by said Indemnified Parties in enforcing the provisions of this Paragraph.

C. The indemnification obligation under this Section 00800-2.1.6 shall not be limited in any way by any limitation on the amount or type of insurance carried by Contractor or by the amount or type of damages, compensation, or benefits payable by or for the Contractor or any Subcontractor or other person or organization under workers' compensation acts, disability benefit acts, or other employee benefit acts.

D. Pursuant to California Public Contract Code Section 9201, Owner shall timely notify Contractor of receipt of any third-party claim relating to this Agreement.

E. The Contractor's obligations pursuant to this provision will survive the expiration or earlier termination of this Contract.

F. In the event the Contractor enters any agreement with the owners of any adjacent property to enter upon or adjacent to such property for the purpose of performing this contract, the Contractor shall fully indemnify, defend and save harmless such person, firm, or corporation, state or other governmental agency which owns or has any interest in such adjacent property. The form and content of such indemnification agreement shall be approved by the Owner and the City of Placerville prior to commencement of the work on or about such property. Contractor also shall indemnify the Owner, the City of

Placerville, the Engineer and the Construction Manager, and their officers, officials, employees, agents and volunteers, as provided above.

2.1.7 Injury or Illness Reports - The Contractor shall furnish the Construction Manager with a copy of the Employer's Report of Injury immediately following any incident requiring the listing of said report on the OSHA Log during the prosecution of the work under this Contract. The Contractor shall also furnish the Construction Manager with a copy of the Employer's Report of injury involving any subcontractor on this project.

2.1.8 Notification of Insurance Companies - The Contractor shall advise all insurance companies to familiarize themselves with all of the Conditions and provisions of this Contract, and they shall waive the right of special notification of any change or modification of this Contract or of extension of time, or of decreased or increased work, or of the cancellation of the Contract, or of any other act or acts by the Indemnified Parties, under the terms of this Contract, and failure to so notify the aforesaid insurance companies of changes shall in no way relieve the insurance companies of their obligation under this Contract.

2.2 Insurance During Guarantee Period

For all work the Contractor or its subcontractors perform during the guarantee period, worker's compensation, and commercial general liability insurance and insurance in the amounts and format required herein, shall remain in force and be maintained for one (1) year after final completion.

2.3 Third Party Insurance Requirements

The Work, requires an encroachment permit from Caltrans. A copy of the permit application is included as an appendix to these specifications. Contractor shall ensure that the insurance it obtains in accordance therewith complies with all requirements mandated by each permitting agency from whom permits shall be obtained for the Work and any other third parties from whom third party agreements are necessary to perform the Work (collectively, the "Third Party(ies)"). To the extent there is a conflict between the Third Party(ies)'s Insurance Requirements and those set forth by the Owner in Section 00800- SUPPLEMENTARY GENERAL CONDITIONS, the requirement(s) providing the more protective coverage for both the Owner and the Third Party(ies) shall control and be purchased and maintained by Contractor.

Contractor shall be responsible to determine what insurance requirements exist as a condition precedent to obtaining permit(s) for the Work, if any. Contractor shall be solely responsible for any delay(s) arising from its failure and/or its Subcontractors' failure to timely obtain all required insurance.

All required third party insurance shall be submitted to the Owner at the same time Contractor submits all other contractually required insurance, which is no later than fifteen (15) days after Notice of Award, unless otherwise agreed to in writing by the Owner prior to this deadline.

Bidders are encouraged to contact the applicable local agency(ies) prior to Bid in determining all applicable permits, and related insurance requirements, for this Project.

3.0 SUBSTANTIAL COMPLETION

Substantial completion of the Project as required by Section 00700, requires that the following portions of the Work must be operational and ready for the Owner's continuous use as intended:

The following items of work must be fully tested and functional for Project Substantial Completion to be attained:

- All testing required by the Contract has been successfully completed.
- All equipment shall be installed and operational, or temporary arrangements satisfactory to the Owner have been made.
- All record drawings have been submitted, updated, reviewed and approved.

Portions of the Work not essential to the system operation, which can be completed without interruption of system operations, may be completed after the Work is substantially complete, and may include the following items:

- Final Site Clean-Up
- Completion of the Final Punch List prepared by the Construction Manager in accordance with Section 00700.

***** END OF SECTION *****

CITY OF PLACERVILLE, CALIFORNIA\
DEVELOPMENT SERVICES DEPARTMENT
ENGINEERING DIVISION

Pardi/Big Cut/Sacramento Street Area Waterline Relocation Project

Project No. 41109

GENERAL REQUIREMENTS

April 25, 2016

SECTION 01060
REFERENCES

1.0 CODES AND STANDARDS

Whenever reference is made to a code or standard, it means the latest edition in effect the date that the Contract Documents are dated. Where codes, standards and reference documents are referred to in the Contract Documents, the Contractor may submit a written request to the Construction Manager for assistance in locating such documents. Within three days of receipt of such request, the Construction Manager or the Engineer will notify the Contractor as to where the document(s) can be reviewed.

2.0 DEFINITIONS OF WORDS AND TERMS

Where used in the project manual, the following words and terms shall have the meanings indicated. The meanings shall be applicable to the singular, plural, masculine and feminine of the words and terms.

The Contract Documents include the terms “as allowed,” “as approved,” “as ordered”, “as directed” or terms of like effect or import to authorize an exercise of professional judgment by the Owner, Construction Manager or Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of the Owner, Construction Manager or Engineer as to the Work. It is intended that such exercise of professional judgment, action or determination will be solely to evaluate, in general, the Work for compliance with the requirements of and information in the Contract Documents and conformance with the design concept of the completed Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Owner, Construction Manager or Engineer any duty or authority to supervise or direct the performance of the Work or any duty or authority contrary to the provisions of the Contract Documents.

Acceptance, Final Acceptance. Formal action of the City of Placerville’s City Council in determining that the Contractor's work has been completed in accordance with the Contract Documents and in notifying the Contractor in writing of the acceptability of the Work.

Acts of God. "Acts of God" shall include only the following occurrences or conditions and effects: earthquakes in excess of a magnitude of 3.5 on the Richter Scale and tidal waves.

Addenda. Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.

Agreement. The written instrument which is evidence of the agreement between Owner and Contractor covering the Work.

Allowance. “Allowance” shall mean an amount of money set aside under the Contract for a special purpose identified and defined in the Contract Documents.

Application for Payment. The form acceptable to Owner’s Representative which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

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

Bid. Offer of a bidder submitted on the prescribed forms setting forth prices of the work to be performed.

Bidder. Any Individual, partnership, corporation, or a combination thereof, includes joint venturers who meet the requirements of the Contract Documents and offer a bid to perform the Work. The term “Successful Bidder” is the lowest responsible Bidder submitting a responsive Bid to whom the Owner (on the basis of Owner’s evaluation as provided for in the Contract Documents) makes an award.

Bidding Documents. The Bidding Requirements and the proposed Contract Documents (including all Addenda).

City. Refers to the City of Placerville.

Clarification Letter. A Clarification Letter is issued by the Construction Manager to address the clarification of Contract issues raised by the Construction Manager, Engineer or Owner.

Claim. A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.

Completion. The word completion shall indicate substantial completion. See Substantial Completion.

Construction Manager. The person designated, in writing, by the Owner to act as its representative at the construction site and to perform administrative functions relating to this Contract. The Construction Manager may also furnish inspection services as provided by the Contract. All contact by the Contractor with the Owner shall be through the Construction Manager.

Contract. The entire and integrated written agreement between the City and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

Contract Change Order. A document which is signed as recommended by Owner’s Representative, signed by Contractor, and signed by Owner’s Director of Technical Services, which authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.

Contract Documents. The words "Contract Documents" shall mean any or all of the following items, as applicable:

Notice Inviting Bids
Instructions to Bidders
Bid Form and Bid Schedule
Designation of Subcontractors

Agreement
Performance Bond
Payment Bond
Guaranty Bond
General Conditions
Supplementary General Conditions
General Requirements
Specifications
Drawings
Addenda, if any
Executed Change Orders, if any
Field Orders
Permits

Each of these items is to be considered by reference as part of the Contract Documents, also referred to as Contract.

Contract Price (also referred to as Contract Amount). The amount payable to the Contractor under the terms and conditions of the Contract based on the price given on the bidding schedule, with adjustments made in accordance with the Contract. The base amount given in the bidding schedule shall be either a lump sum bid or the summation of the unit price bids multiplied by the estimated quantities set forth in the bid form.

Contract Time. The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any, (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Construction Manager's written recommendation of final payment.

Contractor. The individual partnership, corporation, or combination thereof including joint venturers who enter into the Contract with the Owner for the performance of the Work. The term "Contractor" means the Contractor or his authorized representative. The term "Contractor" also covers subcontractors, subtier subcontractors, consultants, equipment and material suppliers, and their employees.

Contractor's Plant and Equipment. Equipment, material, supplies, and all other items, except labor, brought onto the site by the Contractor to carry out the Work, but not to be incorporated in the Work.

Corrective Work Item List. List of incomplete items of work, incomplete administrative requirements and items of work which are not in conformance with the Contract, prepared by the Construction Manager and issued to the Contractor as an attachment to the response to the Contractor's notification of Substantial Completion.

County. Refers to the County or Counties where the Project is located.

Days. The word "Days" shall mean calendar days, including legal holidays, Saturdays and Sundays, unless specifically noted otherwise. The day shall be 24 hours measured from midnight to the next midnight.

Defective. The word "defective," when modifying the word "Work," refers to Work that is unsatisfactory, faulty, or deficient in that it:

A. does not conform to the Contract Documents, or

B. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents, or

C. has been damaged prior to Engineer's recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with the Contract Documents).

Engineer. The engineer or architect designated by the Owner to have design control over the Work or a specified portion of the Work, acting either directly or through duly authorized representatives. Such representatives shall act within the scope of the particular duties delegated to them. The Engineer may also furnish inspection services as provided by the Contract.

Direct. Action of the Owner or Construction Manager by which the Contractor is ordered to perform or refrain from performing work under the Contract.

Drawings. Also referred to as "Plans". That part of the Contract Documents consisting of the graphical and technical requirements of the Contract as included on the plan sheets. Drawings, or reproductions thereof, show the location, character, dimensions and details of the work to be done. Shop drawings and other Contractor submittals are not Drawings as so defined.

Engineer. The person or firm designated as Engineer with authority is defined in the Contract Documents.

Engineer Field Directive. Written documentation of the actions of the Owner or Construction Manager in directing the Contractor. Also referred to as a Directive.

Field Order. A written instruction given to the Contractor authorizing work that is a change to the scope of work carried out on a time and material basis or a lump sum cost agreed to between Owner and Contractor.

Final Completion. The date when the Work is 100% complete, including completion and acceptance of all punch list corrections, as certified by the Owner.

Final Inspection List. List of materials, equipment, workmanship, or administrative requirements which are not in conformance with the Contract. The list shall be prepared by the Construction Manager and submitted to the Contractor following the Contractor's notice of completion of the Work, including all items on the Punch List.

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

General Conditions. Documents 00700, **SPECIAL PROVISIONS**, and 00800, **SUPPLEMENTARY CONDITIONS**, which form the part of the Contract Documents representing the general clauses that establish how the Project is to be administered.

Hazardous Waste. The term Hazardous Waste shall have the meaning provided in Section

1004 of the Solid Waste Disposal Act (42 USC Section 6906) as amended from time to time.

Herein. Refers to information presented in the Contract Documents.

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

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

Laws and Regulations; Laws or Regulations. Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

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

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

Notice of Award. The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.

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

Notice to Proceed. A written notice given by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work under the Contract Documents.

Owner. The word "Owner" refers to the City of Placerville, the governing body of which is termed the "City Council" or "Council". The word "City" shall also mean "Owner".

Owner Representative. The person designated in writing by the Owner to act as its agent on specified matters relating to this Contract. The Owner's Representative is an employee or agent of the Owner who has been designated to represent the Owner.

Paragraph. For reference or citation purposes, a paragraph shall refer to the paragraph, or paragraphs, called out by paragraph number and alphanumeric designator.

Perform. Refer to "Provide."

Person. The term, person, includes firms, companies, corporations, partnerships, and joint ventures.

Plans. See “Drawings.”

Progress Schedule. A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor’s plan to accomplish the Work within the Contract Times.

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

Project Manual. The bound documentary information prepared for bidding and constructing the work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the Table of Contents.

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

Punch List. List of incomplete items of Work, incomplete administrative requirements and items of Work which are not in conformance with the Contract, prepared by the Construction Manager and issued to the Contractor as an attachment to the Certificate of Substantial Completion.

Request for Information. Also referred to as “Request for Clarification”. A Request for Information (RFI) is issued by the Contractor to the Construction Manager requesting additional information necessary to clarify or amplify an item in the Contract Documents that the Contractor believes is not clearly shown or called for in the Drawings or Specifications or other portions of the Contract Documents, or to address problems which have arisen under field conditions. A RFI is not to be used for request for materials/equipment substitutions or value engineering/cost reduction incentive proposals.

Request For Proposal. A request for a proposed cost made to the Contractor by the Owner to add, delete or change the Work. RFP’s shall not be deemed to be directions to proceed with any addition, deletion or change to the Work. RFP’s may also be referred to as “Request for Quotation”.

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

Samples. Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.

Schedule of Submittals. A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.

Schedule of Values. A schedule, prepared and maintained by Contractor, allocating portions of

the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

Shall. Refers to actions entered into by the Contractor or the Owner as a covenant with the other party to do or to perform the action.

Shop Drawings (Submittals). Shop drawings (submittals) are drawings, diagrams, illustrations, schedules, performance charts, brochures, and other data which are prepared by the Contractor or any subcontractor, manufacturer, supplier, or distributor and which illustrate some portion of the work.

Shown. Refers to information presented on the drawings, with or without reference to the drawings.

Site. Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.

Specifications. That part of the Contract Documents consisting of written descriptions of the technical features of materials, equipment, constructions systems, standards, and workmanship.

Specify. Refers to information described, shown, noted or presented in any manner in any part of the contract.

Standard Drawings, Standard Plans, Standard Specifications. The latest edition of the Standard Drawings, Standard Plans or Standard Specifications referenced in the Contract Documents.

State of California Specifications. The State of California Department of Transportation Standard Specifications in effect at the date of Notice Inviting Bids, Document 00010. Also referred to as State Standard Specifications and Caltrans Standard Specifications.

Stop Notice. A legal remedy for subcontractors and suppliers who contribute to public works, but who are not paid for their work which secures payment from construction funds possessed by the Owner.

Subcontractor. A subcontractor is a person or entity who has a direct contract with the Contractor or a sub-tier subcontractor who has a direct contract with a subcontractor to perform any of the Work associated with the Project. The term subcontractor means a subcontractor or subcontractor's authorized representative. The term subcontractor, does not include any separate contractor or any separate contractor's subcontractors.

Submittals. The information which is specified for submission to the Construction Manager in accordance with the Contract Documents.

Substantial Completion. Sufficient completion of the project or the portion thereof to permit a utilization of the project. Determination of substantial completion is solely at the discretion of the Owner. Substantial completion does not mean complete in accordance with the Contract nor shall substantial completion of all or any part of the project entitle the Contractor to acceptance under the Contract.

Substantial Completion Date. Date when the Owner puts into service, the Project or that portion

of the Project that has been determined to be substantially complete.

Sub-subcontractor. A sub-subcontractor is a person or entity who has a direct or indirect contract with a subcontractor to perform any of the Work associated with the Project. The term sub-subcontractor means a sub-subcontractor or an authorized representative thereof, also referred to as subtier-subcontractor.

Supplier. A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or any Subcontractor.

Surety. The person, firm, corporation, or organization that joins with the Contractor in assuming the liability for the faithful performance of the Work and for the payment of all obligations pertaining to the Work in accordance with the Contract Documents by issuing the Bonds required by the Contract Documents or by law.

Underground Facilities. All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.

Unit Price Work. Work to be paid for on the basis of unit prices.

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

Will. See definition of "Shall".

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

Work Day. A working day is defined as any day, except Saturdays, Sundays and City Legal Holidays, unless approved by the Owner. Any work scheduled by the Contractor on non-working days (Saturdays, Sundays, and City Legal Holidays) shall be verified and approved by the City at least 72 hours in advance. The City shall be compensated for inspection work, at an hourly rate, for any work on non-working days and for overtime.

3.0 ABBREVIATIONS

A. Interpret abbreviations by context in which abbreviations are used. Abbreviations for standards and organizations used in the Contract Documents are defined as follows:

AA	Aluminum Association
AABC	Associated Air Balance Council
AAMA	Architectural Aluminum Manufacturers Association
AAN	American Association of Nurerymen
AASHTO	American Association of State Highway and Transportation Officials

ABC	Associated Air Balance Council
ABPA	Acoustical and Board Products Association
ABMA	American Boiler Manufacturers Association
ACI	American Concrete Institute
ACIL	American Council of Independent Laboratories
ACPA	American Concrete Pipe Association
ADC	Air Diffuser Council
AEIC	Association of Edison Illuminating Companies
AFBMA	Antifriction Bearing Manufacturers Association
AFPA	American Forest & Paper Association
AGA	American Gas Association
AGMA	American Gear Manufacturers Association
AHA	American Hardboard Association
AI	Asphalt Institute
AIA	American Institute of Architects
AIMA	Acoustical and Insulating Materials Association
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
AMCA	Air Moving and Conditioning Association
AMG	American Masonry Guild
ANSI	American National Standards Institute
APA	American Plywood Association
API	American Petroleum Institute
AREMA	American Railway Engineers and Maintenance-of-Way Association
ARI	American Refrigeration Institute
ASAHC	American Society of Architectural Hardware Consultants
ASCE	American Society of Civil Engineers
ASAHC	American Society of Architectural Hardware Consultants
ASHRAE	American Society of Heating, Refrigerating, and Air-Conditioning Engineers
ASME	American Society of Mechanical Engineers
ASSE	American Society of Sanitary Engineers
ASTM	American Society for Testing and Materials
AVATI	See RTI
AWG	American Wire Gage
AWI	Architectural Woodwork Institute
AWPA	American Wood-Preservers' Association
AWPB	American Wood Preservers Bureau
AWS	American Welding Society
AWWA	American Water Works Association
BHMA	Builders Hardware Manufacturers Association
BIA	Brick Institute of America (formerly SCPI)
BSI	Building Stone Institute
CAGI	Compressed Air and Gas Institute
CAL/OSHA	State of California Dept. of Industrial Relations, Division of Industrial Safety
CBM	Certified Ballast Manufacturers

CBR	California Bearing Ratio
CDA	Copper Development Association
CI	Chlorine Institute
CISPI	Cast Iron Soil Pipe Institute
CLFMI	Chain Link Fence Manufacturers Institute
CMAA	Crane Manufacturers Association of America
CPSC	U.S. Consumer Products Safety Commission
CRA	California Redwood Association
CRSI	Concrete Reinforcing Steel Institute
CS	Commercial Standard (U.S. Department of Commerce)
CTI	Cooling Tower Institute
DFPA	Douglas Fir Plywood Association
DHI	Door and Hardware Institute
DIPRA	Ductile Iron Pipe Research Association
EEI	Edison Electric Institute
EIA	Electronic Industries Association
EJCDC	Engineers' Joint Contract Documents Committee
EPA	Environmental Protection Agency
ETL	Electronic Testing Laboratory
Fed Spec	Federal Specification
FCI	Fluid Controls Institute
FGMA	Flat Glass Marketing Association
FHWA	Federal Highway Administration
FIA	Factory Insurance Association
FM	Factory Mutual Insurance Company
FPS	Fluid Power Society
FS	Federal Specifications
FSA	Fluid Sealing Association
FTI	Facing Tile Institute
GO 95	General Order No. 95 CA PUC rules for overhead electric line construction
HEI	Heat Exchange Institute
HI	Hydraulic Institute
HMI	Hoist Manufacturers Institute
HPMA	Hardwood Plywood Manufacturers Association
HTI	Hand Tools Institute
IAPMO	International Association of Plumbing and Mechanical Officials
I-B-R	Institute of Boiler and Radiator Manufacturers
IEEE	Institute of Electrical and Electronics Engineers
IBC	International Building Code
IES	Illuminating Engineering Society
IFI	Industrial Fasteners Institute
IPCEA	Insulated Power Cable Engineers Association
IRI	Industrial Risk Insurers

ISA	Instrumentation, Systems, and Automation Society
MHI	Materials Handling Institute
MIL	Military Specification
MMA	Monorail Manufacturers Association
MSS	Manufacturers Standardization Society of Valve and Fitting Industry
NAAMM	National Association of Architectural Metals Manufacturers
NACE	NACE International
NAPA	National Asphalt Pavement Association
NBHA	National Builders Hardware Association
NBBPVI	National Board of Boiler and Pressure Vessel Inspectors
NBS	See NIST
NCSPA	National Corrugated Steel Pipe Association
NCMA	National Concrete Masonry Association
NEBB	National Environmental Balancing Bureau
NEC	National Electrical Code
NECA	National Electrical Contractors Association
NEMA	National Electrical Manufacturers Association
NEMI	National Elevator Manufacturing Industry
NETA	International Electrical Testing Association
NFPA	National Fire Protection Association
NIST	National Institute of Standards and Technology (formerly NBS)
NLA	National Lime Association
NPC	National Plumbing Code
NPCA	National Paint and Coatings Association
NPT	National Pipe Thread
NRMCA	National Ready Mixed Concrete Association
NSC	National Safety Council
NSF	NSF International (formerly National Sanitation Foundation)
NTMA	National Terrazzo and Mosaic Association
NWMA	National Woodwork Manufacturers Association
OSHA	Occupational Safety and Health Administration
PCA	Portland Cement Association
PCI	Prestressed Concrete Institute
PUC	California Public Utilities Commission
PS	Product Standard
RIS	Redwood Inspection Service
RTI	Resilient Tile Institute (formerly AVATI)
SAE	Society of Automotive Engineers
SCPRF	Structural Clay Products Research Foundation
SDI	Steel Door Institute
SFPA	Southern Forest Products Association
SI	Systéme International des Unités (International System of Units)
SIGMA	Sealed Insulating Glass Manufacturers Association
SJI	Steel Joist Institute

SMA	Screen Manufacturers Association
SMACNA	Sheet Metal and Air Conditioning Contractors National Association
SPFA	Steel Plate Fabricators Association
SPI	Society of the Plastics Industry
SPTA	Southern Pressure Treaters Association
SSI	Scaffolding and Shoring Institute
SSPC	SSPC: The Society for Protective Coatings
UBC	Uniform Building Code (ICBO)
UL	Underwriters' Laboratories
USBR	U.S. Bureau of Reclamation
VA	Vermiculite Association
WCLA	West Coast Lumberman's Association
WCLIB	West Coast Lumber Inspection Bureau
WEF	Water Environment Federation
WIC	Woodwork Institute of California
WPOA	Western Plumbing Officials Association
WSCPA	Western States Clay Products Association
WWPA	Western Wood Products Association

B. Abbreviations used in Specifications are:

a	year or years (metric unit)
A	ampere or amperes
am	ante meridian (before noon)
ac	alternating current
ac-ft	acre-foot or acre-feet
atm	atmosphere
AWG	American Wire Gauge
bbl	barrel or barrels
bd	board
bhp	brake horsepower
bil gal	billion gallons
BOD	biochemical oxygen demand
Btu	British thermal unit or units
Btuh	British thermal units per hour
bu	bushel or bushels
C	degrees Celsius
cal	calorie or calories
cap	capita
cd	candela or candelas
cfm	cubic feet per minute
Ci	curie or curies
cm	centimeter or centimeters
cmu	concrete masonry unit
CO	carbon monoxide

Co.	Company
CO_2	carbon dioxide
COD	chemical oxygen demand
Corp.	Corporation
counts/min	counts per minute
cu	cubic
cu cm	cubic centimeter or centimeters
cu ft	cubic foot or feet
cu ft/day	cubic feet per day
cu ft/hr	cubic feet per hour
cu ft/min	cubic feet per minute
cu ft/sec	cubic feet per second
cu in	cubic inch or inches
cu m	cubic meter or meters
cu yd	cubic yard or yards
d	day (metric units)
day	day (English units)
db	decibels
DB	dry bulb (temperature)
dc	direct current
diam	diameter
DO	dissolved oxygen
DS	dissolved solids
emf	electromotive force
fpm	feet per minute
F	degrees Fahrenheit
ft	feet or foot
fc	foot-candle or foot candles
ft/day	feet per day
ft/hr	feet per hour
ft/min	feet per minute
ft/sec	feet per second
g	gram or grams
G	gravitational force
gal	gallon or gallons
gal/day	gallons per day
gal/min	gallons per minutes
gal/sec	gallons per second
g/L	grams per liter
gpd	gallons per day
gpd/ac	gallons per day per acre
gpd/cap	gallons per day per capita
gpd/sq ft	gallons per day per square foot
gph	gallons per hour
gpm	gallons per minute
gps	gallons per second

h	hour or hours (metric units)
ha	hectare or hectares
hp	high point
hp	horsepower
hp-hr	horsepower-hour or horsepower-hours
hr	hour or hours (English units)
Hz	hertz
ID	inside diameter
ihp	indicated horsepower
Inc.	Incorporated
inch	inch
inches	inches
inches/sec	inches per second
J	joule or joules
k	kips
K	kelvin
K	thermal conductivity
kcal	kilocalorie or kilocalories
kcmil	thousand circular mils
kg	kilogram or kilograms
km	kilometer or kilometers
kN	kilonewton or kilonewtons
kPa	kilopascal or kilopascals
ksi	kips per square inch
kV	kilovolt or kilovolts
kVA	kilovolt-ampere or kilovolt-amperes
kW	kilowatt or kilowatts
kWh	kilowatt hour
L	liter or liters
lb/1000 cu ft	pounds per thousand cubic foot
lb/acre-ft	pounds per acre-foot
lb/ac	pounds per acre
lb/cu ft	pounds per cubic foot
lb/day/cu ft	pounds per day per cubic foot
lb/day/acre	pounds per day per acre
lb/sq ft	pounds per square foot
lin	linear, lineal
lin ft	linear foot or feet
lm	lumen or lumens
log	logarithm (common)
ln	logarithm (natural)
lx	lux
m	meter or meters
M	molar (concentration)

mA	milliampere or milliamperes
max	maximum
mCi	millicurie or millicuries
meq	milliequivalent
*µ*F	microfarad or microfarads
MFBM	thousand feet board measure
mfr	manufacturer
mg	milligram or milligrams
mgd/ac	million gallons per day per acre
mgd	million gallons per day
mg/L	milligrams per liter
*µ*g/L	micrograms per liter
*µ*m	micrometer or micrometers
mile	mile
mil. gal	million gallons
miles	miles
min	minimum
min	minute or minutes
MLSS	mixed liquor suspended solids
MLVSS	mixed liquor volatile suspended solids
mm	millimeter or millimeters
mol wt	molecular weight
mol	mole
Mpa	megapascal or megapascals
mph	miles per hour
MPN	most probable number
mR	milliroentgen or milliroentgens
Mrad	megarad or megarads
mV	millivolt or millivolts
MW	megawatt or megawatts
N	newton or newtons
N	normal (concentration)
No.	number
Nos	numbers
NRC	noise reduction coefficient
NTU or ntu	Nephelometric Turbidity Units
oc	on center
OD	outside diameter
ORP	oxidation-reduction potential
OT	ortho-tolidine
OTA	ortha-tolidine-arsenite
oz	ounce or ounces
oz/sq ft	ounces per square foot
Pa	pascal or pascals
pl	plate or property line
pm	post meridiem (afternoon)
ppb	parts per billion

ppm	parts per million
ppt	parts per thousand
pr	pair
psf/hr	pounds per square foot per hour
psf	pounds per square foot
psi	pounds per square inch
psia	pounds per square inch absolute
psig	pounds per square inch gauge
PVC	polyvinyl chloride
qt	quart or quarts
R	radius
R	roentgen or roentgens
rad	radiation absorbed dose
RH	relative humidity
rpm	revolutions per minute
rps	revolutions per second
s	second (metric units)
S	Siemens (mho)
SDI	sludge density index
sec	second (English units)
SI	International System of Units
sp	static pressure
sp gr	specific gravity
sp ht	specific heat
sq	square
cm^2 or sq cm	square centimeter or centimeters
sq ft	square feet or foot
sq inch	square inch
sq inches	square inches
km^2 or sq km	square kilometer or kilometers
m^2 or sq m	square meter or meters
mm^2 or sq mm	square millimeter or millimeters
sq yd	square yard or yards
SS	suspended solids
STC	Sound Transmission Class
SVI	sludge volume index
TDS	total dissolved solids
TKN	total Kjeldahl nitrogen
TLM	median tolerance limit
TOC	total organic carbon
TOD	total oxygen demand
TOW	top of weir
TS	total solids
TSS	total suspended solids
TVS	total volatile solids
U	U Factor/U Value

U	Coefficient of Heat Transfer
U	heat transfer coefficient
UNS	Uniform Numbering System
US	United States
V	volt or volts
VA	volt-ampere or volt-amperes
W	watt or watts
WB	wet bulb
wg	water gauge
wk	week or weeks
wt	weight
yd	yard or yards
yr	year or years (English unit)

C. Abbreviations used on Drawings: As listed on Drawings or in Specifications.

D. Symbols used in Specifications:

:	"shall be" or "shall"-where listed within sentences or paragraphs
#1	Number
1#	Pound
&	And
%	Percent
C	Centigrade
F	Fahrenheit
º	Degree
/	per, except where used to combine words; example: power/fuel, and it that case it means and
"	Inch (inches)
'	foot (feet)
@	At
©	Copyright
®	Registered
™	Trademark
±	Plus and Minus tolerance
≠	not equal to

E. Symbols, used only on Drawings, are indicated thereon.

*****END OF SECTION*****

SECTION 01090
REGULATORY REQUIREMENTS AND PERMITS

1.0 APPLICABLE CODES

See Technical Specifications for Applicable Codes.

2.0 FEES AND PERMITS

2.1 Summary

Contractor shall comply with all the terms, conditions and requirements attached to all permits, bonds and licenses required by any local, state, or federal agencies to perform work, construct, erect, test and start up of any equipment or facility for this Contract. The Contractor shall give all notices necessary and incidental to the due and lawful prosecution of the Work.

Any permits, bonds, licenses and fees therefore required for the performance of work under this Contract and not specifically mentioned herein as being obtained and paid for by the Owner shall be included in the Contractor's Bid price. The Contractor shall apply for and obtain all safety permits for excavations, tunneling, trenches, construction (building structure, scaffolding, or falsework) and demolition required by CAL/OSHA.

The Contractor shall post at the site of Work all required permits as stipulated by the respective regulatory agency.

2.2 Local Agency and Building Code Fees and Permits

The Owner is not responsible for any local agency or utility permits required for temporary facilities during construction such as field office trailers and temporary electrical service for construction operations. Obtaining all such permits and the costs associated with such permits are the responsibility of the Contractor and shall be included in the Contractor's Bid Price.

2.3 Encroachment Permit

The Contractor is made aware that all work along Sacramento Street between Pacific Street and Gilmore Street south is within the State of California – Department of Transportation (Caltrans) Right-of-Way. The City has applied for and received a design encroachment permit (included as Appendix B). The Contractor shall be responsible for applying for and obtaining a construction encroachment permit utilizing the City design encroachment permit as the parent permit and complying with all the terms, conditions and requirements on the construction encroachment permit that the Contractor shall obtain. All work within Caltrans right-of-way shall comply with Caltrans Standards.

A traffic control plan has been included in the Appendix E for the areas within Caltrans Right-of-Way. Contractor may use this TCP, but shall ultimately be responsible for preparing, having approved, and implementing a project wide TCP and being in compliance with all other provision required by the approved Caltrans and City encroachment permits. Any revisions to the included traffic control plan shall be prepared by the Contractor and will

require City and Caltrans approval. Refer to Section 2060 regarding submittal of traffic control plans.

The contractor is also made aware that the project will also require the Contractor to apply for a City encroachment permit. Fees will be waived; however, all conditions of the permit will apply. An example City encroachment permit is provided in Appendix B.

2.4 Construction Water

The Contractor must obtain a water use permit for construction water from the City of Placerville. Construction meters require a one-thousand dollar ($1,025) deposit. The monthly rental fee for the construction meter is one-hundred dollars ($100) per month and is billed bimonthly. The usage fee is a tiered rate as shown in the table below:

Water Usage Price per 100 Cubic Feet
0-4000 cubic feet $2.94
4001-20,000 cubic feet $3.52
over 20,000 cubic feet $3.81

The payment for the cost for this permit, meter, and water usage shall be included with the various items of the proposal and no separate payment will be made.

3.0 STORM WATER QUALITY CONTROLS

3.1 General

The 1972 amendments to the Federal Water Pollution Control Act established the National Pollutant Discharge Elimination System (NPDES) permit program to control discharges of pollutants from point sources. The 1987 amendments to the Clean Water Act (CWA) created a new section of the CWA devoted to storm water permitting (Section 402(p)). The EPA has delegated permitting authority to the State Water Resources Control Board (SWRCB). The SWRCB issues both general and individual permits. Construction activities are regulated under the NPDES General Permit for Storm Water Discharges Associated with Construction Activity (General Permit) provided the total amount of ground disturbance during construction is greater than or equal to 1 (one) acre. The appropriate Regional Water Quality Control Board (RWQCB) enforces the General Permit. Coverage under a General Permit requires the submission of a Notice of Intent (NOI) with the appropriate fee, annual compliance reports, a Notice of Termination (NOT) and preparation of a storm water pollution prevention plan (SWPPP).

Construction activity includes, but is not limited to: clearing, grading, demolition, and excavation, construction of new structures, pipelines and reconstruction of existing facilities involving removal and replacement that results in soil disturbance. This includes construction access roads, staging areas, storage areas, stockpiles, and any off-site areas which receive run-off from the construction project such as discharge points into a receiving water.

If a violation of the permit is due to the Contractor's actions or inactions and a fine is assessed, the Contractor shall be responsible for the fine.

3.2 Projects Disturbing Less Than 1-Acre

This project has been determined by the Owner to disturb less than 1-acre; therefore, a NOI, SWPPP, and NOT are not required. The Contractor shall comply with the following requirements for projects disturbing less than 1-acre.

3.2.1 General – the Contractor shall perform water pollution control work in conformance with the requirements in the Section 303 of the Clean Water Act, the Water Quality Control Plan for the Sacramento River Basin (Central Valley Regional Water Control Board 1998) and in the El Dorado County Stormwater Quality Ordinance.

Before the start of job site activities, the Contractor shall provide training for project managers, supervisory personnel, and employees involved with water pollution control work. The training shall include:

A. Rules and regulation
B. Implementation and maintenance for:

    1. Temporary Soil Stabilization
    2. Temporary Sediment Control
    3. Tracking Control
    4. Wind Erosion Control

The Contractor shall designate in writing a Water Pollution Control Manager (WPCM). The Contractor shall submit a statement of qualifications describing the training, work history, and expertise of the proposed WPCM. The qualifications shall include either:

A. Must have attended State Water Resources Control Board sponsored or approved Qualified SWPPP Practitioner training as described at State Water Resources Control Board web site.
B. Certification as a Certified Professional in Erosion and Sediment Control (CPESC).

The WPCM shall be:

A. Responsible for water pollution control work.
B. The primary contact for water pollution control work.
C. Have authority to mobilize crews to make immediate repairs to water pollution control practices.

The Contractor may designate one manager to prepare the Water Pollution Control Program (WPCP) and a different manager to implement the plan. The WPCP preparer shall meet the training requirements for the WPCM.

3.2.2 Water Pollution Control Program – The Contractor shall submit a Water Pollution Control Program (WPCP) to the Owner for approval. The WPCP shall conform to the requirements in the Clean Water Act and these special provisions.

The WPCP shall include water pollution control practices:

A. For storm water and non-storm water from areas outside of the job site related to construction activities for the contract such as:

    1. Staging areas

2. Storage yards
3. Access roads

B. Appropriate for each season as described in “Implementation Requirements” of these special provisions.

The WPCP shall include a schedule that:

A. Describes when work activities that could cause water pollution will be performed.
B. Identifies soil stabilization and sediment control practices for disturbed soil area.
C. Includes dates when these practices will be 25, 50, and 100 percent complete.
D. Shows 100 percent completion of these practices before the rainy season.

The WPCP shall include the following water pollution control practices and their associated contract items of work as shown on the plans or specified in these special provisions:

A. Temporary Soil Stabilization
B. Temporary Sediment Control
C. Tracking Control
    1. Stabilized Construction Entrance/Exit
D. Wind Erosion Control
E. Non-Storm Water Management
F. Waste Management and Materials Pollution Control
    1. Concrete Waste Management
G. Final Stabilization Measures

Within 5 days after contract approval, the Contractor shall submit 2 copies of the WPCP to the Owner. The Contractor shall allow 5 days for the Owner’s review. If revisions are required, the Owner will provide comments and specify the date that the review stopped. The Contractor shall revise and resubmit the WPCP within 5 days of receipt of the Owner’s comments. The Owner’s review will resume when the complete WPCP is resubmitted. When the Owner approves the WPCP, the Contractor shall submit 3 copies of the approved WPCP to the Owner. The Contractor may proceed with construction activities if the Owner conditionally approves the WPCP while minor revisions are being completed.

The Contractor shall not perform work that my cause water pollution until the WPCP has been approved by the Owner. The Owner’s review and approval shall not waive any contract requirements and shall not relieve the Contractor from complying with Federal, State and local laws, regulations, and requirements.

If there is a change in construction schedule or activities, the Contractor shall prepare and amendment to the WPCP to identify additional or revised water pollution control practices. The Contractor shall submit the amendment to the Owner for review within a time agreed to by the Owner not to exceed the number of days specified for the initial submittal of the WPCP. The Owner will review the amendment within the same time allotted for the review of the initial submittal of the WPCP.

If directed by the Owner or requested in writing by the Contractor and approved by the Owner, changes to the water pollution control work specified in these special provisions will be allowed. Changes may include addition of new water pollution control practices. The Contractor shall incorporate these changes in the WPCP. No additional compensation will

be made by the Owner for modifications and/or additions to the WPCP.

The Contractor shall keep a copy of the approved WPCP at the job site. The WPCP shall be made available when requested by a representative of the Regional Water Quality Control Board, State Water Resources Control Board, United States Environmental Protection Agency, or the local storm water management agency. Requests from the public shall be directed to the Owner.

3.2.3 Implementation Requirements – The Contractor's responsibility for WPCP implementation shall continue throughout any temporary suspension of work ordered in conformance with the provisions in Standard Specifications 13-2.

If the Contractor or the Owner identifies a deficiency in the implementation of the approved WPCP, the deficiency shall be corrected immediately, unless an agreed date for correction is approved in writing by the Owner. The deficiency shall be corrected before the onset of precipitation. If the Contractor fails to correct the deficiency by the agreed date or before the onset of precipitation, the Department may correct the deficiency and deduct the cost of correcting deficiencies from payments.

3.2.3.1 Year Round – The Contractor shall monitor the National Weather Service weather forecast on a daily basis during the contract. The Contractor may use an alternative weather forecasting service if approved by the Owner. Appropriate water pollution control practices shall be in place before precipitation.

The Contractor may discontinue earthwork operations for a disturbed area for up to 21 days and the disturbed soil area will still be considered active. When earthwork operations in the disturbed area have been completed, the Contractor shall implement appropriate water pollution control practices within 15 days or before predicted precipitation, whichever occurs first.

3.2.3.2 Rainy Season – Soil stabilization and sediment control practices conforming to these special provisions shall be in place during the rainy season between October 15 and April 15.

The Contractor shall implement soil stabilization and sediment control practices a minimum of 10 days before the start of the rainy season.

3.2.4 Inspection and Maintenance – The WPCM shall inspect the water pollution control practices identified in the WPCP as follows:

A. Before a forecasted storm,
B. After precipitation that causes site runoff,
C. At 24-hour intervals during extended precipitation,
D. On a predetermined schedule, a minimum of once every 2 weeks outside of the defined rainy season, and
E. On a predetermined schedule, a minimum of once a week during the defined rainy season.

The WPCM shall oversee the maintenance of the water pollution control practices.

The WPCM shall use the Storm Water Quality Construction Site Inspection Checklist provided in the Preparation Manual or an alternative inspection checklist provided by the Owner. A copy of the completed site inspection checklist shall be submitted to the Owner within 24 hours of finishing the inspection.

3.2.5 Reporting Requirements – If the Contractor identifies discharges into surface waters or drainage systems causing or potentially causing pollution or if the project receives a written notice or order from a regulatory agency, the Contractor shall immediately inform the Owner. The Contractor shall submit a written report to the Owner within 7 days of the discharge, notice, or order. The report shall include the following information:

A. The date, time, location, and nature of the operation, type of discharge and quantity, and the cause of the notice or order.
B. The water pollution control practices used before the discharge, or before receiving the notice or order.
C. The date of placement and type of additional or altered water pollution control practices placed after the discharge or after receiving the notice or order.
D. A maintenance schedule for affected water pollution control practices.

4.0 DEWATERING

Construction dewatering in El Dorado County is regulated by the California Regional Water Quality Control Board- Central Valley Region. In May of 2013, the Central Valley Region adopted Waste Discharge Requirements Order No. r5-2013-0074 and National Pollutant Discharge Elimination System (NPDES) Permit No. CAG995001 to regulate construction dewatering. Should the Contractor need to control groundwater by dewatering, depressurization of water bearing soil and rock formations, dispose of testing/flushing water and/or dewater the pipeline for abandonments or tie-in purposes the Contractor must apply for coverage under and comply with this NPDES Permit, or any updated NPDES Permit, and all other laws and regulations having jurisdiction over construction dewatering. The Contractor is responsible for obtaining all permits from agencies with control over all dewatering matters including well installation/abandonment, water discharge, use of existing storm drains and natural water sources. Contractor can download a complete copy of Order No. r5-2013-0074 on the internet site:
http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2013-0074.pdf

The Contractor will be held responsible for any fines or penalties from regulatory agencies resulting from its dewatering system.

Before dewatering is commenced, the Contractor shall obtain acceptance of the City Representative for the method, installation, monitoring, testing, removal, discharge point(s) and other system details of the Contractor's proposed dewatering system. To that end, the Contractor is to submit to the City Representative a complete dewatering plan prepared and signed by a Professional Engineer registered in California.

*****END OF SECTION*****

SECTION 01110
SUMMARY OF WORK

1.0 THE WORK COVERED BY THE CONTRACT DOCUMENTS

A. The Work consists of construction and completion of waterline replacement along the alignment described on the Contract Drawing for the City. Main Line construction includes, but is not limited to: piping, fittings, valves, fire hydrant reconnections/replacements, connections to the existing City facilities, and all appurtenances as required. Service Line construction includes, but not limited to: the construction of service laterals starting with saddle or tee at the main a new meter, connection from the meter to the existing house or service in-tract pipe, abandonment of the existing service connection as approved by the City, repair of landscaping and private property (including and concrete) disturbed/damaged during construction, and the placement of meters and meter boxes including all appurtenances necessary to complete the service.

B. The Contractor shall provide all labor, superintendence, materials, plant, power, light, heat, fuel, water, tools, appliances, equipment, supplies, services, and other means of construction necessary or proper for performing and completing the Work specified in the Contract Documents. The Contractor shall perform and complete the work in the best manners that promote rapid and efficient construction activities consistent with safety of life and property, to the satisfaction of the Construction Manager, and in strict accordance with the Contract Documents.

C. The Contractor shall comply with all codes, ordinances, regulations, orders, and other legal requirements of public authorities having bearing on the performance of the Work.

2.0 LOCATION OF PROJECT

A. The Work is located in the City of Placerville along portions of Pardi Way, Big Cut Road and Sacramento Street (Hwy 49, Caltrans ROW) as identified in the contract drawings.

3.0 OWNER ASSIGNED SUBCONTRACTORS AND EQUIPMENT SUPPLIERS

A. Assignment of Subcontractors and Equipment Suppliers by Owner is not anticipated.

4.0 OWNER FURNISHED EQUIPMENT

A. OWNER will furnish the following products:

1. None.

5.0 ACTIVITIES BY OTHERS

A. Owner, utilities, and others may perform activities within Project area while the Work is in progress.

1. Schedule the Work with Owner, utilities, and others to minimize mutual interference.

B. Activities by others which may affect performance of work include:

1. Normal daily operation of the existing facilities by Owner's personnel.

C. Cooperate with others to minimize interference and delays.

1. When cooperation fails, submit recommendations and perform Work in coordination with work of others as directed.

6.0 COORDINATION OF WORK

A. Maintain overall coordination of the Work.

B. Obtain construction schedules from each subcontractor, and require each subcontractor to maintain schedules and coordinate modifications.

7.0 CONTRACTOR STAGING AREAS

A. The City will not provide any designated staging areas as part of the project. The Contractor is responsible for locating and obtaining any agreements necessary for all staging areas necessary to complete the project.

B. Contractor shall provide copies of all fully executed staging area agreements. All agreements shall name the City as additionally insured.

C. Contractor is responsible for all stormwater pollution control measures required for staging areas.

D. Prior to release of retention and final payment the Contractor is required to provide written proof that the staging area has been accepted by the property following project completion.

*****END OF SECTION*****

SECTION 01140
WORK RESTRICTIONS

1.0 GENERAL SEQUENCING AND CONSTRAINTS

A. Work Sequence and Constraints described hereinafter are critical events in work sequence which are presented to underscore the importance of proper sequencing, scheduling and coordination. The work sequence and constraints presented do not describe all items affecting the completion of the Work, but are intended to describe important events necessary to minimize disruption of the existing facilities.

2.0 INTERRUPTION OF WATER SUPPLY

2.1 General Requirements

A. The Work shall be bid, scheduled and constructed in such a manner as to result in the least possible disruption to the existing customers. No customer shall have their water service disrupted for more than four (4) hours a day and for no more than two (2) consecutive days or two (2) total days. Water service shall be restored to all customers by the end of each work day. Modifications that affect or may affect the water supply to the existing customers shall not be made without first obtaining written or explicit verbal permission from the City Representative.

In the event the Contractor's efforts to re-establish permanent potable water service to a property exceed the time constraints above, the contractor shall be responsible for providing a reliable potable water source to that property at no additional cost to the City or the property owner until the permanent potable water service can be re-established.

The Contractor shall provide adequate temporary pumping and piping facilities to properly clear the work areas as necessary of water and/or and sewage (in the event of a sewer service or main break). The Contractor shall clean the work areas as required to perform the work.

Shutdown and isolation of existing facilities by closing existing valves/gates, or as specifically provided for in the Contract Documents, will be performed by City personnel unless otherwise authorized by the City. All shutdown and/or isolation of existing facilities shall be scheduled a minimum of two (2) business days in advance of needing the City's assistance. The City may authorize the Contractor the flexibility of operating the City facility provided the Contractor has employed a State certified D1 operator who has demonstrated to the City Engineer and Operations manager they are competent in operating the City's facility. The Contractor shall submit the D1 operator's documentation to the City for review and approval. Note that 100% shut off may not be possible due to the age of existing valves. Contractor shall provide adequate temporary pumping, storage, piping, and disposal of such water in order to complete the work.

Prior to any shutdown all materials, fittings, supports, equipment and tools shall be

on the site and all necessary skilled labor scheduled prior to starting any connection work.

Planned utility service shutdowns to any service shall be accomplished during periods of minimum use. In some cases this will require night or weekend work, which shall be at no additional cost to the City. The Contractor shall program work so that service will be restored in the minimum possible time and shall cooperate with the City and utility owner in reducing shutdowns of the utility to a minimum. No utility shall be disconnected without prior written approval from the utility Owner and City Representative. When it is necessary to disconnect a utility, the Contractor shall give at least two (2) weeks' notice to the utility Owner and to the City Representative for approval of the proposed schedule.

The Contractor shall note that only certain structures, tie-ins and constraints are addressed in this section. All work, whether or not addressed here, shall be governed by applicable parts of this section, and schedules and procedures further submitted for approval.

2.2 Outage Submittal Requirements

A. The Contractor shall submit to the City Representative a detailed outage plan and time schedule for operations at least two (2) weeks prior to the need for outage. Note that this will require a significant effort, including meeting with each affected customer and the City inspector to discuss the planned outage time frames and their individual meter re-installation details. It will also include analyzing the number of connections on each street to manage the work within the outage limitations described in Section 2.1 above.

The detailed plan shall meet the restrictions and conditions found in the Contract Documents. The outage plans shall be coordinated with the construction schedule and shall meet the Contractor's planned method; the length of time required to complete said operation. In addition, the outage plan shall describe the Contractor's contingency plan that shall be initiated in the event that its temporary facilities fail or it becomes apparent that the time constraints described in the approved outage plan cannot be met. The contingency plan shall conform to all specified outage requirements. All costs for preparing and implementing both the outage and contingency plans shall be borne by the Contractor.

The Contractor shall attend a meeting with the City Representative and Utility Owner one (1) week before the scheduled outage to review the plan. Any changes to the plan must be approved by the City Representative prior to the outage.

2.3 Property Owner Notification

A. The Contractor shall produce, print, and distribute door hangers and/or mailers a minimum of ten (10) working days and again twenty-four (24) hours in advance of performing the water service line cross-over to the new service line. Contractor shall submit samples of the notifications to the City for approval. At a minimum, the notification shall be printed on the Contractor’s letter head, include the Contractor Foreman’s contact number, the schedule (days and hours) when the work will be performed and water service outage will occur, and possible

expectations when the new service is activated (e.g. higher pressure and need to clean facet screens). No additional compensation will be made for notification reproduction and distribution cost should the Contractor's schedule change.

2.4 Work Constraints, Sequencing and Planned System Outages Specific to this Project

A. Contractor shall provide adequate time within their schedule to apply for and obtain approval of the City and the Caltrans construction encroachment permits for work within the Contract area.

Contractor shall coordinate all work on private property with the property Owner and the City Representative. The Contractor shall be responsible for coordinating with each property Owner to determine how each property will be reconnected. Contractor shall ensure that access to the property for the Owner is maintained at all times. For properties where the landscape or structures (including concrete driveways) is disturbed during replacement or relocation of the meter and service reconnection the Contractor shall return all disturbed landscape and structures to its original condition. If any shrubs or trees are affected, every effort shall be made to preserve the existing plant and replant it. If unable to do so, the Contractor shall provide a similar plant in coordination with the property Owner and City Representative. This restoration work shall be done as the meter reconnections are made and before moving on to the next location.

All property restoration shall be done to the reasonable satisfaction of the property Owner. The contractor is responsible for providing proof of property Owner satisfaction prior to substantial completion of the project (signatures shall be provided).

Contractor shall ensure that access is provided to property Owners at all times and that every effort is made to minimize delays to property Owners. The Contractor shall coordinate their schedule to provide for continuous bus access, delivery of mail and packages and garbage pickup, as well as emergency services.

2.4 Work By Others

A. Only City personnel shall operate existing water valves unless otherwise directed.

In the event of a utility break (such as gas, electric, phone, cable, sewer or other) the Contractor shall immediately contact the utility to coordinate inspection and repair of the damaged facility. The Owner of the respective utility must be contacted and approve of any repairs made.

3.0 OTHER WORK RESTRICTIONS AND COORDINATION REQUIREMENTS

3.1 Work Hours

A. Work hours shall conform to all applicable Federal, State, County, and local laws, ordinances, and codes applicable to the work. Where any of these laws are in conflict, the more stringent requirements shall be followed.

All work shall be performed during the hours of 8:00 a.m. and 5:00 p.m., Monday through Friday. This restriction includes deliveries of materials and equipment and servicing of construction equipment on the project site. Any work outside this time frame shall be allowed only with prior written permission from the City's Representative. The actual time the City's personnel, City Representative or Engineer spend working outside this time frame shall be billed to the Contractor at the personnel's standard charge out rate. Any work designated to have a special time frame shall be so noted on the Plans and/or elsewhere in these Specifications and shall be excluded from this reimbursement.

Should the Contractor perform work outside of the standard hours, Monday through Friday without the City's written permission, the City will charge the Contractor, as a penalty, five hundred dollars ($500.00) for each infraction. This charge will be deducted from the next progress payment due Contractor.

Each and everyday the Contractor is not going to perform any work, the Contractor shall by 9:00 a.m. review the entire site, considering all situations, and leave a message at the City that the site has been reviewed and the site is secure. Should any mitigation be necessary, the Contractor should also advise the City.

3.2 Existing Utilities

A. A minimum of 48 hours in advance of excavation activities, the Contractor shall contact the following parties to ascertain and verify the existence and location of utility lines and facilities and shall coordinate all work in accordance with the information obtained from such inquiries in order to prevent damage to such lines and facilities:

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

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

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

The Engineer or his representative has endeavored to determine the existence of utilities at the work site from the records of the Owners of known utilities in the vicinity of the work. The positions of these utilities, as derived from such records,

are shown on the Plans. The service connections to these utilities may not be shown on the Plans.

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

3.3 Trench Excavation

A. In all public areas, the maximum length of trench excavation opened shall not exceed 200-feet or the distance necessary to accommodate the amount of pipe installed in a single day, whichever is greater. No trench in public areas shall be left open at night or during periods when the Contractor is not at the site of work. Trenches in these areas shall either be backfilled and temporarily paved, where applicable, or covered with steel trench plates as required by the City. Use of trench plates shall be kept to a minimum in order to allow for the subsequent continuation of work. No more than two trench plates are to be used at one time. All other areas to be backfilled on a daily basis.

3.5 Final Pavement

A. In the event that final pavement and/or the overlay cannot be performed by October and/or the City of Placerville/ Caltrans determines that temperatures are not adequate the Contractor shall provide paving the following Spring at no additional cost to the City.

*****END OF SECTION*****

SECTION 01160
FIELD ENGINEERING

1.0 DATUM

A. Vertical and horizontal datum are based on the coordinates and benchmarks shown on the Drawings or as provided by Owner prior to the start of construction. The Contractor is to locate and protect Owner furnished control points prior to starting the Work and preserve control points during construction. The Contractor shall re-establish all control points disturbed by its operations at no cost to Owner.

B. The Contractor shall establish other vertical and horizontal control from these Owner furnished reference points as required to properly layout and construct the Work. All connections shall be installed based on actual elevations of existing structures to which connections are made.

C. The Contractor's layout shall be based upon existing structures and the vertical and horizontal datum established by the Owner.

D. The Contractor shall be responsible for the preservation of all existing survey monuments or permanent bench marks. Any monuments or bench marks disturbed or destroyed by Contractor shall be referenced and replaced by a licensed land surveyor. A corner record or record of survey, as appropriate, shall be filed by the licensed land surveyor as required by the Land Surveyor's Act with the appropriate local government agencies.

2.0 QUALITY ASSURANCE

A. The Contractor's Surveyor shall be a land surveyor registered in California or civil engineer qualified and licensed in California with at least five (5) years surveying experience of similar projects.

B. Dimensions for all existing structures, piping, paving, and other nonstructural items are taking from the available information during the Owner's planning and design. The Contractor shall field verify all dimensions and conditions in advance of any construction in the area. Any discrepancy between the field survey by the Contractor and the information indicated in the Contract Documents shall be immediately brought to Contraction Manager's attention by written notification. In all questions arising as to proper location of lines and grades, the Construction Manager's decision will be final.

C. Accuracy of the Contractor's stakes, alignments and grades may be periodically and randomly checked by the Construction Manager. If requested by Construction Manager, the Contractor shall supply field labor as required, at no extra charge to Owner, to aid and assist the Construction Manager in checking location and grades of the work as set by the Contractor. This shall include postponing parts of the Work affected by survey check, moving materials and equipment that interfere with a clear line of sight between horizontal control points and the construction work. The

Contractor is not to assume that Construction Manager's check substitutes or complements the Contractor's required field quality control procedures.

D. The Contractor's registered land surveyor to check the line and grade of the slab or footing concrete forms prior to the first slab or footing pour at each structure and building.

3.0 PROJECT SURVEY REQUIREMENTS

A. The City of Placerville will contract to conduct the initial construction staking of the pipeline alignment; trench width and pavement limits; fire hydrant, ARV, and Water Sampling Station locations; meter service locations, and tie-in connections to existing system. Upon award, Contractor shall review the initial construction staking and provided additional construction staking as determine necessary and agreed to by the City. The City will conduct one (1) additional construction staking effort based on what was agreed upon.

B. The Contractor shall be solely responsible for all cost and effort to provided additional construction staking and survey should the Contractor determine it necessary to complete Contract work after the City completed their follow-up construction staking effort. The Contractor shall be responsible for protecting and preserving the construction staking and survey throughout the Contract duration; maintaining alignment, elevation, and grade, as indicated on the Drawings and as required for the proper operation and function.

3.1 SUBMITTALS

A. Contractor to furnish Construction Manager one copy of all land surveyor notes, calculations, sketches and drawings within 48 hours after completion of each survey task.

4.0 RECORD DOCUMENTS

A. The Contractor is to prepare, maintain and submit Record Documents as specified in SECTION 01770- CLOSEOUT PROCEDURES. The Contractor's land surveyor is to affix his signature and registration number to applicable record drawings certifying the accuracy of lines and grades shown.

*****END OF SECTION*****

SECTION 01200
MEASUREMENT AND PAYMENT

1.0 MEASUREMENT AND PAYMENT

1.1 General

A. Measurements of the completed work shall be in accordance with, and by instruments and devices calibrated to United States Standard Measures and the units of measurement for payment, and the limits thereof, shall be made as shown on the Plans, Specifications, Special Provisions (General Conditions), and Supplementary Conditions.

1.2 Units of Measurement

A. Measurements shall be in accordance with U.S. Standard Measures. A pound is an avoirdupois pound. A ton is 2,000 pounds avoirdupois. The unit of liquid measure is the U.S. gallon.

1.3 Certified Weights

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

1.4 Methods of Measurement

A. Materials and items of work which are to be paid for on the basis of measurement shall be measured in accordance with the method stipulated in the particular sections involved or the description of Bid Items found in 2.2 of this Section. In determining quantities, all measurements shall be made in a horizontal plane unless otherwise specified.

B. Material not used from a transporting vehicle shall be determined by the City's Representative and deducted from the certified tag.

C. When material is to be measured and paid for on a volume basis and it would be impractical to determine the volume, or when requested by the Contractor in writing and approved by the City's Representative in writing, the material will be weighed and converted to volume measurement for payment purposes. Factors for conversion from weight measurement to volume measurement will be determined by the City's Representative and shall be agreed to by the Contractor before such method of measurement of pay quantities will be adopted.

D. Full compensation for all expense involved in conforming to the above requirements for measuring and weighing materials shall be considered as included in the unit prices paid for the materials being measured or weighed and no additional allowances will be made therefore.

E. Quantities of material wasted or disposed of in a manner not called for under the Contract; or rejected loads of material, including material rejected after it has been placed by reason of failure of the Contractor to conform to the provisions of the Contract; or material not unloaded from the transporting vehicle; or material placed outside the lines indicated on the plans or given by the City's Representative; or material remaining on hand after completion of the Contract, will not be paid for and such quantities will be deducted from the final total quantities. No compensation will be allowed for hauling rejected material.

2.0 DESCRIPTION OF BID ITEMS

2.1 Summary

A. The Bid Amounts for each Bid Item will be used for comparative bid analysis. The Bid amounts will also form the basis of monthly progress payments. Each Lump Sum bid amount will undergo further breakdown as described later in this section. Unit prices for any unit price bid items will be the basis for monthly progress payment determinations and for any changes related to that Work item. Bid items are not intended to be exclusive descriptions of work categories and the Contractor shall determine and include in its pricing all materials, labor, and equipment necessary to complete each Bid Item (work phase) as shown and specified.

2.2 Description of Bid Items

ITEM 1 – MOBILIZATION/DEMOBILIZATION

A. Measurement and Payment by Lump Sum Paid on a Percent of Work Complete:

1. The lump sum bid for mobilization and demobilization shall not exceed ten percent (10%) of the total bid price.
2. The percent paid each pay request shall be coordinated and agreed to by the City Representative.

B. Mobilization shall include, but not limited to:

1. Includes insurance, bonds, permits and project management, including but not limited to, office meetings, field meetings, and overall project coordination with all parties involved with the project. Bonds and insurance will be paid in the first payment request with back-up data provided by the Contractor.
2. Moving onto the site of all equipment; furnishing temporary construction utilities (temporary power, toilets, water, fences, etc.); temporary buildings and field office trailer(s); and other construction related activity as required for the proper performance and completion of the work. This includes all cost associated with

daily mobilizations of personnel, equipment, and material to and from the various project sites.

3. Work and cost associated with preparing and having approved all submittals and schedules per the Standard Specifications, and construction photos and documentation (pre, during, post-construction).
4. The Contractor is responsible for complying with the City, County of El Dorado, and Caltrans requirements for locating and mapping all survey monuments per their respective standards. The Contractor is responsible for all coordination with the respective Agencies to satisfy any survey monument mapping requirements prior to the start of construction and at the completion of the project.
5. Includes the costs associated with obtaining all necessary permits and any associated fees necessary to perform the Contract Work. The Contractor is made aware that the following encroachment permits are to be obtained by the Contractor:
    a. City of Placerville Encroachment Permit, shall be obtained by the Contractor. Refer to Section 01090 – Regulations and Permits for applicable fees.
    b. Caltrans Construction Encroachment Permit is to be obtained by the Contractor prior to performing work within Sacramento Street (Hwy 49). The Contractor shall utilize the City's obtained Caltrans Design Encroachment Permit, **Appendix B,** as the basis of applying for the Construction Encroachment Permit. The Contractor may use or make reference to the traffic control plan included with the Design Encroachment Permit (**Appendix E**). Contractor shall be responsible for all fees, including inspection fees, associated with this permit, and for preparing and having an approved traffic control plan that covers the entire project area.

C. Demobilization shall include, but not limited to:

1. The preparation of as-built plans as described in the Special Provisions. A final hard copy and electric copy of the as-built plans are due 10-days after substantial completion notification. Final compensation will be delayed until as-built plans are submitted and accepted by the City.
2. The removal of all construction equipment, personnel, construction related materials, temporary facilities, construction markings/paint, debris, and all other construction related items. All sites shall be restored to the City's satisfaction.
3. Providing all contract close out documentation (e.g. lien releases, warranties and guarantees) in compliance with the Contract Documents.

ITEM 2 – CONSTRUCTION AREA SIGN

A. Measurement and Payment by Lump Sum

B. Work shall conform to Section 12 of the Standard Specifications and Special Provisions,

C. Includes, but not limited to, all tools, equipment, materials, and labor necessary to install and remove all construction signage and up to three project identification signs. **Appendix C** has an example of the project sign requirements. The Contractor shall have the sign and message approved by the City prior to fabrication. The required wording and lettering for the project identification sign will be provided by the City to the Contractor at the pre-construction meeting.

ITEM 3 – TRAFFIC CONTROL SYSTEM

A. Measurement and Payment by Lump Sum Paid on a Percent of Work Complete

B. Work to conform to Section 12 of the Standard Specifications and Special Provisions.

C. Includes all tools, equipment, materials and labor necessary to provide and implement an approved traffic control plan in compliance with the City and Caltrans encroachment permit standards. This includes, but not limited to, all signage, flaggers, signal control, barricades, cones, K-rail concrete barriers, and other traffic control devices and methods used in the implementation of the traffic control plan. The contractor is responsible for development, approval and implementation of a traffic control plan as well as the removal of all temporary traffic control devices.

D. If road closures are implemented this will also include all time and materials required to coordinate with the City Police and Fire Department. The Contractor is also responsible to coordinate bus service, mail delivery and garbage pick-up as applicable.

E. Contractor is made aware that night work within Caltrans Right-of-Way (Sacramento Street/Hwy 49) is a condition of the Caltrans Encroachment Permit.

ITEM 4 – WATER POLLUTION CONTROL PLAN

A. Measurement and Payment by Lump Sum Paid on a Percent of Work Complete

B. Work to conform to Section 13 of the Standard Specifications and Special Provisions.

C. Includes preparing a Water Pollution Control Plan (WPCP) acceptable by the Engineer; all tools, equipment, materials, and labor necessary to implement, maintain, and repair the WPCP and BMPs specified in the WPCP. (See Section 01090 Regulatory Requirements and Permits). This includes, but not limited to, any testing and/or reporting that may necessary to keep in compliance with the WPCP. The Contractor is required to have a registered QSP on staff or contracted who shall be named in the WPCP and certifications provided prior to the start of construction.

ITEM 5 – NEW WATER SAMPLING STATION

A. Measurement and Payment by Full Compensation by Each.

B. The water quality sampling station shall be measured per each station complete and in place as shown on the Plans.

C. The payment for each sampling station shall include furnishing all labor, materials, tools, and equipment required to install each sampling station complete and in place. This includes but not limited to furnishing the manufactured sampling station, saddle, all necessary valves, piping, riser, valve box, tracer wire, fittings, concrete and thrust block, marker post, excavation and backfill, backfill material, grading, concrete and/or asphalt restoration, painting and any other incidentals necessary to complete this item.

ITEM 6 – NEW FIRE HYDRANT

A. Measurement and Payment by Full Compensation by Each.

B. The fire hydrant assemblies shall be measured per each assembly complete and in place as shown on the Plans.

C. The payment for each fire hydrant assembly shall include full compensation for furnishing all labor, materials, and tools and equipment required to furnish and install the

fire hydrant assembly complete and in place. This shall include, but not limited to, all necessary valves, piping, hydrant, hydrant bury, riser, valve box, tracer wire, fittings, concrete and thrust block, excavation and backfill, grading, concrete and/or asphalt restoration, painting and all other incidentals necessary to complete this item.

D. Contractor is made aware that per the plans certain fire hydrants are to be replaced in the exact location as an existing fire hydrant. This bid item shall include all costs associated with installing a fire hydrant assembly, and includes any labor and materials necessary for phasing work to keep the existing fire hydrant on line until the new fire hydrant is constructed and activated.

E. This bid item does not include the abandonment of the existing fire hydrant and associated valves and piping that will be paid under separate Bid Item.

ITEM 7 – NEW AIR AND VACUUM RELEASE VALVES

A. Measurement and Payment by Full Compensation by Each.

B. The air and vacuum release valves (AVRV) shall be measured per each AVRV assembly complete and in-place as shown on the Plans.

C. The payment for each AVRV shall include full compensation for furnishing all labor, material, tools and equipment required to install the AVRV complete and in place. This shall include, but not limited to, air release valve and appurtenances, saddles, valves, pipe and fittings, concrete, bolts and washers, valve boxes, covers, excavation and backfill, painting and incidentals necessary to complete the item. This item includes all temporary and permanent pavement restoration, striping and signage associated with this bid item.

D. This bid item does not include the abandonment of existing AVRVs and associated valves and piping that will be paid under separate Bid Item.

ITEM 8 – 4" SDR35 SANITARY SEWER AT CITY CORP YARD

A. Measurement and Payment by Unit Price per Linear Foot

B. The sewer service connection shall be measured by linear foot installed from the sewer line to the location designated by the City Representative. Contractor shall base their bid on 152-ft horizontal distance from the existing sewer line into the City Yard.

C. Payment will be made at the linear foot price that shall include, but not limited to, all labor, material, and equipment, saw cutting, excavation, bedding and backfill, concrete, pipe and fittings, tracer wire, cleanout box and cover, temporary and permanent pavement and striping, and overall site restoration to the City's satisfaction to install the sewer lateral complete and in place.

D. The Contractor is made aware that the sewer service will only be stubbed into the City yard at a location to be determined by the City.

ITEM 9 – 4" CLASS 51 DIP DISCHARGE PIPE AND FLOW SWITCH AT ABANDONED TREATMENT FACILITY

A. Measurement and Payment by Lump Sum

B. The pressure relief (PR) valve discharge pipe with flow sensor switch shall be measured complete and in-place as shown in the plans and shall include, but not limited to,

approximately 125-feet of 4” Class 51 DIP with mortar lining and Field Lok (or approved equal) gaskets; flow switch with radio telemetry capability; reinforced concrete pipe supports with steel straps; fittings; spool pipe; flap gate; couplings; bolts and washers; and all incidental necessary to make a complete connection from the existing PR valve to the discharge point as shown on the Plans.

C. Contractor is made aware that the discharge pipe will be above grade, but spans across an abandoned treatment facility site that is not level and has potential debris and other obstacles that may impact the pipe alignment. Contractor shall make an assessment of the site, and shall be responsible for the removal and disposal of any such obstructions and backfill and compaction necessary to install the discharge pipe and supports.

D. Contractor shall be responsible for installing the approved flow switch and assisting the City with making the connection to the City determined power source on-site.

ITEM NOS. 10 TO 12 – DEMOLITION AND ABANDONMENT GENERAL REQUIREMENTS

A. Work shall be done in accordance with City standards and encroachment permit requirements, and in a clean and professional manner. All demolished materials described below shall be removed from the site by the Contractor and legally disposed of by the Contractor at his expense. Items identified by the City to be salvaged, shall be returned clean and delivered to the City at no additional cost to the City.

B. Contractor shall prepare an abandonment plan for City approval. The abandonment plan shall show how and where the Contractor will make temporary tie-ins or abandonments necessary to keep pipelines, fire hydrants, air/vacuum release valves, and services active during construction. The Contractor is responsible to review each abandonment location to determine the material, labor, and equipment requirements for each abandon. The Contractor is responsible for determining the final abandonment sequencing for the items below and include all costs in their bid for any temporary and permanent facilities necessary to execute the abandonment plan.

C. At all abandonment locations Contractor is responsible for the restoration of private property to the property owner's reasonable satisfaction.

ITEM 10 – MAINLINE PIPE ABANDONMENT

A. Measurement and Payment by Lump Sum Complete

B. Includes all labor, equipment, and materials necessary for the demolition, dismantling and removal of sections of the existing mainline pipe and visible appurtenances such as, but not limited to, fittings, valves, and valve boxes and risers to be abandoned. This includes, but is not limited to, all necessary fittings (spools, restraints, caps, etc.), and concrete plugs necessary for proper abandonment. Contractor is responsible for determining size and fittings required. This includes demolition and removal of pavement sections and concrete as necessary.

C. This includes the abandonment of Air Vacuum Release Valves identified on the Plans, which includes but not limited to removal of the existing AVRV, valves, piping, fittings, covers, excavation and backfill, concrete. The existing AVRV shall be abandoned a minimum 2-feet below ground. The existing AVRVs are to be abandoned with the specific mainline being abandoned.

ITEM 11 – REMOVE EXISTING FIRE HYDRANT

A. Measurement and Payment by Each.

B. Includes all labor, equipment, materials and coordination necessary to demolish, dismantle and remove each fire hydrants, buried hydrant elbows, valve, and other visible appurtenances such as, but not limited to, valve boxes and risers. This includes, but not limited to, demolition and removal of pavement sections as necessary, excavation and backfill, concrete, caps, fittings, and site restoration.

ITEM 12 – ABANDON WATER METER SERVICES

A. Measurement and Payment by Each.

B. Includes all labor, equipment, materials, and coordination necessary to complete a water service abandonment and cross-over of private water services from an existing mainline to the new mainline and installation of a hose bib and riser on dead end lines were required. This includes, but not limited to, excavation and backfill; fittings; nuts and bolts, saddles, hose bib, piping, all appurtenances necessary to properly abandon existing service connection per the abandonment details, removal and disposal of existing meter box and valves, and property restoration that includes any landscape and hardscape replacement and repairs.

ITEMS NO. 13 TO 19 MAINLINE CONSTRUCTION GENERAL REQUIREMENTS

A. Measurement and Payment for all mainline bid items shall be by Unit Price per Linear Foot (per pipe size and type as noted below).

1. Work shall conform to these Plans and Specifications, Standard Specification, Special Provision, and Caltrans and City encroachment requirements.

2. The footage of pipe to be paid for shall be the number of lineal feet of pipe in place, completed, and approved. The footage of pipe shall be measured along the centerline of the pipe from one end, or connection to existing pipe, to the other end, or connection to existing pipe, whichever is applicable. The length of the various pipe diameters shall be measured separately. All fittings including, tees, crosses, elbows, joint restraints, couplings, reducers, thrust blocks, locating wire, polyethylene wrap, etc., shall be included in the footage as typical pipe section in the pipeline being measured, as well as all labor, equipment, and materials necessary to pressure test and disinfect the new pipes. This includes, but is not limited to, potholing, trenching, sheeting and shoring, saw cutting, paving demolition and disposal, excavation and backfill, bedding, Class 2 AB backfill above the pipe bedding, compaction, all trench plating, temporary and permanent hot mix asphalt pavement restoration, and striping and signage. Striping in project area shall be thermoplastic.

3. The Contractor's bid price shall include all labor, equipment, and materials necessary to perform potholes to satisfy USA requirement and for proper installation of the new pipe, valves, tie-ins, and all other project appurtenances.

4. The temporary and final pavement restoration, which includes striping and signage, shall be included in this bid item and performed in accordance with the Standard Specifications Section 26, 39, and 43 and Caltrans and City encroachment permits. All temporary and permanent pavement shall be hot mixed asphalt (HMA). All permanent pavement restoration shall be based on 5-

inches HMA over 9-inches Class 2 AB and an approximate trench width of 4.5-feet. The City has estimated 20,000 SF of permanent pavement restoration throughout the project. The Contractor shall provide all labor, equipment, and materials necessary for transporting, placing, spreading, and maintaining the temporary and permanent pavement that shall include, but not limited to, subgrade preparation; saw cutting; compacting and smoothing; tack coat; temporary plating; quality control; removal of excess materials; and all incidental work necessary. Payment will not be made for any HMA or AB outside of the limits determined by the Engineer. No additional payment will be made for HMA depths greater than what is indicated on the plans unless otherwise directed or approved by the Engineer. Standard specification 9-1.07 – Payment Adjustment for Price Index Fluctuations apply to this bid item.

5. Contractor is made aware that water mains crossing and/or near non-potable water pipe shall be installed in compliance with Title 22 paragraph 64630, and at a minimum be constructed of DR-14 C900 PVC pipe. The cost for the high pressure class pipe, fittings, and restraints shall be factored into the bid item price.

6. The work under Mainline Construction include providing a detailed plan of worker safety and maintaining safety during construction, including conforming to the California Labor Code Sections 6700-6708, all applicable safety orders and permits, and OSHA requirements for sheeting, shoring, and bracing of excavations.

7. Tie-in connections as callout on the plans will be paid for under a separate bid item.

8. Valves and valve installation will be paid for under separate bid items.

ITEM 13 – 6" PVC C900 DR-14 PIPELINE

A. See general requirements listed above.

ITEM 14 – 12" PVC C900 DR-14 PIPELINE

A. See general requirements listed above.

ITEM 15 – 8" PVC C900 DR-18 PIPELINE

A. See general requirements listed above.

ITEM 16 – 12" PVC C900 DR-18 PIPELINE

A. See general requirements listed above.

ITEM 17 – HARD ROCK EXCAVATION

A. Measurement and Payment by the Unit Price per Cubic Yard.

B. Unit price should take into consideration savings realized from the reduction in non-rock trench excavation as paid under the pipeline and tie-in items.

C. Included in this bid item are all costs for labor, tools, equipment associated with rock excavation as defined in specification section 02221. The cubic yards indicated in the bid schedule is an allowance. Payment will be made per the actual volume of rock excavation. This item quantity may change by as much as 100% without adjustment to

the contract unit price, depending on field conditions.

ITEM 18 – 2" MAT GRIND AND PAVE (CALTRANS ROW)

A. Measurement and Payment by the Unit Price per Square Feet

1. Included in this bid item are all costs for labor, equipment, materials, and freighting necessary to complete the 2" (in depth) mat grind and permanent pavement and striping (thermoplastic striping per Caltrans Standards) from edge of pavement to road centerline (including centerline striping). The Contractor shall anticipate completing this work as night work and in accordance with the Caltrans Encroachment Permit.

2. Coordination with Caltrans for approval of materials is also included in this item. An additional 10% was added to the quantity. Payment will be made per the actual square footage of pavement placed.

ITEM 19 – 2" MAT GRIND AND PAVE (CITY STREETS)

A. Measurement and Payment by the Unit Price per Square Feet

B. Included in this bid item are all costs for labor, equipment, materials, and freighting necessary to complete the 2" (in depth) mat grind and permanent pavement and striping (thermoplastic striping per Caltrans Standards) to the limits shown on the plans and agreed to by the City. The Contractor shall anticipate completing this work during normal working house and in accordance with the City Encroachment Permit.

C. Coordination with the City for approval of materials is also included in this item. An additional 10% was added to the quantity. Payment will be made per the actual square footage of pavement placed.

ITEM NOS. 20 TO 23 – VALVE INSTALLATION

A. Measurement and Payment by Each on a Percent Complete

B. Work to conform to Section 15-2 and Section 77 of the Standard Specifications and Special Provisions.

C. This includes all labor, tools, equipment, and materials necessary to complete the installation of valves that includes, but is not limited to, fabrication, freight, and furnishing of valves; nuts and bolts; gaskets; restraint; valve operating extension; and valve riser and box.

D. This includes adjusting all valve boxes and iron to grade upon placing permanent pavement. Contractor shall provide all tools, equipment, materials, and labor necessary to make the adjustments to grade including, but not limited to, furnishing all materials; saw cutting; excavation and backfill; subgrade preparation; placing temporary pavement; constructing concrete collars; pavement removal; adjusting existing iron and utility boxes; furnishing new iron and utility boxes (if applicable); and all incidental work necessary to make the adjustment to grade. All frames, covers, boxes, grates, and manholes are permitted for reuse unless damage occurs during initial removal or unless otherwise directed by the Engineer or shown on the plans.

E. The adjustment to grade are located throughout the project in areas of new construction,

new pavement, and hardscape locations. All work shall be coordinate with the City Representative and Caltrans inspector.

F. The quantity shown on the bid schedule is an estimated number of valve installations and adjustments to grade. Payment will be made based on the actual number of valves installed by the sizes indicated. Additional payment will not be made for new frames, covers, boxes, grates, and manholes installed as a result of contractor damage during removal of existing facilities. No payment will be made for adjusting frames, covers, boxes, grates, or manholes not required as a result of the construction work.

ITEM 20 – 4" GATE VALVE

A. See general requirements listed above.

ITEM 21 – 6" GATE VALVE

A. See general requirements listed above.

ITEM 22 – 8" GATE VALVE

A. See general requirements listed above.

ITEM 23 – 12" GATE VALVE

A. See general requirements listed above.

ITEM 24 – TIE-IN TO EXISTING WATER SYSTEM

A. Measurement and Payment by Each Complete Connection.

B. The tie-in connections to existing water mains shall be measured and paid per each connection complete and in-place as shown in the Plans. The Contractor shall include all labor, equipment, and materials necessary for a complete tie-in connection. This includes, but not limited to, all excavation; saw cutting; removal of asphalt and spoils; trenching and shoring; sand and Class 2 AB backfill, piping, crosses, tees, fittings, couplings, fitting restraints and thrust blocks, polyethylene wrap, tracer wire, and all incidentals necessary to complete each tie-in connection. This item includes all temporary pavement, striping and signage, and incidental landscape, hardscape, and concrete restoration work associated with this bid item.

C. The Contractor's bid price shall include all labor, equipment, and materials necessary to perform potholes to satisfy USA requirement and for proper installation of the new pipe, valves, tie-ins, and all other project appurtenances.

D. The demolition and/or abandonment work associated with each tie-in connection and water system will be paid under separate bid item.

E. Fire hydrant assemblies; water service connections; AVRVs; and permanent pavement, striping and signage; and valve box and iron adjustment to grade will be paid under separate bid items.

F. The quantity shown in the Bid Schedule is based on the number of connections shown in the Plans and is not subject to change. Any quantity adjustments will be negotiated through the change order process.

ITEM NOS. 25 TO 31 – SERVICE LINE AND IN-TRACT PIPING GENERAL REQUIREMENTS

A. All work on private property shall include coordination with the property owner and shall minimize disturbance to the fullest extent possible.

B. Water outages shall be limited as described in the contract documents. Property owners shall be informed in advance per City standards.

C. Included in the bid items listed below is all labor, equipment and tools, and materials associated with the demolition and restoration of concrete sidewalks, curb and gutters, and access ramps. Concrete restoration work shall conform to Sections 68-2 and 73 of the Standard Specifications and Special Provisions. Included shall be, but not limited to, furnishing all materials; temporary plating; excavation and backfill; placing temporary pavement and striping; furnishing, placing, and compacting AB; preparing and compacting subgrade; grading and preparing subgrade; installing formwork; pouring; finish work; installing detectable surfaces; modifying or extending existing underdrain or irrigation facilities, and all incidental work to restore impacted concrete work.

   The concrete sidewalks and ramps being impacted are located on Sacramento Street, Gilmore Street, Chamberlain Street, and Phillips Court. Concrete restoration dimensions shall match existing, or at a minimum 6-inches concrete over 4-inches of AB whichever is more stringent.

D. The Contractor's bid price shall include all labor, equipment, and materials necessary to perform potholes to satisfy USA requirement and for proper installation of the new pipe, valves, service lines and in-tract pipe, tie-ins, and all other project appurtenances.

E. Included is all labor, equipment, and materials associated with the disinfecting and flushing of service lines and in-tract piping in accordance with the Contractor's approved disinfection and flushing plan.

F. Included is all labor, equipment, and materials associated with the restoration of landscape and hardscape impacted as a result of installing the water service line and in-tract piping.

G. Costs associated with permanent hot mixed asphalt restoration for the laterals including permanent striping shall be paid under separate bid item.

H. The abandonment of the existing service will be paid under separate bid item.

I. Contractor and Engineer shall walk the Project to confirm the final location that the meter boxes prior to start of construction.

ITEM 25 – 1-INCH TO 1 1/2-INCH WATER SERVICE TO NEW METER AND METER BOX (IN SIDEWALK) CONNECT TO EXISTING IN-TRACT PIPING

A. Measurement and Payment by Full Compensation by Each.

B. Work shall include the general service line and in-tract piping requirements listed above.

C. Water services provided and installed by the contractor where designated on the Plans shall include furnishing all labor, equipment and material to install complete 1-inch to 1½-inch service line and new meter and meter box in the sidewalk in accordance with the Plans. This includes, but not limited to, locating and exposing the existing service; saw cutting existing surface features (i.e. AC and concrete) as necessary; excavation; bedding, backfill and compaction; drain rock; all piping, corp stops, angle stops, gate valve, service saddles, polyethylene tubing, meter, meter box and cover, meter couplings, fittings necessary to make the connection to the new meter and existing in-tract piping, and temporary pavement and striping.

ITEM 26 – 1-INCH TO 1 1/2-INCH WATER SERVICE TO NEW METER AND METER BOX (UNPAVED AREA) CONNECT TO EXISTING IN-TRACT PIPING

A. Measurement and Payment by Full Compensation by Each.

B. Work shall include the general service line and in-tract piping requirements listed above.

C. Water services provided and installed by the contractor where designated on the Plans shall include furnishing all labor, equipment and material to install complete 1-inch to1½" service line and new meter and meter box in the unpaved location in accordance with the Plans. This includes, but not limited to, locating and exposing the existing service; saw cutting existing surface features (i.e. AC and concrete) as necessary; excavation; bedding, backfill and compaction; drain rock; all piping, corp stops, angle stops, gate valve, service saddles, polyethylene tubing, meter box and cover, meter, couplings, fittings necessary to make the connection to the new meter and existing in-tract piping, temporary pavement and striping.

ITEM 27 – 1-INCH TO 1 1/2-INCH WATER SERVICE AND METER BOX CONNECT TO NEW IN-TRACT PIPING

A. Measurement and Payment by Full Compensation by Each.

B. Work shall include the general service line and in-tract piping requirements listed above.

C. Water services provided and installed by the contractor where designated on the Plans shall include all labor, equipment, and material to install complete 1-inch to 1-½-inch service line from the new mainline to a new meter and meter box in accordance with the Plans. This includes, but not limited to, making the connection to the new mainline, saw cutting existing surface features (i.e. AC and concrete) as necessary; clearing and grubbing as necessary; excavation; bedding, backfill and compaction; furnishing and installing the meter, meter box; drain rock; all piping, corp stops, angle meter stop, gate valve, service saddles; polyethylene tubing; couplings; fittings necessary to make the meter service connection, and temporary pavement and striping.

D. At 764 Chamberlain Street, the bid price shall reflect the cost to place approximately 1700 sf of type 2 slurry over a portion of the driveway.

E. The cost associated with installing the in-tract line will be paid under separate bid items.

ITEM 28 – IN-TRACT PIPE, 1-INCH, < 50-100FT

A. Measurement and Payment by Full Compensation by Each

B. Work shall include the general service line and in-tract piping requirements listed above.

C. This includes all labor, equipment, and material to install complete a new 1-inch in-tract Schedule 40 PVC pipe in accordance with the plans. The new in-tract pipe shall be installed from the customer gate valve downstream of the new meter to the proposed connection point as shown in the plans and service location sheet. Included in this bid item is clearing and grubbing of the in-tract alignment; excavation; bedding, backfill, and compaction; pipe, tracer wire, fittings, and all incidentals necessary to install a complete in-tract pipe.

D. The bid quantity is estimated at this time. Changes in quantity must be approved in writing by the Engineer. Payment will be made per the actual quantity installed.

ITEM 29 – IN-TRACT PIPE, 1 1/2-INCH 100-200FT

A. Measurement and Payment by Full Compensation by Each

B. Work shall include the general service line and in-tract piping requirements listed above.

C. This includes all labor, equipment, and material to install complete a new 1.5-inch in-tract Schedule 40 PVC pipe in accordance with the plans. The new in-tract pipe shall be installed from the customer gate valve downstream of the new meter to the proposed connection point as shown in the plans and service location sheet. Included in this bid item is clearing and grubbing of the in-tract alignment; excavation; bedding, backfill, and compaction; pipe, tracer wire, fittings, and all incidentals necessary to install a complete in-tract pipe.

D. The bid quantity is estimated at this time. Changes in quantity must be approved in writing by the Engineer. Payment will be made per the actual quantity installed.

ITEM 30– IN-TRACT PIPE, 2-INCH 200-400FT

A. Measurement and Payment by Full Compensation by Each

B. Work shall include the general service line and in-tract piping requirements listed above.

C. This includes all labor, equipment, and material to install complete a new 2-inch in-tract Schedule 40 PVC pipe in accordance with the plans. The new in-tract pipe shall be installed from the customer gate valve downstream of the new meter to the proposed connection point as shown in the plans and service location sheet. Included in this bid item is clearing and grubbing of the in-tract alignment; excavation; bedding, backfill, and compaction; pipe, tracer wire, fittings, and incidentals necessary to install a complete in-tract pipe.

D. The bid quantity is estimated at this time. Changes in quantity must be approved in writing by the Engineer. Payment will be made per the actual quantity installed.

ITEM 31 – 1" PRESSURE REGULATING VALVE

A. Measurement and Payment by Full Compensation by Each

B. Work shall include the general service line and in-tract piping requirements listed above.

C. Install complete a pressure regulating valve (PRV) at residential properties as shown in the plans. This includes, but not limited to, all labor, equipment, and materials, furnishing the Cla-Val 9001 PRV or approved equal, valve(s), pipe, fittings, couplings, meter box, excavation, backfill and compaction, and tie-in to existing in-tract line.

D. The bid quantity is estimated at this time. Changes in quantity must be approved in writing by the Engineer. Payment will be made per the actual quantity installed.

ITEM 32 – SUPPLEMENTAL WORK

A. Paid by Supplemental Work Orders issued against a maximum amount shown as a Lump Sum on the Bid Schedule.

B. The amount of the expenditure under this item may vary from zero to the total amount shown on the Bid Schedule and is not guaranteed to the Contractor. The amount of expenditure under this Item may constitute the sum of several modifications.

C. Work to conform to these Contract Documents

D. This Item has been included in the Contract to cover modifications to the work necessitated by field conditions.

E. The Engineer will issue a Supplementary Work Order to the Contractor when a portion of the work being performed will be paid under this item.

3.0 DESCRIPTION OF OPTIONAL BID ITEMS

OPTIONAL ITEM 33 – 12" PVC C900 DR-18 PIPE INSTALLATION BETWEEN CHAMBERLAIN STREET AND PACIFIC STREET

A. Measurement and Payment by Unit Price per Linear Foot

1. Work shall comply with the general requirements of Mainline Construction above and Bid Item 12.

2. This includes the all temporary and permanent pavement restoration, striping and signage. All temporary and permanent pavement shall be hot mixed asphalt (HMA). All permanent pavement restoration shall be based on 5-inches HMA over 9-inches Class 2 AB and an approximate trench width of 4.5-feet. The City has estimated 2,000 SF of permanent pavement restoration along this section of Sacramento Street.

3. The abandonment of existing mainlines will be paid under separate bid item.

4. Water service abandonments and new connection between new main and existing service will be paid under separate bid items.

5. The abandonment of the existing fire hydrant assemblies will be paid under separate bid item.

OPTIONAL ITEM 34 – NEW WATER SAMPLING STATION

A. Measurement and Payment by Each Complete

B. Work shall comply with Bid Item 5 above.

OPTIONAL ITEM 35 – NEW FIRE HYDRANT

A. Measurement and Payment by Full Compensation by Each.

B. Work shall comply with Bid Item 6 above.

OPTIONAL ITEM 36 – 12" GATE VALVES

A. Measurement and Payment by Each on a Percent Complete

B. Work shall comply with the general requirements of Bid Item 20 -23 above.

C. The bid quantity is estimated at this time. Changes in quantity must be approved in writing by the Engineer. Payment will be made per the actual quantity installed.

OPTIONAL ITEM 37 – TIE-IN TO EXISTING WATER SYSTEM

A. Measurement and Payment by Each Complete Connection.

B. Work shall comply with the requirements of Bid Item 24 above.

OPTIONAL ITEM 38 – 1-INCH TO 1 1/2-INCH WATER SERVICE TO NEW METER AND METER BOX (IN SIDEWALK) CONNECT TO EXISTING IN-TRACT PIPING

A. Measurement and Payment by Full Compensation by Each.

B. Work shall comply with the general requirements of Bid Item 25-31 above and Bid Item 25.

C. Restoration of sidewalks, ramps, and curb and gutter will be paid under this bid item.

D. The bid quantity is estimated at this time. Changes in quantity must be approved in writing by the Engineer. Payment will be made per the actual quantity installed.

OPTIONAL ITEM 39 – MAINLINE PIPE ABANDONMENT

A. Measurement and Payment by Lump Sum Complete.

B. Work shall comply with the requirements of Bid Item 10 above.

OPTIONAL ITEM 40 – REMOVE EXISTING FIRE HYDRANT

A. Measurement and Payment by Each Complete.

B. Work shall comply with the requirements of Bid Item 11 above.

OPTIONAL ITEM 41 – ABANDON WATER METER SERVICES

A. Measurement and Payment by Each Complete.

B. Work shall comply with the requirements of Bid Item 12 above.

OPTIONAL ITEM 42– 2" MAT GRIND AND PAVE (CALTRANS ROW)

A. Measurement and Payment by the Unit Price per Square Feet

B. Work shall comply with the requirements of Bid Item 18 above.

4.0 CONTRACTOR'S COST BREAKDOWN

A. For work to be performed for a lump sum amount, the Contractor shall submit a cost breakdown to the City Representative prior to the first payment and within ten (10) days after Notice to Proceed. The cost breakdown, as agreed upon by the Contractor and the City Representative, shall be used for preparing future estimates for partial payments to the Contractor, and shall list the major items of work with a price fairly apportioned to each item.

The cost breakdown shall be generally in the same format as the Contract specifications divisions and subdivisions, with major items of work listed individually. The cost breakdown shall be by structure, civil, landscaping, or other logical division of work. The cost breakdown for architectural, structural, mechanical, and electrical work shall include separate items for identifiable portions of the structures. The cost breakdown shall include separate allowances for any testing and startup work required. Measurable approximate quantities of work performed by the Contractor or its subcontractors shall be provided. For quantities that are the sum total of several individual quantities, backup summaries shall be provided which list the individual descriptions and quantities. These summaries then will be used to determine the quantities of work in place in subsequent progress payment requests.

The above is a statement of the intent of the Contract Documents to provide a high level of detail, acceptable to the City Representative, to allow a fair and reasonable estimate to be made of the value of work installed. The detail of the cost breakdown must be sufficient to provide timely processing of the monthly progress payment request.

The cost breakdown will be subject to the approval of the City Representative, and upon request, the Contractor shall substantiate the price for any or all items and provide additional level of detail, including quantities of work. The cost breakdown shall be sufficiently detailed to permit its use by the City Representative as one of the bases for evaluating requests for payments. The City Representative shall be the sole judge of the adequacy of the cost breakdown.

The cost breakdown shall be solely used to determine progress payments. The cost breakdown shall not be considered in determining payment or credit for additional or deleted work.

*****END OF SECTION*****

SECTION 01312
PROJECT MEETINGS

1.0 GENERAL

A. Project meetings and conferences are an important administration and communication requirement of all project participants. Meetings will address issues related to the Work, review and coordinate progress of the Work and other matters of common interest to project participants. This section describes the requirements for calling for and conducting meetings for the Work. Meeting and conference locations and qualified participants will be determined by the Construction Manager and the Contractor based on the meeting agenda topics.

B. Minutes will be taken by the Construction Manager for the Pre-Construction Conference(s) and all Progress and Coordination Meetings hereinafter described. Copies of meeting minutes will be distributed to all attendees within five (5) days after meeting. Attendees will have three (3) days to submit comments or additions to minutes received from Construction Manager. Minutes will constitute final documentation of meeting discussion topics, results and action items. Meetings may be recorded by the Construction Manager for accuracy of meeting minutes.

2.0 PRECONSTRUCTION CONFERENCE

A. Upon issuance of Notice to Proceed, or earlier when mutually agreeable, Construction Manager will schedule a preconstruction conference and organizational meeting at a suitable conference room at the Owner's offices or other suitable location. More than one preconstruction conference may be required if the Owner and Contractor deem it is in the best interest of the project to do so. Construction Manager will preside at conference.

B. Attending the Preconstruction Conference: Contractor's Project Manager, Contractor's Superintendent(s), Owner, Construction Manager, Engineer, Owner's subconsultants, and representatives of utilities, major subcontractors and others involved in performance of the Work, and others necessary to agenda.

C. The Construction Manager, in concert with the Owner, Engineer and Contractor, will prepare an agenda for discussion of significant items relative to contract requirements, procedures, coordination and construction. Items on the agenda will include the Contractor's field organization, Owner's organizational chart of representatives/consultants, contract administration procedures, Contractor's preliminary schedule, submittals, progress payments, change order procedures, security, testing, safety and permit requirements, inspection procedures, and other project related matters.

D. Unless previously submitted to Engineer, Contractor shall bring to the conference a preliminary schedule for each of the following:

1. Progress Schedule.
2. Procurement Schedule.
3. Schedule of Values for progress payment purposes.
4. Schedule of Shop Drawings and other submittals.

E. The purpose of the conference is to designate responsible personnel and establish a

working relationship. Matters requiring coordination will be discussed and procedures for handling such matters established. The agenda will include, but not be limited to:

1. Contractor's preliminary schedules.
2. Transmittal, review, and distribution of Contractor's submittals.
3. Processing Applications for Payment.
4. Maintaining record documents.
5. Critical Work sequencing.
6. Field decisions and Change Orders.
7. Use of premises, office and storage areas, security, housekeeping, and
8. Owner's needs.
9. Major equipment deliveries and priorities.
10. Contractor's assignments for safety and first aid.

3.0 PROGRESS AND COORDINATION MEETINGS

A. The Construction Manager shall schedule, arrange and conduct progress and coordination meetings. These meetings shall be conducted not more than once per week and shall be attended by the Contractor's superintendent and representatives of all subcontractors, utilities, and others that are active in the execution of the Work or involved in an important progress meeting agenda item. Upon approval of the Construction Manager, meeting sub-tier level participants with a minor role at that juncture in the project, may participate in progress meetings by speakerphone if there are suitable facilities to do so.

B. The Agenda of each progress meeting will include the review, correction (if necessary) and approval of minutes of the previous progress meeting; review items of significance that could affect project progress and cost; review status of previous action items and determine what new action items are necessary to insure the project stays on schedule; review quality control; and review Contractor’s three (3) week schedule provided in accordance with other sections of these Specifications. The Contractor will distribute a copy of and present the submittal, RFI, Submittal, potential change logs at each progress and coordination meeting.

C. Progress and coordination meetings will be held at the project site, Owner’s offices or another mutually agreeable place.

4.0 PROGRESS SCHEDULE AND PROGRESS BILLING MEETINGS

A. Each month the Contractor shall attend a progress schedule and progress payment meeting with the Construction Manager. At this meeting, the Construction Manager and Contractor are to review the percentage of the work completed and establish an amount to be requested in the Application for Payment. The meeting date shall be scheduled in accordance with the Owner’s deadline for submittal of Progress Pay Estimates. Following review of the proposed billing, the Contractor will prepare an Application of Payment and submit to the Construction Manager for final review and processing.

B. These meetings will also discuss time impact evaluations for change orders and time extension requests, actual and anticipated schedule activity sequence/duration changes, and Contractor delays. These meetings are considered a critical component of the overall monthly schedule update submittal and Contractor shall have appropriate personnel attend.

C. The Construction Manager can also call for special progress schedule meetings should there be schedule revisions that necessitate such a meeting.

5.0 SUBMITTAL MEETINGS

A. When required in the individual technical specification, or if requested by the Contractor or the Construction Manager, a meeting regarding a required submittal will be held to facilitate the timeliness of the submittal preparation and review process. This meeting will convene at a mutually agreeable place. The party responsible for preparing the submittal shall be in attendance along with the Engineer.

6.0 QUALITY ASSURANCE MEETINGS

A. The Contractor or the Construction Manager may request a meeting prior to the start of a particular phase of the project to discuss how the Work shall be accomplished in accordance with the quality requirements of the contract documents, codes, permits and industry standards. All required inspection and testing applicable to this phase of the project will be discussed in detail. The Contractor shall require that all management and quality control personnel employed by the Contractor for this phase of the project are in attendance. Quality assurance meetings might be requested for such phases of the project as site work, concrete, piping, mechanical, specialty subtrades and electrical/instrumentation.

7.0 PRE-INSTALLATION MEETINGS

A. When required in the individual specification, or if requested by the Contractor or Construction Manager, a pre-installation meeting will be held to review conditions of the installation, installation procedures and coordination with related work. This meeting should take place at least seven (7) days in advance of installation or as required in the technical specifications. Meeting is to be attended by all parties involved in the installation.

8.0 PRE-SUBSTANTIAL COMPLETION MEETING

A. Thirty (30) days prior to the estimated substantial completion, the Construction Manager, Owner, Engineer, Contractor and appropriate subcontractors will meet to review maintenance manuals, guarantees, closeout submittals, bonds, and service contracts for materials and equipment.

9.0 SPECIAL MEETINGS

A. Any time during progress of the Work, the Owner and the Construction Manager shall have the authority to require the Contractor and any subcontractor, suppliers, or service providers to attend job-site conferences on matters which require immediate or special attention. Any notice of such conference shall be duly observed and complied with by the Contractor and subcontractors, suppliers, or service providers without extra cost to Owner.

10.0 POST CONSTRUCTION GUARANTY PERIOD MEETING

A. The Contractor shall meet with the Owner, Construction Manager and Engineer approximately eleven (11) months after date of Substantial Completion to inspect the Work. Meeting will be arranged by the Owner at least seven (7) days before meeting. The Contractor will require attendance of its Project Manager/Superintendent, appropriate manufactures and appropriate subcontractors.

*****END OF SECTION*****

SECTION 01325
PROJECT SCHEDULES AND REPORTS

1.0 GENERAL

The requirements for project schedules and reports are included to assure adequate planning and execution of the work and to assist the Construction Manager in appraising the reasonableness of the proposed schedule and evaluating the progress of the work.

2.0 CONSTRUCTION SCHEDULE

2.1 The schedule shall be submitted within ten (10) days of Notice to Proceed and favorably reviewed by the Construction Manager before the first partial payment can be made.

2.2 Baseline Schedule

The Contractor shall submit the schedule based on either the bar chart method or the Critical Path Method (CPM). The schedule shall indicate preceding activity relationships and/or restraints where applicable and a controlling path shall be indicated. The schedule shall be time scaled and shall be drafted to show a continuous flow from left to right. The construction schedule shall clearly show the sequence of construction operations and specifically list:

A. The start and completion dates of all work items.

B. The dates of submittals, procurement, delivery, installation and completion of each major equipment and material requirement.

C. Progress milestone events or other significant stages of completion, as defined in Section 00800-1.1, **Time Allowed for Completion,** and Section 01140, **WORK RESTRICTIONS.**

D. The lead time required for testing, inspection and other procedures required prior to acceptance of the work.

Activities shall be no longer than ten (10) workdays, except for submittals and delivery items. If an activity takes longer, it shall be broken into appropriate segments of work for measurement of progress. This limitation may be waived, upon approval of the Construction Manager, for repetitious activities of longer durations for which progress can be easily monitored.

2.3 Float

"Total Float" or "Float" shall be defined as the difference between the early finish and late finish dates for an activity.

On the schedule delineate the specified Contract duration and identify the planned completion of the Work as the final milestone. The time period between these two dates, if any, shall be considered contract float.

Float in any activity, milestone completion date or Contract completion date shall be considered a resource available to both the Owner and the Contractor. Neither the Owner nor the

Contractor has ownership of the float. Float is for the benefit of the Project. Acceptance of the Contractor's Baseline Schedule, monthly updates or revised schedule, when based on less time than the maximum time allowed for milestone(s) or Contract completion does not serve to change any Contract duration, nor serve as a waiver of the Contractor's nor the Owner's right to utilize the full amount of time specified in the Contract, unless so modified in a Contract Change Order.

2.4 **Reports** – One of the following reports shall be submitted as the Baseline Schedule:

A. Bar Chart: A report which lists each activity description, early start and finish dates, and all preceding and succeeding activities. The report shall conspicuously indicate all activities on the controlling path.

B. CPM Schedule: A CPM network report sorted by activity number which lists each activity description, early start and finish dates, preceding and succeeding activities and restraints, including lead/lag durations. The report shall show the critical path.
- CPM network report sorted by total float.
- CPM network report sorted by early start.

3.0 WEATHER CONDITIONS

Seasonal weather conditions shall be considered in the planning and scheduling of work activity durations influenced by high or low ambient temperatures or precipitation to ensure the completion of the Work within the Contract Time. No time extensions will be granted for the Contractor's failure to take into account such weather conditions for the location of the Work and for the period of time in which the Work is to be accomplished.

The expected loss of working days specified in the Supplementary General Conditions, Section 00800-1.3, **Weather Days**, shall be included in a separate identifiable critical activity labeled "Weather Days Allowance" to be included as the last critical activity of the project schedule. When weather days are experienced, and are approved as such by the Construction Manager, the Contractor shall either:

A. Increase the duration of the current critical activity(ies) by the number of weather days experienced, or

B. Add a critical activity to the schedule to reflect the occurrence of the weather day(s).

The duration of the weather day allowance activity shall be reduced as weather days are experienced and included in the schedule. Any remaining weather days in the weather day allowance activity at the completion of the project shall be considered as float and shall not be for the exclusive use or benefit of either the Owner or Contractor.

4.0 UPDATES

4.1 Submittal Period

The Contractor shall submit at monthly intervals a report of the actual construction progress. Each monthly report shall cover a period of approximately thirty (30) days. The monthly reports

shall be submitted within ten (10) days of the end of the reporting period. The end of the reporting period shall be as agreed upon by the Construction Manager and Contractor.

Produce and provide one (1) complete set each of time-scaled logic diagrams and bar chart on 22-inch by 34-inch sheets. The network diagram shall be clear and legible. Critical activities shall be indicated in red color. Progress bars shall be conspicuously identified by color other than red, black or white.

4.1.1 All Monthly Updates - All monthly updates shall include as a minimum:

A. Reports - Provide the reports defined in Section 01310-3.3.4, Reports.

B. Narrative and Tabular Report - The report shall show the activities or portions of activities completed during the reporting period. The report shall state the percentage of the work actually completed and scheduled, the remaining duration, and the progress along the critical path in terms of days ahead or behind the allowable dates as of the report date. Any changes made by the Contractor to the CPM schedule, including activity numbers, durations, constraints and activity descriptions, shall be listed in a detailed report which describes the reason for each.

C. Activity Numbers and Descriptions – New activity numbers and descriptions may be added where required to further define the work and as approved by the Construction Manager. Activities may be deleted if the applicable work has not been performed and is deleted from the Work and as approved by the Construction Manager.

4.1.2 Delayed Schedule Updates - If, in the opinion of the Construction Manager, the project is behind schedule, the Contractor shall submit a narrative report with each updated analysis which shall include but not be limited to, a description of current and anticipated problem areas, delaying factors and their impact, and an explanation of corrective actions taken or proposed.

4.2 Schedule Review

Once each month, on a date mutually agreed upon, but no later than ten (10) days after the submittal of the monthly update specified herein, a jobsite meeting will be held to review the CPM Schedule, job progress and the monthly update, or the Construction Manager will provide written comments on the monthly update.

5.0 TIME IMPACT ANALYSES

When change orders are initiated, delays are experienced, or the Contractor desires to revise the schedule logic, the Contractor shall submit to the Construction Manager a written Time Impact Analysis illustrating the influence of each change, delay, or Contractor request on the current contract schedule completion date.

6.0 WEEKLY ACTIVITIES PLAN

On the last working day of every week the Contractor shall submit to the Construction Manager the Contractor's Plan of Activities for the next three weeks. The Plan of Activities shall describe

the activity and location of the activity and include the activity number as provided in the CPM Schedule.

7.0 CONTRACTOR'S DAILY REPORTS

The Contractor shall maintain daily job reports recording all significant activity on the project, including number of workers on site, active construction equipment used, notable deliveries, work activities, delays, interruptions or any problems encountered. If there is no work performed on any given day, the Contractor shall note the reasons for no work and submit a daily report to the Construction Manager on those days also. Failure to stay current with daily reporting will be just cause for the Owner not processing a progress payment until reports are submitted.

***** END OF SECTION *****

SECTION 01330
SUBMITTAL PROCEDURES

1.0 GENERAL

A. Where required by the Contract Documents, the Contractor shall submit descriptive information that will enable determination of whether the Contractor's proposed materials, equipment, or methods of work are in general conformance to the design concept and in compliance with the Contract Documents. The information to be submitted shall consist of drawings, specifications, descriptive data, certificates, samples, test results and such other information, all as specifically required in the specifications. In some instances, specified submittal information describes some, but not all, features of the material equipment, or method of work. Features not requiring submittals shall be as specified.

B. Submittal review shall be only for general conformance with the design concept and general compliance with the information given in the contract documents. It shall not include review of quantities, dimensions, weights or gages, fabrication processes, construction safety precautions, all of which are the sole responsibility of the Contractor. Review of a specific item shall not indicate acceptance of an assembly of which the item is a component. The Construction Manager and/or Engineer shall not be required to review and shall not be responsible for any deviations from the contract documents not clearly noted by the Contractor, nor shall the Construction Manager and/or Engineer be required to review partial submissions or those for which submissions for correlated items have not been received.

C. The Contractor may authorize material or equipment suppliers to deal directly with the Construction Manager with regard to such submittals; however, ultimate responsibility for the accuracy and completeness of the information contained in the submittal shall remain with the Contractor.

2.0 CONTRACTOR RESPONSIBILITES

A. The Contractor shall be responsible for the accuracy and completeness of the information contained in each submittal and shall assure that the materials and equipment incorporated into the Work, or the methods of performing the Work shall be as described in the accepted submittals.

B. The Contractor shall verify that all features of all products conform to the specified requirements. Submittal documents shall be clearly edited to indicate only those items, models, or series of equipment that are being submitted for review. All extraneous materials shall be crossed out or otherwise obliterated.

C. The Contractor shall ensure that there is no conflict with other submittals and notify the Construction Manager in each case where his submittal may affect the work of another contractor or the Owner. The Contractor shall coordinate submittals among its subcontractors and suppliers including those submittals complying with unit responsibility requirements specified in applicable technical sections.

D. The Contractor shall coordinate submittals with the work so that work will not be delayed.

He shall coordinate and schedule different categories of submittals, so that one will not be delayed for lack of coordination with another. No extension of time will be allowed because of failure to properly schedule submittals. The Contractor shall not proceed with work related to a submittal until the submittal process is complete. This requires that submittals for review and comment shall be returned to the Contractor stamped "No Exceptions Taken" or "Make Corrections Noted." The Contractor assumes the risk of expense and delays when proceeding with work that hasn't met this requirement.

E. The Contractor shall certify on each submittal document that it has reviewed the submittal, verified field conditions, and complied with the contract documents.

F. The Contractor shall include a copy of the applicable specification section, with addendums and all referenced sections included with each paragraph check-marked to indicate specification compliance or marked to indicate requested deviations from the specification requirements. Check Marks (√) shall denote full compliance with a paragraph as a whole. If deviations from the specifications are indicated, and therefore requested by the Contractor, each deviation shall be underlined and denoted by a number in the margin to the right of the identified paragraph. The remaining portions of the paragraph not underlined will signify compliance on the part of the Contractor with the specifications. The submittal shall be accompanied by a detailed, written justification for each deviation. Failure to include a copy of the marked-up specification sections, along with justification(s) for any requested deviations to the specification requirements, with the submittal shall be sufficient cause for rejection of the entire submittal.

3.0 SUBMITTAL AND MATERIAL LIST

A. Within fifteen (15) days after the Notice to Proceed, and prior to the submission of the initial shop drawings, the Contractor shall submit a draft Master Submittal List of all required submittals to the Construction Manager for favorable review. The Master Submittal List shall include a description of each item, Specification reference and the anticipated submittal date. The List shall include all items of equipment and materials for architectural, structural, mechanical, piping, electrical, heating and ventilating, equipment piping, and plumbing work; and the names of manufacturers with whom purchase orders have been placed. Items on the List shall be arranged in the same order as in these Specifications, and shall contain sufficient data to identify precisely the items of material and equipment the Contractor proposes to furnish. The List shall reference the applicable Specification section or Drawing. After the submission is favorably reviewed and returned to the Contractor by the Construction Manager, it shall become the basis for the submission of detailed manufacturer's drawings, catalog cuts, curves, diagrams, schematics, data, and information on each separate item for review. No work shall proceed on any item until it has been submitted and favorably reviewed. An incomplete submittal list is not a basis for avoiding a submittal required by the specifications.

B. Contractor shall submit a cash flow projection for the complete project along with their overall project schedule. Cash flow projections shall be updated with each monthly pay submittal at a minimum.

4.0 DEFINITIONS

A. Manufacturer's Instructions: Instructions, stipulations, directions, and recommendations issued in printed form by the manufacturer of a product addressing handling, installation, erection, and application of the product; Manufacturers Instructions are not prepared especially for the Work.

B. Shop Drawings: Drawings, diagrams, schedules, and other data specially prepared for the Work to illustrate some portion of the Work. Shop drawings include, but not necessarily be limited to:

1. Custom-prepared data such as fabrication or erection/installation (working) drawings.

2. Scheduled information, setting diagrams, actual shop work manufacturing instructions, custom templates, special wiring diagrams, coordination drawings, individual system or equipment inspection and test reports including performance curves and certifications, as applicable to the Work.

C. Product Data: Illustrations, standard schedules, performance charts, brochures, diagrams and other information to illustrate materials or equipment for some portion of the Work.

1. Product data as specified in individual Sections, and as applicable to the Work shall include, but not necessarily be limited to:

a. Standard prepared data for manufactured products (sometimes referred to as catalog data or "cuts").
b. Manufacturer's product specifications.
c. Installation instructions.
d. Availability of colors and patterns.
e. Manufacturer's printed statements of compliance and applicability.
f. Roughing-in diagrams and templates.
g. Product photographs.
h. Standard wiring diagrams.
i. Performance curves and operational-range diagrams.
j. Production or quality control inspection and test reports and certifications, and mill reports.
k. Operating and maintenance instructions and recommended spare parts listing and printed product warranties.

D. Samples: Physical examples which illustrate materials, equipment, or workmanship and establish standards by which the Work will be judged. Samples specified in individual Sections, include, but are not necessarily limited to, physical examples of the work such as sections of manufactured or fabricated work, small cuts or containers of materials, complete units of repetitively-used products, color/texture/pattern swatches and range sets, specimens of coordination of visual effect, graphic symbols and units of work to be used by the Engineer or others for independent inspection and testing, as applicable to the Work.

5.0 PROCEDURES

A. The Contractor shall deliver submittals to the Construction Manager at the address provided to Contractor by the Construction Manager. The Contractor is required to allow adequate time in its project schedule for the preparation and review of the submittal to ensure that the submittal will serve its intended purpose. The Contractor is encouraged to mark the submittal “high”, “normal” or “low” priority to assist the reviewer in prioritizing the submittal reviews during periods of high volume of submissions.

B. Transmittal Form - Unless otherwise specified, submittals regarding material and equipment shall be accompanied by a transmittal form. A separate transmittal form shall be used for each specific item, class of material, equipment, and items specified in separate, discrete sections, for which the submittal is required. Submittal documents common to more than one piece of equipment shall be identified with all the appropriate equipment numbers. Submittals for various items shall be made with a single form when the items taken together constitute a manufacturer's package or are so functionally related that expediency indicates checking or review of the group or package as a whole. The specification section and subsection or paragraph to which the submittal is related shall be indicated on the transmittal form.

C Assign each submittal a unique number. Clearly note the submittal numbers on the transmittal. Number each submittal with the identifying specification section, followed by a sequential number that represents the Contractor’s assigned number of 01, 02, et cetera. Resubmittals shall be numbered by adding a dot (.) and 01, 02, 03, et cetera to the original submittal number, depending on the number of times the submittal has been resubmitted. For example: if Submittal 03300-01 requires a resubmittal, the first resubmittal will bear the designation “03300-01.01” and the second resubmittal will bear the designation “03300-01.02” and so on.

D. Submit specified number of copies of submittal. Should the Contractor require more returned copies of any particular submittal, the Contractor shall furnish an equal greater number of copies to the Construction Manager than is specified.

E. Provide or furnish products and execute the Work in accordance with accepted submittals, unless in conflict with Contract Documents.

F. Deviations From The Contract – If the submittals show any deviations from the Contract requirements, the Contractor shall submit with the submittal submission a separate written description of such deviations and the reasons therefore. If the Owner accepts such deviation, the Owner shall issue an appropriate Contract Change Order, except that, if the deviation is minor, or does not involve a change in price or in time of performance, a Change Order need not be issued. If any deviations from the Contract requirements are not noted on the submittal, the review of the shop drawing shall not constitute acceptance of such deviations.

6.0 SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

A. Submit Shop Drawings, Product Data, Samples, and other pertinent information

in sufficient detail to show compliance with specified requirements.

B. Check, verify, and revise submittals as necessary to bring them into conformance with Contract Documents and actual field conditions.

1. Determine and verify quantities, dimensions, specified design and performance criteria, materials, catalog numbers, and similar data.

2. Coordinate submittal with other submittals and with the requirements of the Contract Documents.

C. Field Verification: Prior to submitting shop drawings, Contractor shall have determined and verified all field measurements, elevations, potential conflicts, quantities and dimensions. This verification may require potholing.

D. After completion of checking, verification, and revising; stamp, sign and date submittals indicating review and approval; and submit to Construction Manager.

1. Stamp and signature indicates Contractor has satisfied shop drawing review responsibilities and constitutes Contractor's written approval of shop drawing.

2. Shop drawings without Contractor's written approval will be returned for resubmission.

E. Shop Drawings: Submit eight (8) copies. Three (3) will be returned with reviewer's comments and stamp.

F. Product Data and Manufacturer's Instructions: Submit four (4) copies. Excise or cross out non-applicable information and clearly mark applicable information with citations to and terminology consistent with Contract Documents.

1. One (1) copy will be returned with reviewer's comments and stamp.

G. Samples: Submit two (2) samples labeled with reference to applicable Contract Documents. Label will be returned with reviewer's selection when appropriate, comments and stamp. Samples will not be returned unless return is requested in writing and additional sample is submitted.

H. Special Samples: Submit one (1) sample labeled with reference to applicable Contract Documents. Sample and one (1) label will be returned for installation in the Work.

7.0 MANUFACTURER'S INSTRUCTIONS

A. Submit manufacturer's instructions whenever made available by manufacturers and when installation, erection, or application in accordance with manufacturer's instructions is required by the Specifications. Submit manufacturer's instructions prior to installation, erection, or application of equipment and other project components. Submit manufacturer's instructions in accordance with requirements for Product Data.

8.0 ENGINEER'S REVIEW

A. The Engineer's review of submittals shall not release Contractor from Contractor's responsibility for performance of requirements of Contract Documents. Neither shall Engineer's review release Contractor from fulfilling purpose of installation nor from Contractor's liability to replace defective work. The Contractor shall not consider submittals as Contract Documents. The purpose of submittals is to demonstrate how Contractor intends to conform to the Contract Documents and design concepts. Engineer will be entitled to rely upon the accuracy or completeness of designs, calculations, or certifications made by licensed professionals accompanying a particular submittal whether or not a stamp or seal is required by Contract Documents or Laws and Regulations.

B. The Engineer's review of shop drawings, samples, or test procedures will be only for conformance with design concepts and for compliance with information given in Contract Documents. The Engineer's review does not extend to:

1) Accuracy of dimensions, quantities, or performance of equipment and systems designed by Contractor.
2) Contractor's means, methods, techniques, sequences, or procedures except when specified, indicated on the Drawings, or required by Contract Documents.
3) Safety precautions or programs related to safety which shall remain the sole responsibility of the Contractor.

C. Except as may be provided in subsequent specifications; a submittal will be returned within ten (10) working days. When a submittal cannot be returned within that period, Construction Manager will, within a reasonable time after receipt of the submittal, give notice of the date by which that submittal will be returned. The returned submittal shall indicate on the following actions:

1) If the review indicates that the material, equipment or work method complies with the project manual, submittal copies will be marked "NO EXCEPTIONS TAKEN." In this event, the Contractor may begin to implement the work method or incorporate the material or equipment covered by the submittal.

2) If the review indicates limited corrections are required, copies will be marked "MAKE CORRECTIONS NOTED." The Contractor may begin implementing the work method or incorporating the material and equipment covered by the submittal in accordance with the noted corrections. Where submittal information will be incorporated in O&M data, a corrected copy shall be provided.

3) If the review reveals that the submittal is insufficient or contains incorrect data, copies will be marked "AMEND AND RESUBMIT." Except at its own risk, the Contractor shall not undertake work covered by this submittal until it has been revised, resubmitted and returned marked either "NO EXCEPTIONS TAKEN" or "MAKE CORRECTIONS NOTED."

4) If the review indicates that the material, equipment, or work method does not comply with the project manual, copies of the submittal will be marked

"REJECTED - SEE REMARKS." Submittals with deviations that have not been identified clearly may be rejected. Except at its own risk, the Contractor shall not undertake the work covered by such submittals until a new submittal is made and returned marked either "NO EXCEPTIONS TAKEN" or "MAKE CORRECTIONS NOTED."

5) If the submittal information does not require a review by the Engineer, copies of the submittal will be marked “Review not Required” and will be returned without review.

9.0 REVIEW COSTS

A. The Owner’s cost for review of submittals for the same proposed materials, equipment or work shall be apportioned as follows:

1) The cost of review of the initial submittal and the first revised submittal will be borne by the Owner.

2) The cost to review all additional revised submittals after the first revised submittal will be charged to the Contractor. The cost of review shall include, without limitation, administrative, design and engineering activities directly related to review of submittals.

3) If a submittal is approved and the Contractor elects to submit an alternate item for review for the same application, the Contractor shall be responsible for the review costs for the alternate submittal. The cost of review shall include, without limitation, administrative, design and engineering activities directly related to review of submittals.

10.0 SUBMITTALS FOR INFORMATION OR RECORD ONLY

A. Where specified, the Contractor shall furnish five (5) copies of informational submittals to the Construction Manager. Incomplete or inadequate product data, test/inspection reports will be returned to the Contractor for re-submittal. The Contractor is to pay for all mill and factory tests that are required in the Contract Documents. No copies of informational submittals will be returned unless they are found to be incomplete or inadequate.

11.0 SUBSTITUTES OR “OR EQUAL” ITEMS AND PRODUCT OPTIONS

A. Whenever materials or equipment are specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the naming of the item is intended to establish the type, function, and quality required. Unless the name designated a “sole source” and/or is followed by words indicating that no substitution is permitted, materials, or equipment of other Suppliers may be accepted by Engineer if sufficient information is submitted by Contractor to allow Engineer to determine that the material or equipment proposed is equivalent or equal to that named.

B. The procedure for review by Engineer will include the following as may also be

supplemented in the Contract Documents. Requirements for review of substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor. If Contractor wishes to furnish or use a substitute item of material or equipment, Contractor shall make written application to the Construction Manager for acceptance thereof, certifying that the proposed substitute will perform adequately the functions and achieve the results called for by the general design, be similar and of equal substance to that specified and be suited to the same use as that specified. The application will state that the evaluation and acceptance of the proposed substitute will not prejudice Contractor's achievement of Substantial Completion on time, whether or not acceptance of the substitute for use in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for Work on the Project) to adapt the design to the proposed substitute and whether or not incorporation or use of the substitute in connection with the Work is subject to payment of any license fee or royalty. All variations of the proposed substitute from that specified will be identified in the application and available maintenance, repair, and replacement service will be indicated. The application will also contain an itemized estimate of all costs that will result directly or indirectly from acceptance of such substitute, including costs of redesign and claims of other contractors affected by the resulting change, all of which shall be considered by Engineer in evaluating the proposed substitute. The Owner may require Contractor to furnish at Contractor's expense additional data about the proposed substitute.

C. If a specific means, method, technique, sequence or procedure of construction is indicated in or required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, sequence, technique or procedure of construction acceptable to Engineer, if Contractor submits sufficient information to allow Engineer to determine that the substitute proposed is equivalent to that indicated or required by the Contract Documents. The procedure for review by Engineer will be similar to that provided in Section 01330 – Submittals.

D. All requests for substitution shall be submitted within thirty-five (35) calendar days after award of the contract. The Engineer will be allowed a reasonable time within which to evaluate each proposed substitute. The Engineer and Owner will be the sole judge of acceptability, and no substitute will be ordered, installed or utilized without Engineer's prior written acceptance that will be evidenced by either a Change Order or an accepted Shop Drawing. Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute. Contractor shall pay all costs for redesign required by the implementation of the proposed substitute.

*****END OF SECTION*****

SECTION 01340

REQUESTS FOR INFORMATION AND CLARIFICATIONS

1.0 GENERAL

A. Should the Contractor discover conflicts, omissions, or errors in the Contract Documents, or have any questions concerning interpretation or clarification of the Contract Documents, or if it appears to the contractor that work to be done or any matter relative thereto are not sufficiently detailed or explained in the Contract Documents, then, before proceeding with the work affected, the Contractor shall immediately notify the Construction Manager in writing and request interpretation, clarification, or additional detailed instructions concerning the work. The Contractor shall ask for any clarification or request for information immediately upon discovery, but no less than fifteen (15) days prior to the start date of the activities related to the clarification, based on the latest updated and accepted construction schedule. Contractor shall be responsible for its costs to implement and administer RFI's throughout the Contract duration. Regardless of the number of RFI's submitted, Contractor will not be entitled to additional compensation.

B. A RFI is not to be used for request for materials/equipment substitutions or value engineering/cost reduction incentive proposals.

2.0 RFI PROCEDURES

2.1 <u>Contractor Review and Submittal</u>

A. Contractor's review

Before submitting each RFI, the Contractor shall carefully review the following for relevant information:

1. All field measurements, quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto.
2. All materials with respect to intended use, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work.
3. All information relative to means, methods, techniques, sequences, and procedures of construction and safety precautions and programs incident thereto.
4. The coordination of each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents.
5. The Contract Documents.
6. The Project correspondence and documentation.

B. Submittal requests

1. The Contractor shall submit all requests for clarification and/or additional information in writing through the Construction Manager to the Engineer using a request for information (RFI) form. Contractor shall provide a detailed written statement that indicates the specific Drawings or Specifications in need of clarification and the nature of the clarification requested.

2. Contractor shall furnish six (6) copies of each RFI. Digital copies shall also be submitted. With prior approval from the Construction Manager the Contractor may submit electronic copies only. Each RFI shall be dated and bear a signed certification that Contractor has performed the review defined above. No consideration for review by Construction Manager of any RFI will be made for any item which has not been certified by the Contractor. All non-certified RFI's will be returned to Contractor without action taken by Engineer, and any delays caused thereby shall be the total responsibility of Contractor.

3. Each RFI shall be limited to one subject.

2.2 RFI Numbering System

A. The Construction Manager will assign blocks of numbers for the Contractor, Engineer, Owner's Representative, and for substitutions. The Contractor will use the block of numbers consecutively with the date of issue, except for re-issuance of a respective RFI in which the subscript A, B, C, etc., will be added until the RFI is resolved. If Contractor believes the RFI reviewer's response is incomplete, Contractor shall issue another RFI (with the same RFI number with the letter "A" indicating if it is a follow-up RFI) to Construction Manager clarifying original RFI. Additionally, Construction Manager may return RFI requesting additional information should original RFI be inadequate in describing condition.

2.3 Owner's RFI Review and Response Time

A. Except as may otherwise be provided herein, the Construction Manager will return one copy of each RFI form to Contractor, with its comments noted thereon or on a separate comment sheet, within a reasonable amount of time, but no more than fifteen (15) calendar days following their receipt from Contractor, or if it is necessary to extend this period, the Construction Manager shall notify the Contractor in writing as to when a decision will be provided.

B. Engineer's review will be only to provide clarification and interpretation of the Contract Documents. Engineer's review shall not relieve Contractor for the responsibility for compliance with the Contract Documents.

C. Engineer's review will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto.

D. The Engineer may furnish additional detailed written instructions to further explain the work, and such instructions shall be a part of the contract documents.

Clarifications will be issued using the above RFI system and a Field Directive as necessary. Should additional detailed instructions in the opinion of the Contractor constitute work in excess of the scope of the contract, the Contractor shall submit notification immediately and written notification thereof to the Construction Manager no more than seven (7) days following receipt of such instruction, and in any event prior to the commencement of work thereon. If the Construction Manager considers it justified, the instructions of the Engineer will be revised or a proposed change order will be issued for the Owner's consideration. The Contractor shall have no claim for additional compensation or extension of the schedule because of any such additional instructions unless the Contractor provides the Construction Manager written notice thereof within the time frame specified above. In addition, the Contractor shall within fifteen (15) days from the date of notification provide detailed justification and analysis as well as complete pricing and schedule CPM fragmentary network to support any request for time extension.

E. Should the Contractor proceed with the work affected before receipt of a response from the Construction Manager, any portion of the work which is not done in accordance with the Owner's interpretation, clarifications, instructions, or decisions subject to removal or replacement and the Contractor shall be responsible for all losses.

F. RFI's will not be recognized or accepted, if in the opinion of the Construction Manager or Engineer, that one of the following conditions exists:

1. The Contractor submits an RFI as a submittal.

2. The Contractor submits the RFI under the pretense of a contract documents discrepancy or omission without thoroughly reviewing the documents. In this case, the Contractor shall be responsible for both the Construction Manager's and Engineer's administrative costs to process the RFI. Such costs will be deducted from Contractor's progress payments.

3. The Contractor submits the RFI in a manner that suggests that specific portions of the contract documents are assumed to be excluded, or be taken as an isolated portion of the contract documents in part rather than whole.

4. The Contractor submits an RFI in an untimely manner without proper coordination and scheduling of work or related trades.

G. The Engineer's review shall not relieve Contractor from the entire responsibility for any variation from the requirements of the Contract Documents unless Contractor has in writing called attention to each such variation at the time of each RFI submittal and Engineer has given written approval of each such variation by specific written notation thereof incorporated in the RFI review; nor will any review by Engineer relieve Contractor from responsibility for compliance with the requirements for careful review above.

END OF SECTION

SECTION 01354
HAZARDOUS MATERIAL PROCEDURES

1.0 GENERAL

This section includes procedures required when encountering hazardous materials at the Work site.

2.0 REFERENCES

A. California Health and Safety Code, Section 25117.

B. State of California Code of Regulations (CCR).

1. Title 8. Industrial Relations.
   a. Division 1. Department of Industrial Relations.
2. Title 22. Social Security
   a. Division 4. Environmental Health.
   b. Division 4.5. Environmental Health Standards for the Management of Hazardous Waste.

C. United States Code of Federal Regulation (CFR), Title 29 and Title 40.
1. 29 CFR 1910.1000.
2. 29 CFR 1910.134.

3.0 SUBMITTALS

Submit laboratory reports, hazardous material removal plans, and certifications.

4.0 HAZARDOUS MATERIALS PROCEDURES

A. Hazardous materials are those defined by the State of California Health and Safety Code, Section 25117.

B. When Hazardous Materials Including Contaminated Soil Have Been Found:
1. Prepare and initiate implementation of plan of action.
2. Notify immediately Construction Manager, and other affected persons.
3. Notify such agencies as are required to be notified by Laws and Regulations with the times stipulated by such Laws and Regulations.
4. Designate a Certified Industrial Hygienist to issue pertinent instructions and recommendations for protection of workers and other affected persons' health and safety.
5. Identify and contact subcontractors and licensed personnel qualified to undertake storage, removal, transportation, disposal, and other remedial work required by, and in accordance with laws and regulations.

C. Forward to Construction Manager, copies of reports, permits, receipts, and other documentation related to remedial work.

D. Assume responsibility for worker health and safety, including health and safety of Subcontractors and their workers.

1. Instruct workers on recognition and reporting of materials that may be hazardous.

E. File requests for adjustments to Contract Times and Contract Price due to the finding of Hazardous Materials in the Work site in accordance with **Section 00700.**

1. Minimize delays by continuing performance of the Work in areas not affected by hazardous materials operations.

5.0 ASBESTOS MATERIALS

A. It is the specific intent of these Contract Documents to exclude from the Work any and all products or materials containing asbestos. No new products containing asbestos shall be incorporated in the Work.

B. The Contractor is made aware that the existing water and sewer pipelines in the project area are made of Asbestos Concrete (AC). The Contractor shall anticipate the need for removal of sections of the existing pipeline during tie-ins to the existing system and abandonment of the existing pipelines where indicated on the plans.

C. All Asbestos Concrete (AC) Pipe shall be handled and disposed of according to California Code of Regulations (CCR) Tile 8, Section 1529; or most current regulations. Contractor shall provide a plan for disposal of the AC pipe and provide evidence of proper disposal to the Construction Manager.

*****END OF SECTION*****

SECTION 01360
ENVIRONMENTAL CONTROLS

1.0 SITE MAINTENANCE

The Contractor shall keep the work site, staging areas, and Contractor's facilities clean and free from rubbish and debris and shall comply with the requirements of Section 01090- 3.0, **STORMWATER QUALITY CONTROLS** and the Water Pollution Control Plan. Materials and equipment shall be removed from the site when they are no longer necessary. Upon completion of the work and before final acceptance, the work site shall be cleared of equipment, unused materials, and rubbish to present a clean and neat appearance.

A. Cleanup

1. Waste material of any kind will not be permitted to remain on the site of the work or on adjacent streets. Immediately upon such materials becoming unfit for use in the work, they shall be collected, carried off the site and disposed of by the Contractor. In general, the site shall be maintained on a daily and weekly basis.
2. The Contractor shall keep all buildings occupied by the Contractor clear of all refuse, rubbish and debris that may accumulate from any source and shall keep them in a neat condition to the satisfaction of the City Representative.
3. In the event that waste material, refuse, debris and/or rubbish are not so removed from the work by the Contractor, the Owner reserves the right to have the waste material, refuse, debris and/or rubbish removed and the expense of the removal and disposal charged to the Contractor.
4. Paints, solvents, and other construction materials shall be handled with care to prevent entry of contaminants into storm drains, surface waters, or soils.

B. Street cleaning

1. The Contractor shall be responsible for preventing dirt and dust from escaping from trucks departing the project site, by covering dusty loads, washing truck tires before leaving the site, or other reasonable methods.
2. When working dump trucks and/or other equipment on paved streets and roadways, the Contractor will be required to clean said streets as required by the City Representative to remove dirt caused by the Contractor's activities. The use of water in amounts, which result in mud on public streets, is not acceptable as a substitute for sweeping or other methods. Equipment for this operation shall be on the job site or available at all times.
3. In the event that the above requirements are violated and no action is taken by the Contractor after notification of infraction by the City Representative, the Owner reserves the right to have the streets in

question cleaned by others and the expense of the operation charged to the Contractor.

C. Final Cleanup

1. Before final inspection, the project site shall be neat and presentable. At a minimum dispose of:
   a. Rubbish and debris
   b. Excess materials
   c. Falsework
   d. Temporary structures
   e. Equipment

D. Do not remove warning, regulatory, or guide signs until Contract acceptance unless otherwise directed by the Engineer.

2.0 FUGITIVE DUST PREVENTION AND CONTROL PLAN:

1. The project shall comply with El Dorado AQMD Rule 223 – Fugitive Dust.
2. Describe proposed Best Management Practices (BMPs) to be implemented for the control of fugitive dusts.
3. Submit prior to initiation of dust creating construction activities.
4. Submit daily records of measures taken to control fugitive dust on weekly basis.

3.0 AIR POLLUTION CONTROL

A. All fuel combustion construction equipment (both stationary and mobile) shall be tuned for optimal performance during construction activities.

B. To the extent possible, Contractor shall implement the following measures:

1. Contractor shall ensure that all equipment used during construction is of 2010 model or later.
2. Retard diesel engine injection timing by two to four degrees.
3. Use electricity from power poles rather than by temporary gasoline or diesel generators.
4. Use reformulated, low-emission diesel fuel with less than 15 PPM sulfur in all diesel engines to comply with El Dorado County Guide to Air Quality Assessment. The use of the Best Available Control Technologies will reduce the health impact of diesel exhaust particulates.
5. Use catalytic converters on gasoline-powered equipment.
6. Do not leave inactive construction equipment idling for prolonged periods (i.e., more than two 2 minutes).
7. Schedule construction activities and material hauls that affect flow to off-peak hours.
8. Configure construction parking to minimize traffic interference.

C. Comply with El Dorado County APCD Rule 224 - Cutback and Emulsified Asphalt Paving Materials.

4.0 ASBESTOS DUST MITIGATION PLAN:

A. Naturally occurring asbestos (NOA):

1. Contractor is made aware that rock found on this site may contain asbestos.
2. If NOA is identified in the course of construction, the Contractor shall:

a. Notify the Engineer immediately.
b. Prepare and submit an Asbestos Dust Mitigation Plan pursuant to CCR Title 17 Section 93105 (“Asbestos Airborne Toxic Control Measures for Construction, Grading, Quarrying, and Surface Mining Operations”). The Plan shall include all measures required by the State of California and the El Dorado County AQMD Rule 223-2.
c. Obtain El Dorado County AQMD approval of the Asbestos Dust Mitigation Plan before earthwork restarts.
d. Comply with all requirements outlined in California Air Resources Board “Asbestos Air Toxic Control Measures for Construction, Grading, Quarrying and Surface Mining Operations.”
e. If asbestos is found in concentrations greater than 5 percent, the material shall not be used as surfacing material as stated in State Regulation CCR Title 17 Section 93106 (“Asbestos Airborne Toxic Control Measure-Asbestos Containing Serpentine”). The material containing NOA can be reused at the site for subgrade material covered by other non-asbestos-containing material

3. Contractor shall include all costs necessary to comply with these standards in the bid.

5.0 NOISE CONTROL

A. The Contractor shall comply with applicable laws, regulations, and ordinances which apply to any work performed pursuant to the contract. If the requirements of this Section are more restrictive than those of the local regulations, the requirements of this Section shall govern.

B. Contractor shall comply with City of Placerville noise ordinances.

C. Each internal combustion engine, used for any purpose on the job or related to the job, shall be enclosed and be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine shall be operated on the project without said muffler and enclosure. Use "quiet package" or "hush" equipment which is readily available for such equipment as trailer-mounted compressors, generators, welders, etc. All equipment shall be operated in the quietest manner practicable.

D. Contractor shall be required to locate all fixed construction equipment such as compressors and generators as far as feasibly possible from sensitive receptors. Contractor shall shroud or shield all impact tools.

E. Where possible, the Contractor shall use electric rather than diesel or gas-powered equipment.

F. There shall be no start-up of machines or equipment, no delivery of materials or equipment, no cleaning of machines or equipment and no servicing of equipment except during the permitted hours of construction involving noisy operations.

G. Amplified sound and other forms of loud communication constituting a nuisance, at the sole discretion of the City Representative, shall not be permitted.

H. Material stockpiles and/or vehicle staging areas shall be located as far

as practicable from dwellings.

I. The Contractor shall designate a disturbance coordinator responsible for responding to noise complaints. The name and telephone number of the coordinator shall be clearly posted at the construction site. The disturbance coordinator shall determine causes and implement measures to mitigate the noise impact, including the enforcement of the allowable hours of construction, the identification of poorly muffled equipment and requiring its repair or replacement; and recommending temporary construction noise barriers.

J. If acceptable noise levels for a residential area are exceeded (as defined in 3.03 and 3.04 below) the Contractor shall be responsible for providing sound walls or other means necessary to reduce the noise level.

5.01 SOUND LEVEL MEASUREMENT

A. Any sound level measurement made pursuant to the provisions of this chapter shall be measured with a sound level meter using the "A"- weighting and response. “A-weighted sound pressure level" means the sound pressure level as measured with a sound meter using the "A"-weighting network. The standard notation is dBA.

5.02 NOISE MEASUREMENT PROCEDURES

The following procedures shall be utilized for measuring and evaluating exterior noise in the project area unless otherwise specified:

A. Noise measurements shall be conducted any time during the day or night when the suspect noise source is in operation.

B. The location selected for noise measurement shall be on the noise receptor's property line at a point approximately ten feet from any building, wall or obstruction (trees, bushes, etc.)

C. No individual other than the operator shall be within ten feet of the sound level meter during the measurement period.

D. The sound level meter shall be calibrated in accordance with the manufacturer's instructions.

E. With the noise source in operation, the operator shall record the instantaneous response at fifteen-second intervals or less, for a period of fifteen minutes or greater. Or, for a noise source in operation for less than fifteen minutes, the operator shall record the instantaneous response at fifteen-second intervals or less for the time the noise source is in operation.

F. The suspect noise source shall only be measured for a violation of this ordinance when it is five dBA or greater than another noise source within the measurement vicinity.

G. The corrective factors set forth in Section 3.04 shall be applied to the noise standard established for the specific noise zone.

H. The suspect noise level shall be compared with the standards in Section 3.03.

I. If the noise level generated from the suspect noise source exceeds the standard, the suspect noise source shall be considered to be in violation of this chapter.

5.03 ALLOWABLE NOISE LEVELS

Noise received on property occupied by another person within the project area, in excess of the following levels shall not be allowed, except as expressly provided otherwise herein:

STANDARDS

	Day	Night
Zone	7:00 A.M.- 9:00 P.M.	9:00 P.M.- 7:00 A.M.
Residential	55 dBA	45 dBA

1.02 5.04 CORRECTIONS TO NOISE LIMITS.

The numerical limits given above shall be adjusted by the following corrections, where appropriate:

	Noise Condition	Correction (in dB)
1	Repetitive impulsive noise, pure tones and sound with cyclically varying amplitude	-5
2	Steady whine, screech or hum	-5
The following corrections apply to day only:		
3	Noise occurring more than 5 but less than 15 minutes per hour	+5
4	Noise occurring more than 1 but less than 5 minutes per hour	+10
5	Noise occurring less than 1 minute per hour	+15

6.0 TREE AND PLANT PROTECTION

A. Temporary tree protection

1. The Contractor shall carefully protect existing trees from damage by construction activities. No trees outside the construction limits shall be removed or damaged, unless authorized by the City Representative.
2. If a tree is damaged or destroyed by construction (other than those designated for removal), the Contractor shall replace it in species, size and grade with a healthy tree as directed by the City Representative. Where it is necessary to replace a tree damaged by construction, the Contractor shall bear all expenses required to establish the replacement tree and paying Placer County tree removal fees.

B. Cultivated areas and other surface improvements:

All landscaped areas and other surface improvements which are damaged by actions of the Contractor shall be restored. The Contractor shall minimize vegetation removal. Areas shall not be cleared until construction activities require the work. Erosion controls shall be in place prior to clearing and grading activities.

C. Other areas to be protected:
Environmentally sensitive areas are indicated on the Drawings. The Contractor shall erect a protective fence around the area to be protected. The protective fence shall be 4 feet tall, international orange high density polyethylene resin (Visi-Barrier or equal). Posts shall be heavy duty steel T-posts with corrosion resistant coating spaced at 5 feet on centers.

7.0 WATER CONTROL

A. Temporary pumping and drainage

1. The Contractor shall conform to the regulations and requirements of legally authorized surface water management agencies.
2. The Contractor shall be responsible for keeping trenches and other areas free from water as required to permit continuous progress of, or to prevent damage to, its own work or the work of others. The Contractor's operations shall be conducted in such a manner as to prevent sediment from reaching existing sewers, storm drains, and creeks.
3. The Contractor shall cover exposed excavated areas and spoils piles when runoff from rain is or would be likely to cause turbidity to enter local waterways. The Contractor shall suspend work in the rain if such work cannot be performed without causing turbid runoff.
4. To avoid solids or turbid runoff from entering local waterways, the Contractor shall cover, secure, and/or berm excavated area and spoils piles and employ other methods as necessary such as hay bale around storm drains or around construction sites; use of cut and cover construction method; or use of sedimentation basins.
5. The Contractor may apply for a "one-time" discharge permit (defined as a maximum discharge length of one month) to the sewer system with South Placer Municipal Utility District (SPMUD). The following minimum requirements for discharge to the sewer system have been indicated by SPMUD. The Contractor is responsible for all coordination with SPMUD, permit application preparation and fees and complying with all conditions placed on the permit by SPMUD.
    a) All of the water to be discharged to the system will have to run through baker tank(s) to settle out all debris/sediment. A meter must be placed at the discharge point of the baker tank to measure flow. The discharge is limited to a maximum flowrate of 2gpm.

B. WATER QUALITY MEASURES:

1. Erosion control measures, such as silt fences, filter fabric, sedimentation ponds, placement of hay bales along the peripheries of construction sites, temporary detention ponds, and terraced slopes, shall be employed as appropriate in conformance with the approved Storm Water Pollution Prevention Plan (SWPPP) or Water Pollution Control Plan (WPCP) and shall be in place prior to any clearing or grading activity.

8.0 OIL SPILL PREVENTION AND CONTROL

A. General

The Contractor shall be responsible for prevention, containment, and cleanup of spilling of oil, fuel, and other petroleum products used in the Contractor's operations. All such prevention, containment, and cleanup costs shall be borne by the Contractor. The Contractor shall not discharge oil, fuel, or other petroleum products from equipment or facilities into surrounding waters or onto adjacent land.

B. Spill mitigation measures

The Contractor shall, at a minimum, take the following measures regarding oil spill prevention, containment, and cleanup:

1. Fuel hoses, lubrication equipment, hydraulically operated equipment, oil drums, and other equipment and facilities shall be inspected regularly for drips, leaks, or signs of damage, and shall be maintained and stored properly to prevent spills. Proper security shall be maintained to discourage vandalism.
2. All land-based oil and products storage tanks shall be diked or located so as to prevent spills from escaping to the water. Diking and subsoils shall be lined with impervious material to prevent oil from seeping through the ground and dikes.
3. All visible oils on land shall be immediately contained using dikes, straw bales, or other appropriate means and removed using sand, ground clay, sawdust, or other absorbent material, which shall then be properly disposed of by the Contractor. Waste materials shall be temporarily stored in drums or other leakproof containers after cleanup and during transport to disposal. Waste material shall be disposed off property at an approved site.

9.0 DISCOVERY OF CULTURAL RESOURCES

If discovery is made of items of historical archaeological or paleontological interest, the Contractor is to immediately cease all Work in the area of discovery and promptly notify the City Representative. Archaeological indicators may include, but are not limited to, dwelling sites, locally darkened soils, stone implements or other artifacts, fragments of glass or ceramics, animal bones, human bones and fossils. Do not resume Work in the area of discovery until authorization is received from the City Representative. When work is resumed, excavation or other activities shall be as directed by the City Representative. If the discovery of cultural resources causes a decrease or increase in the Contractor's cost of, or the time required for, performance of any part of the Work the Owner shall cause to be issued a change order under the procedures provided in Section 00700.

*****END OF SECTION*****

SECTION 01380
PHOTOGRAPHS

1.0 GENERAL

Photographs before, during and after construction are an important record of site conditions, construction progress, as-built features and significant planned/unplanned events. The Contractor is to employ a competent photographer to record this important factual information. Equipment used by photographer to include:

A. Digital Camera- Sony Cybershot DSC-H5 (or latest equivalent Sony model), or equal and must have built-in gps location capabilities. Prepare color photographs, in both print and digital file format, as directed by the Construction Manager. All negatives become the property of the Owner. All electronic files are to be furnished in jpeg format and stored on a compact disc (CD).

1.1 Pre-Construction Photographs

The Contractor shall provide one hundred (100) preconstruction photographs of the general project area plus a minimum of three different angles photographed of each existing meter location including surrounding area prior to commencement of Work on the site. Preconstruction photographs shall he taken at locations to be designated by the Construction Manager. These photographs shall be submitted prior to beginning construction.

1.2 During Construction Photographs

The Contractor shall provide construction color photographs showing the progress of the Work. Contractor is to take photos of all Work prior to being buried or covered, including piping, fittings, transitions, tie-ins and valves. Contractor is to take photos of any significant planned or unplanned events. These vantage points will be determined by the Construction Manager. On pipeline projects, the Contractor shall take photos at a maximum of one hundred (100) ft intervals. A minimum of forty-eight (48) photographs should be provided every month during construction. Photographs should be submitted with each month's Application for Payment.

1.3 Post-Construction Photographs

Upon acceptance of the Work, the Contractor shall provide one hundred (100) photographs of the general pipeline route as well as a minimum of two photos from different angles of each installed meter box. Post-construction photographs shall he taken at locations to be designated by the Construction Manager. These photographs shall be submitted as part of Contract Closeout.

2.0 DELIVERABLE PRODUCTS

2.2 Digital

Electronic files, provide 8-1/2" x 11" color printed page with thumbnail views and file

name identification for each picture. Digital images shall be compiled on CD or other approved electronic media and provided with a descriptive index of the images. All printed pages must be indexed chronologically and provided in a three-ring binder. All CD's to be labeled in protected in an individual plastic case.

*****END OF SECTION*****

SECTION 01400
QUALITY CONTROL AND INSPECTION

1.0 CONTRACTOR'S QUALITY CONTROL

1.1 General

The Contractor is to ensure that products, services, workmanship and Site conditions comply with the requirements of the Contract Documents by coordinating, supervising, testing and inspecting its Work. The Contractor shall utilize only suitably qualified, skilled and trained personnel experienced in the tasks required to complete the Work in accordance with the quality requirements of the Contract Documents. Should there be no quality basis specifically prescribed for any portion of the Work, the quality and testing procedures shall be in accordance with the best-accepted practices of the construction industry for the locale of the Project, for projects of this type, or standards set by engineering or technical societies (e.g. ASTM or ASHRAE), whichever is more stringent.

1.2 Quality of Work

The Contractor's quality of Work shall include, but not be limited to, the following requirements:

A. Quality of Products: Unless otherwise indicated or specified, all products shall be new, free of defects, and fit for the intended use.

B. Quality of installation: All Work shall be produced plumb, level, square and true, or true to indicated angle, and with proper alignment and relationship between the various elements, as shown on or required by Contract Documents.

C. Protection of Completed Work: Take all measures necessary to preserve completed Work free from damage, deterioration, soiling, and staining, until acceptance by Owner.

D. Standards and Code Compliance and Manufacturer's Instructions and Recommendations: Unless more stringent requirements are indicated or specified, comply with manufacturer's instructions and recommendations, reference standards and building code research report requirements in preparing, fabricating, erecting, installing, applying, connecting, and finishing Work.

E. Deviations from Standards and Code Compliance and Manufacturer's instructions and Recommendations: Secure Owner's advanced written consent. Document and explain all deviations from reference standards and building code research report requirements and manufacturer's product installation instructions and recommendations, including acknowledgement by the manufacturer that such deviations are acceptable and appropriate for the Project.

F. Verification of Quality: Work shall be subject to verification of quality by Owner in accordance with provisions of the Contract Documents.

1.3 Defective Work

Defective Work shall be modified, replaced, repaired or redone by the Contractor at no change in Contract Sum or Contract Time. Acceptance of Defective Work, without specific written acknowledgement and approval of Owner, shall not relieve the Contractor of the obligation to correct such Work. Should Owner determine that it is not feasible or in Owner's interest to require Defective Work to be repaired or replaced, an equitable reduction in Contract Sum shall be made by agreement between Owner and Contractor. If equitable amount cannot be agreed upon, a Construction Change Directive will be issued and the amount in dispute resolved in accordance with the Contract Documents. Owner and Owner's consultants disclaim any and all responsibility for Work produced not in conformance with the Drawings and Specifications. Contractor shall have full responsibility for all consequences resulting from Defective Work, including without limitation all delays, disruptions, extra inspection and correction costs by Contractor and Owner and re-Work, and extra time and costs of all types. Contractor waives excuses for defective work relating to Owner's prior review of Submittals and/or prior failure to notice Defective Work in place on inspection.

2.0 INSPECTION AND TESTING

Additional requirements for tests are described in these Contract Documents.

2.1 General

Where the Contract Documents require work to be field tested or approved, it shall be tested in the presence of the Construction Manager or its authorized representative. The Construction Manager shall have the right to witness all on-site tests performed by the Contractor and any shop tests. The results of any tests performed by the Contractor shall be made available for the information of the Construction Manager. Inspections, tests or favorable reviews by the Construction Manager or others shall not relieve the Contractor from its obligation to perform the work in accordance with the requirements of the Contract Documents or for its sole responsibility for the quality of workmanship and materials.

Except as specifically required under the technical specifications for testing and inspection, all tests for materials furnished by the Contractor will be done in accordance with commonly recognized standards of national organizations. Where tests are to be performed by the Construction Manager or by an independent laboratory or agency, the Contractor shall furnish such samples of all materials as required by the Construction Manager without charge. The sample or samples of materials to be tested shall be selected by such laboratory or agency, or the Construction Manager, and not by the Contractor. No material for which the Contract Documents require the submittal and approval of tests, certificates of compliance or other documentation shall be incorporated in the Work until such submittal has been made and approved. The Contractor shall provide safe access, including plants where materials or equipment are manufactured or fabricated, for the Construction Manager and inspectors to adequately inspect the quality of work and the conformance with the Contract Documents. The Contractor shall furnish the Construction Manager the necessary labor and facilities for such things as excavation in the compacted fill to the depths required to take samples. The Contractor shall provide adequate lighting, ventilation, ladders and other protective facilities as may be necessary for the safe performance of inspections.

Upon completion of the Work the Construction Manager will conduct a final inspection as provided for in Section 00700. Records shall be available at all reasonable hours for

inspection by other local or State agencies to ascertain compliance with laws and regulations.

Neither the employment of independent testing and inspection agency nor observations or tests by Owner and Owner's consultants shall in any manner relieve the Contractor of obligation to perform Work in full conformance to all requirements of the Contract Documents. The Owner reserves the right to reject all Work not in conformance to the requirements of the Contract Documents, or otherwise Defective.

2.2 Notice

The Contractor shall notify the Construction Manager in writing at least twenty-four (24) hours before any field testing or special inspections are required to be performed by the Construction Manager or independent laboratory furnished by the Owner. The Contractor shall notify the Construction Manager at least two hours before any inspection is required to be performed or to witness the Contractor's on-site field testing.

Whenever the Contractor varies the period during which work is carried on each day, the Contractor shall give due notice to the Construction Manager so that proper inspection may be provided. Any work done in the absence of the Construction Manager shall be considered to be rejected. It will be the responsibility of the Contractor to demonstrate to the satisfaction the Construction Manager that the work meets all conditions of the specification and if such conditions are not met to remove the work.

The Contractor shall give the Construction Manager written notification at least thirty (30) days prior to the shipment of materials and equipment to be tested and/or inspected at the point of origin. Satisfactory tests and inspections at the point of origin shall not be construed as a final acceptance of the materials and equipment nor shall such tests and inspections preclude retesting or reinspection at the site of the Work.

2.3 Costs of Testing

The Contractor shall be responsible for, and shall pay for, all quality control and off-site tests of materials required including all source and mix design tests for the approval of soil and concrete materials. The Owner will perform the soils and concrete confirmation tests detailed in the Technical Specifications during the performance of the Work. Owner will retain and pay a qualified testing agency to perform soil compaction testing and work identified as requiring special inspections and testing as defined by UBC section 1701. All other testing required by the technical specifications shall be the responsibility of the Contractor.

The Contractor shall be responsible for, and shall pay for, all source quality control and all on-site tests of materials required, except those tests specifically noted to be performed and paid for by the Owner.

The Construction Manager shall have the authority to require additional tests or inspections due to the manner in which the Contractor executes its work. Examples of such additional tests and inspections include; tests of materials substituted for previously accepted materials, or substituted for specified materials, or retests made necessary by failure of material to comply with the requirements of the Specifications. Where such tests and inspections are required by Contract to be performed by the Owner, the Owner will pay for

the additional tests and inspections but will issue an unilateral Change Order to deduct these costs from the Contract price.

2.4 Work Covered Prior to Inspection and/or Testing

Work requiring inspection and/or testing shall not be concealed or buried prior to the acceptance of such inspection or testing. Work covered without the favorable review or consent of the Construction Manager shall, if required by the Construction Manager, be uncovered for inspection and/or testing at the Contractor's expense.

2.5 Work Covered With Prior Inspection and/or Testing

If the Construction Manager considers it necessary or advisable that covered work which was favorably inspected and tested be uncovered for reinspection and/or retesting, the Contractor, at the Construction Manager's request, will uncover, expose or otherwise make available for observation, inspection or testing as the Construction Manager 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 defective, the Contractor will bear all expenses of such uncovering, exposure, observation, inspection and testing and of satisfactory reconstruction. If, however, such work is not found to be defective the Contractor will be allowed an increase in the Contract price or an extension of the Contract time, or both, directly attributable to such uncovering, exposure, observation, testing and reconstruction, and a Change Order shall be issued for such additional work.

2.6 Coordination of Caltrans and Other Inspections

The Contractor is completely responsible for scheduling all Caltrans and any other agency inspections in accordance with Caltrans and agency requirements. The Contractor shall notify the Construction Manager of all work component inspection notices and schedules. Failure of the Contractor to properly coordinate and schedule these inspections shall not be cause for time extensions.

2.7 Special Tests and Inspections

As provided for in the Contract Documents, laws and regulations, specialized tests and inspections shall be performed by special inspectors certified by the International Conference of Building Officials (ICBO). Unless otherwise stated in the Contract Documents, each of these tests will be performed and paid for by the Owner.

2.8 Inspections and Tests by Serving Utilities

Unless otherwise indicated in the Contract Documents, the Contractor shall cause, schedule and conduct inspections and tests by serving Utilities required for the Work under this Contract.

2.9 Inspections and Tests by Serving Manufacturers

Unless otherwise indicated in the Contract Documents, the Contractor shall cause all required tests and inspections to be conducted by materials, equipment or systems manufacturers. Additionally, all tests and inspections required by materials, equipment or

systems manufacturers as conditions of warranty or certification of Work shall be made, the cost of which shall be included in the Contractor's bid.

3.0 TEST WATER

The Owner will furnish water for testing to the Contractor, free of charge, as is available from the City's water system. The conveyance of water shall be the responsibility of the Contractor and shall be at the Contractor's expense.

The Contractor shall submit a written request of water needs for testing including a description, volume, location and duration of use to the Construction Manager for approval. The Construction Manager will designate the type of water, locations where connections may be made and the backflow protection, if required. The Contractor is responsible for providing, installing and testing the backflow prevention device at the Contractor's expense. The Construction Manager may also require a meter on the connection depending on the volume of water requested.

There may be short periods of time when water is not available from the Owner's system.

*****END OF SECTION*****

SECTION 01500
CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

1.0 GENERAL

This section covers the general requirements for the Contractor's temporary facilities at the job site and for the prosecution of the work. The Contractor shall be responsible for furnishing, installing and maintaining all temporary utilities required for the Work, all construction aids required for the Work, fences and barriers as required for protection of the public, property, environment and the Work, field offices and storage facilities, as specified, except as allowed herein, and removal of said items upon completion of the Work. The Contractor may use existing roadways for access and parking to the extent practical and allowable.

2.0 QUALITY ASSURANCE

Contractor shall comply with applicable Federal, State, and local laws, codes, regulations and ordinances and with utility company requirements.

3.0 SUBMITTALS

Submit the following information:

1. Copies of permits and approvals for construction as required by Laws and Regulations of governing agencies.
2. Backflow prevention procedures for temporary connection to Owner's potable water system, if applicable.
3. Proposed plan and layout for all temporary offices, designated parking areas, sanitary facilities, storage yards, temporary water service and distribution, temporary sewer connection, temporary telephone service, temporary power service and distribution and temporary fire equipment access roads.

4.0 TEMPORARY UTILITIES

4.1 Utility Requirements

The Contractor shall maintain and operate the temporary utility systems to assure continuous service. The systems shall be modified and extended as Work progress requires. Temporary materials and equipment shall be completely removed when their use is no longer required. The Contractor shall clean and repair any damage caused by temporary utility installations or use.

4.2 Power

Contractor shall make arrangements for temporary power, furnish temporary power pole and meter, make temporary connection, and make arrangements and pay all costs for a temporary power supply. Contractor shall arrange for and pay all costs associated with temporary power service to the field offices and to Contractor's storage sheds, and shall pay all costs for installation and removal of temporary service and all power used. Contractor shall pay for energy used during start-up and testing and until such time that the Owner takes beneficial occupancy of the Work or the Work is accepted by the Owner, whichever occurs first. The Owner shall arrange for and pay for all costs

associated with relocation of existing utility power poles, transformers, wires and related facilities to provide and/or upgrade the permanent service to the facility.

The Contractor shall provide temporary lighting to meet applicable requirements to allow erection or installation of materials and equipment and to allow observation and inspection of the Work.

4.3 Water

Contractor shall provide bottled drinking water service for all drinking water required by construction personnel. Provide refrigerated bottled water dispensers for all trailers to be occupied by personnel. Each dispenser shall have two 3-gallon internal reservoirs and an additional 5-gallon water bottle storage. A minimum of two extra 5-gallon water bottles shall be on hand at each trailer during the duration of occupancy. The Contractor shall be responsible for paying all costs associated with supplying drinking water.

The Contractor shall provide water storage tankage as necessary for construction purposes.

4.4 Telephone

The Contractor shall provide telephone service:

1. Telephone lines and instruments for Contractors use at Contractor's option and costs.

The Contractor shall pay all costs for installation and removal of telephone lines and instruments and local telephone service. If internet access service is specified, the Contractor shall pay all costs for installation and removal and monthly ISP charges for internet service. Telephone and internet service are to be installed and ready for use within 20 days after receipt of the Notice to Proceed.

4.5 Heating and Ventilation

The Contractor shall provide temporary heat and ventilation as required to maintain adequate environmental conditions to facilitate the progress of the Work, to meet specified minimum conditions for the installation of materials, and to protect materials and finishes from damage due to temperature or humidity. Adequate forced ventilation of enclosed areas shall be provided for curing of installed materials, to disperse humidity, and to prevent hazardous accumulations of dust, fumes, vapors or gases. Portable heaters shall be standard approved units complete with controls and suitably vented to the outside as required for protection of health and property. The Contractor shall be responsible for paying all costs of installation, fuel, maintenance, operation, and removal.

5.0 CONSTRUCTION FACILITIES

5.1 General

Temporary structures shall be structurally sound, weather tight, with floors raised above ground. Temperature transmission resistance shall be compatible with occupancy and storage requirements. At the Contractor's option, portable or mobile buildings modified for office use may be used. Existing site facilities and new permanent facilities shall not

be used for construction facilities. Sites for temporary structures shall be filled and graded to provide surface drainage. Temporary structures shall be constructed on proper foundations, secured, provided with connections for utility services and provided with railed steps and landings at elevated entrance doors. Periodic maintenance and cleaning shall be provided for temporary structures, furnishings, equipment and services. Temporary structures, contents and services shall be removed when they are no longer needed for the Work. Foundations and debris shall be removed, the site graded to required elevations and the areas cleaned.

Contractor shall not use any of the Owners facilities or supplies, including telephones, sanitary facilities, trash receptacles or vehicles.

The Contractor shall, at all times, be responsible for the security of the Contractor's facilities, materials and equipment. The Owner will not be responsible for missing or damaged equipment, tools or personal belongings.

5.2 Storage Buildings

Storage buildings shall be adequate for the requirements of the various trades and shall have adequate dimensions for storage and handling of products. Ventilation shall be provided to comply with specified and code requirements for the products stored. Heating shall be provided to maintain temperatures specified in the respective sections for the products stored. Buildings shall be arranged and/or partitioned to provide security of contents and ready access for inspection and inventory. Combustible materials shall be stored in a well ventilated, remote building meeting applicable safety standards.

5.3 Sanitary Facilities

The Contractor shall provide sanitary facilities for the on site personnel:

1. As required by laws and regulations.
2. Not less than one (1) facility per site.
3. Not less than one (1) facility for each 20 employees, or fraction thereof, of Contractor and subcontractors at the site.

Facilities and enclosures shall be serviced, cleaned and maintained on a weekly basis. The Owner's existing sanitary facilities will not be available for use by Contractor or subcontractors.

6.0 CONSTRUCTION AIDS

The Contractor shall provide construction aids and equipment required by personnel and to facilitate the execution of the Work including, but not limited to, scaffolds, staging, ladders, stairs, ramps, runways, platforms, railways, hoists, cranes, chutes and other such facilities and equipment as required. Contractor may, at his own risk, use hoists and cranes installed as part of the work, subject to the following:

1. Coordinate with Engineer and Owner.
2. Do not exceed rated capacity of hoists and cranes.
3. Replace or repair any damaged units to the satisfaction of the Owner.
4. Owner makes no representation as to the suitability, serviceability, or safety of hoists and cranes and assumes no responsibility for their safe use by the Contractor's personnel.

Construction aids shall be relocated as required by the progress of construction, by storage or work requirements, and to accommodate legitimate requirements of Owner. Temporary materials and equipment shall be completely removed at the completion of the Project. Remove foundations and underground installations for construction aids. The areas of the site affected by temporary installations shall be graded to required elevations and slopes and the area clean. The Contractor shall clean and repair damage caused by installation or by use of temporary facilities

7.0 VEHICLE ACCESS AND PARKING

Contractor shall ensure that construction vehicles do not limited access and street parking for area residents. All efforts shall be made to minimize the number of construction vehicles on site at all times.

8.0 TEMPORARY BARRIERS AND ENCLOSURES

8.1 Barricades

The Contractor shall provide suitable barricades as required for protection of the work and protection of the public, Owner's employees, Contractor's employees and others who may be affected by the Work. The barricades shall be provided to prevent unauthorized entry to construction areas and affected roads, streets and alleyways and to protect existing facilities and adjacent property from damage. Warning lights shall be illuminated on barricades from sunset to sunrise where required for safety. Placement of barricades shall be done in a manner that will allow Owner's personnel access to existing facilities. The barricades shall be installed in a neat manner, with a reasonable uniform appearance and structurally adequate for the required purposes. Barricades shall be relocated as required by the progress of the Work. Barricades, including foundations, shall be removed when construction has progressed to the point that they are no longer needed. The Contractor shall repair damage caused by installation, fill and grade the areas of the site to required elevations and slopes and clean the area.

9.0 TEMPORARY CONTROLS

All BMPs identified in the WPCP prepared and submitted by the Contractor shall be in place prior to the start of work.

*****END OF SECTION*****

SECTION 01770
CLOSE OUT PROCEDURES

1.0 GENERAL

Section Includes: Contract closeout requirements including:

1. Disinfection of systems,
2. Preparation and submittal of closeout documents,
3. Final completion certification.

2.0 WASTE DISPOSAL

A. Arrange for and dispose of surplus materials, waste products, and debris off-site.

1. Prior to making disposal on private property, obtain written permission from Owner of such property.

B. Do not fill ditches, washes, or drainage ways which may create drainage problems.

C. Do not create unsightly or unsanitary nuisances during disposal operations.

D. Maintain disposal site in safe condition and good appearance.

E. Complete leveling and cleanup prior to final acceptance of the Work.

3.0 TOUCH-UP AND REPAIR

A. Touch-up or repair finished surfaces on structures, equipment, fixtures, and installations that have been damaged prior to inspection for Final Acceptance.

B. Refinish or replace entire surfaces which cannot be touched-up or repaired satisfactorily.

4.0 FINAL CLEANING AND STERILIZATION [DISINFECTION] OF SYSTEMS OF POTABLE WATER MAINS

A. Clean interior of pipe and fittings.

B. When pipe contains dirt that cannot be removed by flushing, swab pipe interiors with solution containing not less than 500 parts per million of chlorine until clean.

C. Flush 12 inch in diameter and smaller pipe as thoroughly as available water sources will permit.

D. Fill pipe with chlorine solution of sufficient strength to provide 10 parts per million chlorine residual at end of 24 hours.

E. Flush pipes with potable water until chlorine residual is less than 0.6 parts per million before pipe are put into service.

F. See additional requirements in Section 02645 TESTING AND DISINFECTION OF WATER MAINS

5.0 CLOSEOUT DOCUMENTS

A. Submit following Closeout Submittals upon Completion and at least seven (7) days prior to submitting Application for Final Payment:

1. Evidence of Compliance with Requirements of Governing Authorities.
2. Project Record Documents.
3. Operation and Maintenance Manuals.
4. Warranties and Bonds.
5. Keys and Keying Schedule.
6. Evidence of Payment and Release of Liens and Stop Payment Notices as outlined in Conditions of the Contract.
7. Release of claims as outlined in Conditions of the Contract.
8. Survey Record Documents as specified in Section 01722.
9. Certificate of Final Completion.

6.0 PROJECT RECORD DOCUMENTS

A. Maintain at Project site, available to Owner and Construction Manager, one (1) copy of the Contract Documents, shop drawings and other submittals, in good order.

1. Mark and record field changes and detailed information contained in submittals and change orders.
2. Record actual depths, horizontal and vertical location of underground pipes, duct banks and other buried utilities. Reference dimensions to permanent surface features.
3. Identify specific details of pipe connections, location of existing buried features located during excavation, and the final locations of piping, equipment, electrical conduits, manholes, and pull boxes.
4. Identify location of spare conduits including beginning, ending and routing through pull boxes, and manholes. Record spare conductors, including number and size, within spare conduits, and filled conduits.
5. Provide schedules, lists, layout drawings, and wiring diagrams.
6. Make annotations with erasable colored pencil conforming to the following color code:

Additions:	Red
Deletions:	Green
Comments	Blue
Dimensions:	Graphite

B. Maintain documents separate from those used for construction.
   1. Label documents "RECORD DOCUMENTS."

C. Keep documents current.

   1. Record required information at the time the material and equipment is installed and before permanently concealing.

D. Deliver record documents with transmittal letter containing date, Project title, Contractor's name and address, list of documents, and signature of Contractor.

E. Record documents shall be available for the Construction Manager to review to ascertain that changes have been recorded.

F. Failure of the Contractor to keep current with the updating of the Record Documents shall be grounds for withholding monies from partial payment estimates as specified in Section 00700.

***** END OF SECTION *****

CITY OF PLACERVILLE, CALIFORNIA\
DEVELOPMENT SERVICES DEPARTMENT
ENGINEERING DIVISION

Pardi/Big Cut/Sacramento Street Area Waterline Relocation Project

Project No. 41109

TECHNICAL SPECIFICATIONS

April 25, 2016

SECTION 02060
TEMPORARY TRAFFIC CONTROL

PART 1 – GENERAL

1.01 WORK INCLUDED

A. This work consists of furnishing, placing, implementing, maintaining and removing the various temporary traffic control setups in accordance with the City of Placerville Standards and Caltrans Standards.

B. The Contractor shall prepare and submit any proposed deviations from the approved traffic control plan included in the contract documents to the City of Placerville and Caltrans and receive approval prior to starting any work.

PART 2 – PRODUCTS

2.01 GENERAL

A. All barricades, warning signs, lights, temporary signals, and other protective devices shall conform to the provisions for Construction Signing as indicated in the "Manual on Uniform Traffic Control Devices for Streets and Highways", current edition, published by the Federal Highway Administration. Materials used for the fabrication or erection of such devices shall be approved by the City, Caltrans (within Caltrans Right-of-Way) and the Engineer before use on the project. Traffic control devices not approved by the City and/or the Engineer will not be allowed to be used on the project and their use may justify suspension of Work.

B. All traffic control within Caltrans Right-of-Way shall meet Caltrans standards and requirements of the encroachment permit.

C. All controls shall comply with the California Supplement to the Manual on Uniform Traffic Control Devices (MUTCD-CA), Part 6, most current version at time of notice to proceed.

D. Sign Panels: Sign panels will be constructed of 3/4-inch plywood or 6061-T6 or 5052-H38 aluminum alloy sheeting conforming to ASTM 209.

1. Aluminum sign panels will be 0.125 inches thick and backed with metal backing angles; except that those sign panels 48 inches by 60 inches or smaller may be:
    a. 0.080 inches thick and backed with metal backing angles or 2-inch x 4-inch dimensional lumber or,
    b. Unbacked 0.125 inches thick.
2. Wood sign panels will be backed with metal backing angles; except that backing is not required during the construction season for those sign panels 48 inches by 60 inches or smaller.
3. All sign panels installed without backing during construction will be backed as described above at the Contractor’s expense prior to any suspension of work.

E. Barrels: Barrels will be plastic conforming to the Manual on Uniform Traffic Control Devices California Supplement (MUTCD-CA), with six-inch-wide stripes.

2.02 FLAGGING

A. The Flagging Code as adopted by the California Department of Transportation and made a part of the MUTCD-CA shall be adhered to at all times.

2.03 TRAFFIC CONTROL MAINTAINER

A. The Contractor shall designate an individual(s) who will be responsible at all times to see that all necessary maintenance of traffic control devices is performed. The name of this individual(s) and the telephone number where this person(s) can be contacted at any time will be submitted to the Agency before implementing any temporary traffic control on the project.

B. This individual(s) hereinafter entitled "TRAFFIC CONTROL MAINTAINER", will be responsible at all times to see that all necessary maintenance of traffic control devices is performed. Maintenance will include, but will not be limited to, the following:

1. Clean all devices
2. Repair, reset or replace any damaged devices
3. Reset undamaged devices knocked or blown down
4. Replace batteries, light bulbs, control panels, and other components of electrical devices.
5. Add fuel and motor oil to engines of power generating units for electrical devices, and maintain them in good operating condition.
6. Insure that all devices remain in their proper locations and are properly positioned in accordance with the traffic control plan in use.
7. Implement and enforce a system of relief flagging in which every flagger shall be relieved for at least fifteen (15) minutes every four hours for the duration of their shift.

Failure of Contractor to implement a TRAFFIC CONTROL MAINTAINER or failure of Maintainer to comply with the above stipulations will be considered just cause to suspend Work. The cost for a TRAFFIC CONTROL MAINTAINER is subsidiary to other bid items.

PART 3 – EXECUTION

3.01 REQUIREMENTS

A. Construction shall not commence on the portions of the project requiring traffic control until necessary construction warning signs are in place and approved by the Engineer.

B. No traffic control will be paid for outside of the project limits which results from the haul of Contractor secured material sources. Such traffic control shall be approved by the Agency and adhere to the provisions for Construction Signing as indicated in the "Manual on Uniform Traffic Control Devices for Streets and Highways", current edition.. This additional control will be considered subsidiary to other bid items.

C. Contractor shall notify appropriate authorities in advance of any street closure and as required by the City and Caltrans approved traffic control plan. This includes

notifying the City, local media, all emergency services, all non-emergency services, such as waste collection and postal delivery, project engineer and all affected residents and businesses at lease one week prior to closing any streets. Cal-trans shall be notified if the project includes or is adjacent to a road under their jurisdiction. Highways and/or streets closed to through traffic shall be protected by barricades and obstructions shall be reflectorized and illuminated during hours of darkness. All flagging stations shall be fully illuminated, if they are providing traffic control during hours of darkness.

D. Contractor shall provide an appropriate alternate route if street closures are proposed. No closure shall be allowed if an alternate route is not available. All closures must be approved in advance by the City of Placerville and/or State of California – Department of Transportation and shall be limited to between the hours of 7:30am and 4:30pm to allow for ingress and egress of working residents. The Contractor is cautioned that night work will be a requirement for work within Caltrans Right-of-Way; all work shall be in accordance with the Caltrans encroachment permit.

E. Reasonable access shall be maintained to local residents at all times. Collector and arterial streets shall provide local access and emergency traffic flow.

F. Portable signs may be mounted on stands, skids, or on Barricades at the option of the Contractor. When not in use, however, signs and all mounting hardware shall be removed from edge of traveled way.

****END OF SECTION****

SECTION 02072
TIE-IN SEQUENCING

PART 1 – GENERAL

1.01 SCOPE OF WORK

A. This section describes the procedures for tie-ins to the existing water main line and at the designated tie-ins to the existing water services.

PART 2 – MATERIALS (NOT USED)

PART 3 – EXECUTION

3.01 TIE-IN REQUIREMENTS

A. Existing Water System: In order to prevent unnecessary interruption of the water main line, a controlled scheduling and sequence of the Contractor's work is necessary. The Contractor shall work in cooperation with City Operations and Maintenance personnel to maintain continuous operation of the system. The Contractor is required to submit a schedule and tie-in plan for City approval within ten (10) days prior to starting any of the tie-in work. The plan shall include an emergency response measures.

B. The Contractor shall not operate any valve or other water or water appurtenances without permission of the City.

C. Connections to Existing Facilities:

1. The existing water main **must remain in service** until the new water main line is tied in, tested and all water services are moved over to the new water line. The new lines shall be extended as close as possible to the tie-in points. The new lines must be completely tested before tying into the existing lines.
2. New services shall be installed prior to testing of the new water main unless the existing service is to be re-used.
3. The cost of temporary facilities and other items necessary for successful completion of the project shall be included in the bid.
4. The Contractor shall be fully prepared to complete the connection in the time allotted and shall not stop work until the facilities are restored to service or until otherwise directed so by the City. All possible preparatory work shall be completed to the satisfaction of the City prior to connection to the existing system. The City reserves the right to cancel or delay the tie-ins due to weather, equipment or man-power concerns.

D. Exposing Existing Facilities: When connections are to be made to any existing pipe or other appurtenances, a minimum of two days before the tie-in the Contractor shall excavate and expose the existing facility before the connection is made to determine the actual size, elevation, or position of the facility.

E. Tie-in Sequencing

1. After successful testing of the new water main line, the new water main line shall be connected to the existing waterline at the designated locations to create a looped system.
2. Once the new water main line is connected to the existing system, meters are to be switched over to the new services laterals in a systematic way to minimize the

number and duration of outages for any individual customers.

3. Existing service lines will need to be capped and remain water tight until existing system is abandoned.
4. Contractor is required to employ adequate resources to ensure that no customer shall be out of service for more then 4-hours at a time, for more than 2 consecutive days with an outage and no more than 2 outages total, regardless of duration of each outage.
5. Contractor shall forfeit $200/day/customer for each day that any individual customer exceeds the above shut-down limitations.
6. The Contractor shall notify property owners a minimum of 48-hours prior to any shut-downs. The Contractor is responsible for any flow remaining in the service.
7. Only after all services are connected to the new system will final abandonment of the existing system be performed. Contractor shall provide an abandonment plan in advance of final abandonment.

** END OF SECTION **

SECTION 02075
PROTECTION, TESTING, AND RESTORATION OF EXISTING FACILITIES

PART 1 – GENERAL

1.01 REQUIREMENTS

A. This section is intended to include requirements associated with protection, testing, and restoration of existing facilities such as underground utilities, sprinkler systems, utility poles, surface improvements, and survey markers.

1.02 RELATED REQUIREMENTS

A. Section 02491 – Landscaping Repair

1.03 NOTIFICATION OF UTILITIES

A. Utility Owners, including the City of Rocklin and South Placer Municipal Utility District, are to be contacted by the Contractor prior to any excavation activities requesting locations on underground utilities and services on a street by street basis. Should any apparent interference's exist, the: Engineer shall be immediately notified.

B. Contractor shall utilize the services of Underground Service Alert (USA) and shall obtain a USA ticket and keep the ticket current during excavating. USA may be contacted at 1-800-227-2600.

C. In the event that a conflicting utility is damaged, the utility owner shall be notified and given the opportunity to specify alternative repair materials or methods.

1.04 INTERRUPTION TO UTILITIES

A. Any underground facilities located by utility owners, the City, or indicated in Contract Documents shall be treated as directed in Section 00700 to the Construction Contract.

B. Any underground facilities not located by utility owners and not indicated in Contract Documents shall be treated according to Section 00700 to the Construction Contract

C. Exact locations and depths of all underground utilities shall be verified, by uncovering, prior to commencing any WORK activities, as required in Section 00700. When such exploratory excavations show the underground utility locations as indicated in Contract Documents to be in error, the Contractor shall immediately notify the Engineer in writing.

D. Where utilities are to be relocated, Contractor shall make proper application to the owners of the conflicting utilities and notify Engineer of specified time and conditions of necessitated WORK.

E. Contractor shall, prior to work on private property, coordinate with the property owner to test existing sprinkler systems. The test shall require the Contractor to visually inspect the operating sprinkler system and to note any deficiencies. The Contractor shall provide to the City and the landowner a list of deficiencies

F. All restorations made to utilities shall be inspected and approved by an authorized representative of the utility before being concealed by backfill or other WORK.

G. No additional compensation for any breaks or other delays associated with working around existing utility lines (gas, water, sewer, irrigation, etc) will be made. The Contractor assumes the responsibility to retain and protect existing utility lines within or without the specified pay limits.

H. Contractor is responsible and assumes all liability to retain and protect all utility poles within or beyond the specified pay limit.

I. Contractor accepts responsibility for repair of utilities damaged during construction whether shown on the plans or not.

1.05 PROTECTION OF SURVEY AND STREET MARKERS

A. Survey markers or other existing street markers shall not be destroyed, removed, or otherwise disturbed without proper authorization. No pavement breaking or excavation shall be started until all surveyor or other permanent marker points that will be disturbed by the construction operations have been properly referenced for easy and accurate restoration by the Contractor.

B. All survey markers or points disturbed, will be accurately restored by the Contractor after all WORK is complete. The Contractor is responsible to replace survey markers per City of Placerville standards and obtain approval from the City prior to final closeout of the project.

1.06 PROTECTION OF TREES

A. Any construction work within the drip line of any tree shall conform to the City of Placerville Standard Specifications and the following: No tree shall be: removed without the expressed written permission of the property owner. Roots over 2 inches in diameter shall be protected and if accidentally damaged, shall be treated with sealer material or as approved by the City. Hand excavation may be required to avoid damage to roots 2 inches in diameter and larger. Cutting or breaking roots 2 inches in diameter or larger may require trimming of the tree to the satisfaction of the property owner or El Dorado County requirements.

PART 2 – PRODUCTS

2.01 REPLACEMENT IN KIND

A. Unless indicated otherwise, or specifically authorized by a utility owner, reconstruct utilities with new material of the same size, type, and quality as that removed.

PART 3 – EXECUTION

3.01 GENERAL

A. Replace per the City of Placerville standards all improvements such as curbs and gutters, barricades, traffic islands, signalization, fences, signs, etc. that are cut, removed, damaged, or otherwise disturbed by construction.

B. Where utilities are parallel to or cross the construction but do not conflict with the permanent work to be constructed, follow the procedures given below and as

indicated in the drawings. Notify the utility owner a minimum of 48 hours in advance of the crossing construction and coordinate the construction schedule with the utility owner's requirements.

C. Determine the true location and depth of utilities and service connections that may be affected by or affect the work. Determine the type, material, and condition of these utilities. In order to provide sufficient lead time to resolve unforeseen conflicts, order materials and take appropriate measures to ensure that there is no delay in work.

3.02 PROCEDURES

A. Protect in place: Protect utilities in place, unless abandoned, and maintain the utility in service, unless otherwise specified.

B. Cut and Plug Ends: Cut abandoned utility lines and plug the ends. Install a 3-foot concrete plug in waterlines 4” or greater in diameter. Legally dispose of cut pipe and other removed items.

C. Tees or outlets cut and capped on existing waterlines remaining in service will be subjected to the same leak standards as new pipe. Contractor shall account for thrust and pressure in the existing line when cutting and capping outlets.

D. Remove and Reconstruct: Where so indicated in the drawings, or as required by the City’s representative, remove the utility and, after passage, reconstruct it with new materials. Provide temporary services for the disconnected utility.

3.03 COMPACTION

A. Utilities Protected in Place: Contractor shall backfill and compact under and around the utility.

B. Sewer Crossing Procedures – When crossing a sewer service, lateral or main the contractor shall protect the existing facility in place. Backfill material between the sewer service, lateral or main and the waterline shall be CLSM per these specifications. Any damaged sewer service, lateral or main shall be replaced per City standards at the Contractor’s expense.

3.04 LAWN REPLACEMENT

A. Any lawns damaged by construction shall be replaced with nursery grown sod and repaired at no cost to the City per Section 02491. Every attempt shall be made to satisfy the property owner that the repair has been made to restore private property to pre-construction conditions. Seeding may be allowed on a case by case basis to achieve better match with existing grass, if adequate soil preparation is performed and watering arrangements are made with the owner.

3.05 LANDSCAPING REPLACEMENT

A. All landscaping, including plants, flowers, and/or other vegetation damaged by construction shall be replaced or repaired at no cost to the City per Section 02491. Every attempt shall be made to satisfy the property owner that the repair has been made to restore private property to pre-construction conditions.

3.06 YARD STRUCTURES

A. Any structures including: fences, sheds, decks, walkways, concrete, asphalt, etc. Damaged by construction shall be replaced or repaired at no cost to the City. Every attempt shall be made to satisfy the property owner that the repair has been made to restore private property to pre-construction conditions.

3.07 PAVEMENT AND STRIPING

A. All pavement and striping disturbed during the project shall be replaced in kind. Pavement and striping within commercial areas shall be approved by the property owner. Approvals shall be provided to the City in the form of a letter signed by the owner.

3.08 PRIVATE UTILITIES

A. All private utilities such as irrigation systems, swimming pool piping, yard lighting systems, etc., shall be replaced or repaired at no cost to the City. Every attempt shall be made to satisfy the property owner that the repair has been made to restore private property to preconstruction conditions.

3.09 DRIVEWAYS

A. Driveways shall be replaced in kind (but no less than 4" of concrete over 4" of gravel) by removing and replacing the entire damaged portion between joints or scores, except as follows:

1. If there are no joints or scores in the damaged driveway, the Contractor may saw cut scores into the driveway in a symmetrically pleasing manner that is approved by the City and the property owner, to create concrete panels that are no larger than 10' x 10', and replace the newly created damaged portion;
2. In the event that existing driveway panels are greater than 10' x 10', the Contractor may saw cut the driveway in a symmetrically pleasing manner that is approved by the City and the property owner, to create panels smaller than 10' x 10', and remove and replace only the damaged portion

B. It is the intent of this specification that the Contractor will not be required to replace more than 10' x 10' of any single driveway but that if the Contractor is required to saw cut new panels into a driveway, the new panels will be required to be as close to 10' x 10' as possible.

C. Compaction of sub-grade shall be per City of Placerville standards.

D. Driveways may be temporarily repaired with gravel, such that property owner can still use the driveway for up to ten working days. All final driveway repairs shall be made within ten working days of damage occurring.

****END OF SECTION****

SECTION 02081
CONTROLLED LOW STRENGTH MATERIAL

PART 1 – GENERAL

1.01 SECTION INCLUDES

A. Requirements for controlled low strength material (CLSM) as backfill material in specific locations.

B. CLSM shall be used as backfill material for all water mainline and service crossing under existing sewer laterals and sewer mainlines.

1.02 DEFINITION

A. Controlled Low Strength Material (CLSM): A highly flowable, lean concrete mix consisting of a mixture of cement, fly ash, densely graded mineral aggregates, water and admixtures. Characteristics include:

1. Capable of freely flowing to fill excavations and voids without compaction or other additional effort.
2. Used in trenches and backfill adjacent to structures where clearance is limited, and in other areas specifically identified on the Drawings or specified.
3. Low permeability to prevent migration of adjacent fines into the set mix.
4. Easily excavated after curing with minimum risk of damage to buried utility.

1.03 SUBMITTALS

A. Mix Design: Identify name and/or number of the mix design. Provide proportions and gradations of materials proposed for CLSM.

B. Certified test results for compressive strength.

PART 2 – PRODUCTS

2.01 GENERAL

A. CLSM Mix: A mixture of Portland cement, fly ash, aggregate, water, and admixtures that produce a material of controlled density and of low compressive strength capable of filled all spaces between the pipe, the bedding and the trench walls.

2.02 MATERIALS

A. Cement: Conforming to ASTM C150, Type II or III with total alkali content not more than 0.8 percent.

B. Water: Clean, potable water.

C. Fly Ash

1. Mix Designs used for Pipe Bedding and Trench Backfill: Class C in conformance with ASTM C 618.
2. Mix Designs used for Backfill of Excavations: Class F in conformance with ASTM C 618

D. Aggregate Materials

1. Densely graded rock conforming to the following gradation:

Sieve Size	Percentage Passing
1”	100
No. 8	50-100
No. 200	0-5

2.03 DESIGN REQUIREMENTS

A. Minimum Cement Content: 50 pounds per cubic yard.

B. Use fly ash to improve flow-ability of the fresh CLSM and to regulate the strength. Do not use more than 300 pounds per cubic yard.

C. Unit Weight Requirements

1. Density of CLSM when used as backfill of excavations: Between 100 pounds per cubic foot and 130 pounds per cubic foot in the as-placed condition as determined by AST D 6023.

D. Compressive Strength Requirements

1. Mix Designs used for Pipe Bedding and Trench Backfill: Compressive strength at 28 days between 50 psi and 100 psi as determined in accordance with ASTM D 4832.

2.04 CONSISTENCY AND MIXING

A. Consistency: Similar to that of a thick liquid so that it flows readily and fills spaces and voids around pipes and structures.

B. Slump: Between 6 inches and 8 inches when tested in accordance with ASTM C143.

C. Uniform consistency and appearance.

D. Mixing Method and Time: As required to produce a uniform mixture of cement, fly ash, aggregate, admixtures, and water.

2.05 MEASUREMENT OF MATERIALS

A. Use weighing equipment to determine the amount of cement, fly ash, and aggregate entering into each patch. Where batches are proportioned to contain an integral number of conventional sacks of cement, the cement is delivered at the mixer in the original unbroken sacks, the weight of the cement contained in each sack may be taken without weighing as 94 lbs.

B. Use a suitable water meter or other acceptable method of measuring the quantity of water entering the mixer.

PART 3 – EXECUTION

3.01 PLACEMENT

A. CLSM shall be placed as backfill for the water main/water service and between the water pipeline and sewer lateral/main up to a minimum of 6-inches over the sewer pipeline.

B. Thoroughly settle and consolidate CLSM as the material is placed in excavations. Fill the entire depth of the layer that is being consolidated, into a dense, homogeneous mass, filling all spaces and voids and bringing only a slight excess of water to the exposed surface. Place and consolidate CLSM by means that will not cause

segregation of the mix.

C. Do not place CLSM under the following conditions:

   1. When the air temperature is below 40 degrees Fahrenheit.
   2. When the excavation contains water or when the bottom or walls of the excavation are frozen or contain frozen material.

D. Prevent flotation of pipes by placing CLSM in two or more lifts, with each lift reaching an initial set before the succeeding lift is placed. Correct and flotation and displacement of pipelines.

3.02 PROTECTION OF CLSM

A. Protect CLSM from equipment, traffic, and backfilling operations until the surface has achieved an initial set and has hardened enough to develop a minimum penetration number of 650 when tested in accordance with ASTM C 403.

B. If the trench backfill is not to be placed over the CLSM within eight hours after CLSM placement, place a 6-inch layer of moist backfill over the CLSM.

**** END OF SECTION ****

SECTION 02100
SITE PREPARATION

PART 1 – GENERAL

1.01 SCOPE

A. This work shall consist of removing any objectionable material from within the construction area and such other areas as may be specified. Removal of existing facilities, clearing, and grubbing, shall be performed in advance of trenching operations and in accordance with the requirements specified in these specifications. Grubbing also required to clear the staging area.

PART 2 – MATERIALS

2.01 SCOPE

A. The Contractor shall provide all materials and equipment to accomplish the work described.

PART 3 – EXECUTION

3.01 PRESERVATION OF PROPERTY

A. Existing improvements and facilities, adjacent property, utility and facilities, and trees and plants that are not to be removed, shall be protected from injury or damage resulting from the Contractor's operations. Only trees and plants that are designated or marked for removal by the Engineer the District shall be removed.

3.02 REMOVAL OF EXISTING FACILITIES

A. Removal of existing facilities shall consist of removing the facilities, which interfere with construction within the area to be cleared and grubbed. Removed facilities shall be disposed of, salvaged, relocated, reinstalled, or reconstructed as shown on the plans or as specified.

B. Concrete removal shall be performed with minimum damage to any portion that is to remain in place. All damage to the existing concrete, which is to remain in place, shall be repaired to a condition equal to that existing prior to the beginning of removal operations at the Contractor’s expense.

C. All depressions excavated below the original ground surface shall be backfilled and compacted to a relative compaction equivalent to the original ground except for areas, which are to be subsequently excavated to a depth greater than the depressions.

3.03 CLEARING

A. Clearing shall consist of the removal from the area above the natural ground surface of all vegetative growth, such as trees designated for removal, downed trees, logs, upturned stumps, roots of downed trees, brush, grass, weeds, and all other

objectionable material, including concrete or masonry within the area required for the construction and within the easements obtained by the District.

3.04 GRUBBING

A. Grubbing shall consist of removal from the area below the natural ground surface and within the trench limits of all stumps, buried logs, and other objectionable material from with the limits of clearing.

B. All depressions excavated below the original ground surface shall be backfilled and compacted to a relative compaction equivalent to the original ground except for areas which are to be subsequently excavated to a depth greater than the depression.

3.05 DISPOSAL OF MATERIALS

A. Materials shall be removed from the site of the work unless otherwise specified. It shall be the Contractor's responsibility to locate suitable disposal sites unless a disposal site is specified.

*** END OF SECTION ***

SECTION 02115
EXISTING FACILITIES

PART 1 – GENERAL

1.01 SCOPE

A. This work shall consist of identifying, protecting, and relocating existing facilities within the area of work. All work shall be performed to comply with the affected agency utility specifications.

PART 2 – MATERIALS

2.01 SCOPE

A. The Contractor shall provide all materials and equipment to accomplish the work described. Materials shall comply with the governing agency specifications.

PART 3 – EXECUTION

3.01 PROTECTION OF FACILITIES

A. The Contractor shall take all necessary measures to avoid injury to existing surface and underground utility facilities in and near the site of the work. No error or omission on the drawings shall be construed to relieve the Contractor from his responsibility to protect all underground pipes, conduits, cables or other structures. The Contractor shall indemnify the City and hold it harmless from any and all claims, demands, or liability made or asserted by any person or entity on account of, or in connection with any damage to such surface or underground facilities caused by the Contractor or any of his agents or subcontractors.

3.02 EXISTING UTILITIES

A. The drawings for the work show the underground utilities on the site insofar as they are known to the Agency. The drawings may not show facilities apparent from visual inspection of the site or service laterals or appurtenances, the existence of which can be inferred from the presence of other visible facilities such as buildings, meters, junction boxes, etc., on or adjacent to the construction site.

3.03 RELOCATION OF EXISTING UTILITIES

A. The Contractor shall make all arrangements for, and pay all costs connected with, any necessary relocation of existing surface and underground utility facilities (including without limitation, services, conduits, pipes, and mains) affecting the project or the work to be performed under these specifications.

3.04 UNIDENTIFIED EXISTING UTILITIES

A. If, in the performance of the work, an existing facility is encountered which is not shown on the drawings and is not apparent or inferable from visual inspection of the site, the Inspector shall be notified immediately. The City will determine whether the drawings or specifications shall be modified, or whether existing utility shall be relocated or whether the Contractor shall work around the existing utility. If appropriate, the determination of the City shall be incorporated in a Change Order for extra work pursuant to the General Conditions.

** END OF SECTION **

SECTION 02220
STRUCTURAL EXCAVATION AND BACKFILL

PART 1 – GENERAL

1.01 SCOPE

A. This section shall govern the work for structure excavation and backfill. Structure excavation shall consist of the removal of material for the construction of foundations for vaults, manholes, or other structures, and other excavation designated on the Plans or in the Specifications as structure excavation. Trenching and backfill shall be in accordance with Section 02221.

B. Structure excavation and structure backfill shall include the furnishing of all materials and equipment; the construction or installation of all facilities which may be necessary to perform the excavations and to place and compact the backfill; and the subsequent removal of such facilities, except where they are required or permitted by the Plans or Specifications to remain in place.

1.02 SUBMITTALS

A. Upon request, the following items shall be submitted and approved by the City.

1. Test results showing gradation, durability and sand equivalent of import material.

2. Permit and notification form for excavations 5 feet or more in depth as required by Cal-OSHA, including any trench excavation or shoring plans.

PART 2 – MATERIALS

2.01 EXCAVATION

A. Excavation is unclassified. The Contractor shall complete all excavations regardless of the type of materials encountered. The Contractor shall make his own estimate of the kind and extent of the various materials which will be encountered in the excavation.

2.02 FOUNDATION

A. Material for structural foundation shall conform to one of the following:

1. Sand/Decomposed Granite – Sand shall be free from organic matter, clay, debris, or any other material that, in the opinion of the Engineer, is objectionable or deleterious. Sand shall not have more than 13 percent passing a 200-mesh screen. Minor amounts of gravel up to ½ inch in size will be permitted. The sand equivalent shall not be less than 30 and a durability index of not less than 35.

2. Aggregate Base – Base shall be ¾ inch and minus or ½ inch and minus. The aggregate size gradation shall comply with Caltrans Specifications for Class 2 road base. The sand equivalent shall be 30 minimum. The durability index shall be 35 minimum.

3. Crushed Rock – Crushed rock shall be granular material 1 ½ inch and minus. At least 90 percent shall be retained on the No. 4 sieve and less than 5 percent retained on the No. 200 sieve. Compact with vibratory plate compactor.

2.03 BACKFILL

A. Native earth backfill and imported backfill material shall conform to the requirements of Section 02221.

PART 3 – EXECUTION

3.01 PAVEMENT

A. Bituminous or concrete pavements regardless of their thickness, and curbs and sidewalks shall be cut prior to excavation for the structure in accordance with the requirements of the encroachment permit or the City.

B. Road section depth and material (e.g. asphalt and concrete depths) vary and no additional compensation will be allowed.

C. Pavement and concrete materials shall be removed from the site.

3.02 EXCAVATION

A. The sides of excavations for structures shall be sufficient to leave at least 1.5 feet clear as measured from the extreme outside of form work on the structure as the case may be. Where excavation is inadvertently carried below designated elevations, suitable provision shall be made at the expense of the Contractor for adjustment of construction, as directed by the Engineer to meet requirements incurred by the deeper excavation. No earth backfill will be permitted to correct overdepth excavation beneath structures, and overdepth excavation in such locations shall be rectified by backfilling with sand, graded gravel, or concrete as directed by the City.

3.03 BRACING

A. The Contractor's design and installation of bracing and sheeting shall take the necessary precautions to be consistent with the rules, orders, and regulations of the State of California Construction Safety Orders.

B. Excavations shall be so braced, sheeted, and supported that they will be safe, such that the walls of the excavation will not slide or settle and all existing improvements of any kind, either on public or private property, will be fully protected from damage.

C. The sheeting, shoring, and bracing shall be arranged so as not to place any stress on portions of the completed work.

D. The Contractor shall carefully remove sheeting, shoring, bracing, and timbering to prevent the caving or collapse of the excavation faces being supported.

3.04 DEWATERING

A. The Contractor shall provide and maintain means and devices to continuously remove and dispose of all water entering the excavation during construction of the structure and during backfill operations.

B. Water shall be disposed of in a manner that will prevent damage to adjacent property and pipe trenches.

C. The Contractor shall not allow water to rise in the excavation until backfilling around and above the structure is completed.

3.05 BACKFILL

A. After structures and foundations are in place, backfill shall be placed to the original groundline or to the limits designated on the plans.

B. No material shall be deposited against cast in place concrete structures until the concrete has reached a compressive strength of at least 2,500 pounds per square • inch.

C. Backfill material shall be placed in horizontal layers not exceeding 8 inches in depth.

3.06 COMPACTION

A. Compaction requirements shall be as follows:
   1. Backfill within 5 feet of structure: 95% relative compaction.

   2. Structural Backfill beyond 5 feet of structure: 90% relative compaction.

   3. Foundation: 95% relative compaction.

   4. Each layer of backfill material shall be moistened and thoroughly tamped, rolled, or otherwise compacted to the specified relative density.

   5. Compaction equipment shall be carefully operated near structures to prevent their displacement or damage. Structural fill is to be placed and compacted in uniform layers around all sides of the structure.

3.07 EXCESS EXCAVATED MATERIAL

A. The Contractor shall make the necessary arrangements for, and shall remove and dispose of all excess excavated material.

B. All surplus material shall become the property of and be disposed of offsite by the Contractor.

C. No excavated material shall be deposited on private property unless written permission from the owner thereof is secured by the Contractor. Before the City will accept the work as being completed, the Contractor shall file a written release signed by all property owners with whom he has entered into agreements for disposal of excess excavated material absolving the City from any liability connected therewith.

3.08 RESTORATION OF DAMAGED SURFACES AND PROPERTY

A. If any existing improvements, facilities, or vegetation not designated to be removed have been damaged, removed, or disturbed by the Contractor, for whatever reason, such improvements, facilities and vegetation shall be replaced or repaired at the expense of the Contractor.

3.09 FINAL CLEAN-UP

A. After backfill has been completed, the right-of-way shall be dressed smooth and left in a neat and presentable condition to the satisfaction of the City.

***** END OF SECTION *****

SECTION 02221
TRENCH EXCAVATION, BACKFILL AND COMPACTION

PART 1 – GENERAL

1.01 SCOPE

A. This section governs the work for trench excavation, backfill and compaction for underground pipeline work.

1.02 SUBMITTALS

A. Upon request, the following items shall be submitted and approved by the City.
   1. Test results showing gradation, durability and sand equivalent of pipe zone material.
   2. Permit and notification form for excavations 5 feet or more in depth as required by Cal-OSHA, including any trench excavation or shoring plans.

1.03 TESTING

A. Testing frequency and location shall be approved by the City and Caltrans.

1.04 POTHOLING

A. The Contractor shall pothole all utility crossings with the proposed water main alignment and laterals prior to the installation of any water lines and laterals. An extensive effort will be required to pothole all utility crossings a minimum of two weeks in advance of any work occurring and keep the project within the required time frames specified in Section 00800 and document depth and location versus that shown on the plans. Contractor to provide a marked up drawing, two weeks in advance of any work occurring, highlighting any differences in elevation or location of existing utilities. This may require a full time potholing crew working in parallel with the pipe installation. Costs associated with any utility conflicts resulting from inadequate potholing effort shall be the responsibility of the contractor.

B. Contractor shall, prior to any pipeline installation, mark with white paint the limits of pavement removal for the proposed pipeline alignment and mark the depth of all utilities crossing the proposed alignment.

PART 2 – MATERIALS

2.01 TRENCH EXCAVATION

A. Excavation is unclassified. No geotechnical report is provided as part of this project. The Contractor shall perform a thorough investigation of the site. The Contractor shall complete all excavations regardless of the type of materials encountered. The Contractor shall make his own estimate of the kind and extent of the various materials which will be encountered in the excavation. Excavation of rock, if encountered, will be paid per the line item in the bid schedule. See Section 02221-3.04.

2.02 PIPE ZONE

A. Material for the pipe zone shall conform to one of the following:

1. Sand/Decomposed Granite - Sand shall be free from organic matter, clay, debris, or any other material that, in the opinion of the Engineer, is objectionable or deleterious. Sand shall not have more than 13 percent passing a 200-mesh screen. Minor amounts of gravel up to ½ inch in size will be permitted. The sand equivalent shall not be less than 30 and a durability index of not less than 35.

2. Aggregate Base - Base shall be ¾ inch and minus or ½ inch and minus. The aggregate size gradation shall comply with Caltrans Specifications for Class 2 road base. The sand equivalent shall be 30 minimum. The durability index shall be 35 minimum.

2.03 BACKFILL

A. Outside Asphalt Road Sections

1. Material for backfill from 12 inches above the top of the pipe to subgrade, shall be free from organic matter, debris, and rocks larger than 6 inches in diameter or length. The City shall be the sole judge of conformance of backfill material to this specification.

2. Backfill material shall generally conform to the following gradation:

Sieve Size	Percent Passing
6”	100
3”	50
#4	35 - 100
#30	20 – 100

B. Within Asphalt Road Sections

1. Trench shall be backfilled with Class II AB or controlled low strength material (CLSM) as approved by the Engineer.

PART 3 – EXECUTION

3.01 EXCAVATION

A. Excavation for pipelines, fittings, and appurtenances shall be open trench to the depth and in the direction necessary for the proper installation of the same as shown on the contract drawings or as otherwise approved by the Engineer. Excavation shall only proceed when the necessary materials have been delivered to the site.

B. The Contractor shall bear all costs of disposing of roots and all other waste materials from the excavation. Material shall be disposed of in such a manner as to meet all requirements of the state, county, and local regulations regarding health, safety, and public welfare. Non-flammable material and flammable material, when burning is not permitted, shall be disposed of off the construction site in an approved location at the Contractor's expense.

C. The Contractor shall remove obstructions within the trench area or adjacent thereto, such as abandoned concrete structures, logs, and debris of all types, without additional compensation. The Engineer may, if requested, make changes in the trench alignment to avoid major obstructions, if such alignment can be made without adversely affecting the intended function of the facility.

1. Existing Pavement Removal - Pavement to be removed shall be removed and replaced in the manner prescribed by the Agency issuing the encroachment permit.

   Existing pavement, curbs, gutters, sidewalks and driveways to be removed in connection with construction shall be neatly saw cut prior to removal. Saw cuts shall have a minimum depth of one inch in concrete sidewalk. Road section depths and materials (e.g. asphalt and concrete depths) may vary. Contractor is responsible to determine saw cutting requirements.

   Concrete sidewalks or driveways shall be removed so that a minimum 30-inch square is replaced. If the saw cut in a sidewalk or driveway would fall within 30 inches of a construction joint, expansion joint, or edge, the concrete shall be removed and replaced to the joint or edge. If the saw cut would fall within 12 inches of a score mark, the concrete shall be removed and replaced to the score mark. Concrete shall be removed by jackhammer.

2. Grading and Stockpiling - The Contractor shall control grading in a manner to prevent water running into excavations. Obstructions of surface drainage shall be avoided and means shall be provided whereby storm and wastewater can be uninterrupted in existing gutters, other surface drains or temporary drains. Material for backfill or for protection of excavation in public roads from surface drainage shall be neatly placed and kept shaped so as to cause the least possible interference with public travel. Free access must be provided to all fire hydrants, water valves, meters and private drives.

3. Line and Grade - The Contractor shall excavate the trench to the lines and grades shown on the plans. Any deviations shall first be approved by the Engineer.

   The trench shall be excavated to a minimum depth of 6 inches below the bottom of the pipe. The sides of the trench shall be excavated and maintained as nearly vertical as is practical.

4. Trench Support - The trench shall be adequately supported and the safety of workers provided for as required by the standard of the appropriate regulatory agency.

   All shoring for open excavations shall conform to the State of California, Department of Industrial Relations, and Division of Industrial Safety "Construction Safety Orders."

   The Contractor shall be responsible for adequately shored and braced excavations so that the earth will not slide, move or settle, and so that all existing improvements of any kind will be fully protected from damage.

   No shoring once installed, shall be removed until the trench has been approved for backfill operations. Removal of shoring shall only be

accomplished during backfill operations and in such a manner as to prevent any movement of the ground or damage to the pipe or other structures.

The Contractor shall obtain all permits for any excavations over five feet in depth into which a person is required to descend or any excavation less than five feet in depth in soils where hazardous ground movement may be expected and into which a person is required to descend.

Excavated material shall not be placed closer than two feet from the top edge of the trench. Heavy equipment should not be used or placed near the sides of the trench unless the trench is adequately braced.

5. Use of Explosives – Blasting is strictly prohibited.

6. Preservation of Trees - Excavation within the dripline of any tree shall conform to the following and to encroachment permits. Trees shall not be removed outside of fill or excavated areas, except as authorized by the City.

   Tree roots larger than 2 inches in diameter, shall not be cut and shall be kept moist during exposure. For damaged or severed root systems, trees shall be trimmed to compensate for the decreased root system. Trimming shall be done to the satisfaction of the Inspector. All roots shall be neatly cut with saw or sharp cutter.

7. Dewatering - The Contractor shall provide and maintain, at all times during construction, ample means and devices with which to promptly remove and properly dispose of all water from any source entering the excavations or other parts of the work. Dewatering shall be accomplished by methods which will ensure a dry excavation and preservation of the final lines and grades of the bottoms of excavations. Said methods may include well points, sump pumps, suitable rock or gravel placed below the required bedding for drainage and pumping purposes, temporary pipelines and other means, all subject to the approval of the Engineer.

   Dewatering for the structures and pipelines shall commence when groundwater is first encountered and shall continue until the backfill at the pipe zone has been completed.

   The Contractor shall dispose of the water from the work in a suitable manner without damage to adjacent property. No water shall be drained into work built or under construction without prior consent of the Engineer. Water shall be disposed in such a manner as not to be a menace to public health.

   The Contractor shall be responsible to obtain all required Local and State Permits and comply with all applicable regulatory requirements. The Contractor shall provide the City with a dewatering plan clearly showing compliance prior to any dewatering activities.

8. Correction of Faulty Grades – Any over-excavation carried below the grade as specified or shown, shall be rectified by backfilling with approved sand and/or graded gravel, and shall be compacted to provide a firm and unyielding subgrade and/or foundation, as directed by the Engineer.

9. Structure Protection – Temporary support, adequate protection and maintenance of all underground and surface structures, drains, sewers and other obstructions encountered in the progress of the work shall be furnished by the Contractor at his expense and subject to the approval of the Engineer.

Any structure that has been disturbed shall be restored upon completion of the work.

10. Protection of Property and Surface Structures - Trees, shrubbery, fences, and poles and all other property and surface structures shall be protected unless their removal is shown on the drawings or authorized by the Engineer.

11. Trench Width and Grade - The width of the trench within the pipe zone shall be such that the clear space between the barrel of the pipe and the trench wall shall not exceed the amount shown in the standard details. In general, the following shall be adhered to:

Nominal Pipe Diameter	Trench Width Minimum	Maximum
2"-12"	O.D. + 12"	O.D. + 18"
14"-20"	O.D. + 24"	O.D. + 36"

Trench widths in excess of those specified must have prior written approval.

12. Maximum Length of Open Trench - Unless otherwise specified or directed by the city or County, the maximum length of open trench shall be 200 feet, or the distance necessary to accommodate the amount of pipe installed in a single day, whichever is greater. The distance is the collective length of any location, including open excavation, pipe laying and appurtenant construction and backfill which has not been temporarily resurfaced. Failure by the Contractor to comply with the limitations specified herein may result in an order to halt progress of the work until compliance has been achieved. The Contractor shall provide proper barricades for excavated areas.

3.02 TRENCH FOUNDATION

A. The trench bottom shall be graded to provide a smooth, firm and stable foundation at every point throughout the length of the pipe. Should large gravel and cobbles be encountered at the trench bottom or pipe subgrade, they shall be removed from beneath the pipe and replaced with clean imported sand which shall be compacted to provide uniform support and a firm foundation.

B. Foundations in Poor Soil - If excessively wet, soft, spongy, unstable or similarly unsuitable material is encountered at the surface upon which the bedding material is to be placed, the unsuitable material shall be removed to a depth as determined in the field by the Engineer. The Contractor's attention is called to Section 3.1G, regarding his responsibilities in maintaining adequate dewatering procedures to ensure that an otherwise stable foundation will not be rendered unfit due to accumulation of water.

3.03 BACKFILL AND COMPACTION

A. Backfill shall be completed within the shortest possible time so that the construction area or street can be opened to traffic. If for any reason construction of the pipeline or appurtenances thereto is delayed, the City may require that the trench be backfilled and such areas or streets opened to traffic.

B. Pipe Zone - After completion of the trench excavation and proper preparation of the foundation, 6 inches of bedding material shall be placed on the trench bottom for support under the pipe. Bell holes shall be dug to provide adequate clearance between the pipe bell and the bedding material. All pipe shall be installed in such a manner as to insure full support of the pipe barrel over its entire length. After the pipe is adjusted for line and grade and the joint is made, the remainder of the pipe bedding shall be placed to the limits as shown on the Drawings. All bedding material shall be compacted 90 percent as measured by Test Method California 231, prior to placement of subsequent backfill.

C. When bedding material is selected material or imported sand, the pipe bedding backfill shall be brought to optimum moisture content and shall be placed by hand in layers not exceeding 3 inches in thickness to the centerline (springline) of the pipe and each layer shall be solidly tamped with the proper tools so as not to injure, damage, or disturb the pipe. Backfilling shall be carried on simultaneously on each side of the pipe to assure proper protection of the pipe.

D. Each lift shall be "walked in" and supplemented by slicing with a shovel to ensure that all voids around the pipe have been completely filled. Mechanical compaction such as "pogo sticks" or "wackers", as approved, shall be used for compaction of pipe zone.

E. Initial Backfill - The remaining portion of the trench shall be backfilled, compacted and/or consolidated by approved methods to obtain a 90% compaction as measured by Test Method 231F. Backfill shall be Class 2 AB unless otherwise approved by the City Engineer. Bituminous pavement, concrete, rock, or other lumpy material shall not be used in the backfill unless these materials are scattered and do not exceed 6 inches in any dimension and are not placed within 1½ feet of the surface. Material of perishable, organic matter, spongy or otherwise improper nature, shall not be used.

F. When backfill is placed mechanically, the backfill material shall be pushed onto the slope of the backfill previously placed and allowed to slide down into the trench. The Contractor shall not push backfill into the trench in such a way as to permit free fall of the material until at least 18 inches of cover is provided over the top of the pipe. Under no circumstances shall sharp, heavy pieces of materials be allowed to be dropped directly onto the pipe or the tamped material around the pipe. Backfill shall be placed in layers not exceeding 8 inches and compacted by an approved method.

G. Heavy duty compacting equipment having an overall weight in excess of 125 pounds shall not be used until backfill has been completed to a depth of 2 feet over the top of the pipe.

H. If hydro-hammer is used for compaction of overlying materials, at least 4 feet of backfill must be placed over the top of pipe prior to its use. This is required to insure that the pipe is not damaged.

I. Final Backfill - Final backfill placed in trenches below roadways or below shoulders of roadways, shall be compacted to a density of not less than 95% or as directed by the encroachment permit. Backfill outside of roadways shall be compacted to 90%.

J. Backfill shall be placed in layers not exceeding 8 inches, compacted and brought up to the subgrade of the roadway.

3.04 HARD ROCK EXCAVATION

A. Excavation of unrippable rock requiring a larger excavator and/or hydraulic hammering will be paid for as an additional cost above and beyond the cost for excavation and trenching for ordinary excavation. The City Representative will determine when rock excavation for unrippable rock is required per the definition below. Contractor shall refer to the limited seismic refraction investigation report and geological memorandum included in Appendix A for specifics on geological conditions.

Equipment Used (1)	**Excavation rate (2)**	
	Ordinary Excavation, including rippable rock	**Unrippable Rock**
General Excavation – Caterpillar D8N or equivalent (Flywheel power ≥ 285 HP, Vehicle Mass ≥ 82,000 lbs) with single shank ripper Hydraulic Rock Hammer or equivalent (11,000 ft-lbs of breaker force	≥ 5 CY per hour	< 5 CY per hour
Trench Excavation – Caterpillar 235C or equivalent (Flywheel power ≥ 250 HP, Vehicle mass ≥ 92,000 lbs) with a short to medium stick and a rock ripping bucket Hydraulic Rock Hammer or equivalent (11,000 ft-lbs of breaker force	≥ 5 CY per hour	< 5 CY per hour
(1) Equipment shall be in good operating condition and operated by experienced personnel **(2) As witnessed by City Representative**		

B. Contract time will be extended for rock excavation at a rate of one (1) working day per forty (40) cubic yards of rock excavated.

3.05 EXCESS EXCAVATED MATERIAL

A. The Contractor shall make the necessary arrangements for, and shall remove and dispose of all excess excavated material. It is the intent of these specifications that all surplus material not required for backfill or fill shall be disposed of by the Contractor outside the limits of the public right-of-way and/or easements at no liability to the City.

B. No excavated material shall be deposited on private property unless written permission from the owner thereof is secured by the Contractor. Before the City will accept the work as being completed, the Contractor shall file a written release signed by all property owners with whom he has entered into agreements for disposal of excess excavated material absolving the City from any liability connected therewith.

3.06 RESTORATION OF DAMAGED SURFACES AND PROPERTY

A. If any pavement, trees, shrubbery, fences, poles or other property and surface structures have been damaged, removed, or disturbed by the Contractor, whether deliberately or through failure to carry out the requirements of the contract documents, state laws, municipal ordinances, or the specific direction of the City, or through failure to employ usual and reasonable safeguards, such property and surface structures shall be replaced or repaired at the expense of the Contractor.

3.07 FINAL CLEAN-UP

A. After backfill has been completed, the right-of-way shall be dressed smooth and left in a neat and presentable condition to the satisfaction of the City and County.

***** END OF SECTION *****

SECTION 02491
LANDSCAPE REPAIRS

PART 1 – GENERAL

1.01 DESCRIPTION

A. The Contractor shall furnish all labor, equipment, and materials necessary to perform the following work as indicated on the drawings and specified herein:

1. Finish Grading
2. Lawn and Grass Restoration
3. Soil Preparation
4. Clean Up
5. Maintenance
6. Guarantee

1.02 EXISTING CONDITIONS

A. Before submitting bid, the Contractor shall visit the site and become familiar with all conditions relative to landscaping, elevations, soils, area of work, clearances, etc.; no extra payment will be allowed for work occasioned by improper appraisal of existing conditions. Contractor shall document existing conditions with photographs and video per City Standards.

B. Existing landscaping shall be preserved wherever possible.

1.03 WORK ON PRIVATE PROPERTY

A. The Contractor is made aware that portions of the project require work on private property to reconnect existing water services. The Contractor is responsible for coordinating with individual property owners and ensuring that all property is restored to pre-construction conditions. Contractor shall provide evidence of private property owner final approval of restored conditions prior to final completion. No final payment or release of retention will be allowed until approvals are submitted.

1.04 LIKE LANDSCAPING

A. Contractor shall replace all damaged landscaping with plants similar in variety, size, and shape to the existing landscaping. In the event that like landscaping is not commercially available, the Contractor shall coordinate with the property owner for a replacement. In no case will the Contractor be required to replace landscaping to a higher value than the existing without additional considerations from the City.

1.05 HARDSCAPING

A. Concrete, asphalt, and other hardscaping shall be sawcut as appropriate and replaced to the limits provided in the approved property owner agreement.

Alternative methods of repair shall be approved by the property owner and the City.

B. Replacement of hardscaped surfaces shall match existing as much as possible and may include exposed aggregate, stamped concrete, colored concrete, brick, stone, etc.

C. Contractor's personnel physically performing this replacement work shall have a minimum of ten (10) years experience in performing related hardscape work and shall demonstrate a high level of competence.

1.06 RELATED WORK AND REFERENCES

A. Section 02221- Trenching, Backfilling and Compacting

B. ASPA (American Sod Producers Association) -Guideline Specification for Sodding

1.07 DELIVERY, STORAGE, AND HANDLING

A. Deliver Sod to the site on palettes within 24 hours of stripping.

B. Deliver fertilizer in waterproof bags showing weight, chemical analysis, and name of manufacturer.

PART 2 – MATERIALS

2.01 SOIL CONDITIONER

A. Shall be treated bark, 1/4" size, Vita-Bark Nursery Mix, or equal.

2.02 GROWING MEDIA

A. Topsoil: Natural, fertile, agricultural soil capable of sustaining vigorous plant growth, not in frozen or muddy condition, containing not less than six (6) percent organic matter, and corrected to pH value of 5.9 to 7.0. Free from subsoil, slag, clay, stones, lumps, live plants, roots, sticks, crabgrass, coughgrass, noxious weeds, and foreign matter. Not exceeding twelve (12) inches in depth.

B. Fertilizer: Use commercial fertilizer formulation required by soil analysis. Deliver fertilizer mixed as specified in standard size bags showing weight, analysis, name of manufacturer. Store in a weatherproof storage location in such a manner that it will be kept dry and its effectiveness will not be impaired.

2.03 HYDRO MULCH AND SEEDING

A. Provide hydro-mulch and seeding (if approved in lieu of sod) for any lawn or landscape area disturbed.

PART 3 – EXECUTION

3.01 PRE-CONSTRUCTION DOCUMENTATION

A. Prior to construction, the Contractor will document the conditions of all surface features of the affected areas.

3.02 FINISH GRADING

A. Drainage: make entire area within contract lines smooth and even and insure adequate drainage of all areas. There shall be no depressed areas where water is trapped creating wet areas. Should this be discovered by the City before or after completion of the landscape, the Contractor shall correct the problem at no expense to the City.

B. Finish Grades: Insure that finish grades shall be 1/2" below surface of paved areas.

C. Scars: Eliminate any erosion or construction scars.

3.03 SOIL PREPARATION

A. All areas to be seeded or shrub planting beds shall be cleared and weeded. Fertilizer shall be applied in accordance with the recommendations of the nursery supplying the plants.

3.04 PLANTING

A. Trees: Plant and stake trees in accordance with supplying nursery recommendations.

B. Shrubs: Plant and support shrubs in accordance with supplying nursery recommendations.

3.05 WEED CONTROL

A. Apply pre-emergent weed control to all shrub planting beds after completion of all planting. Follow manufacturer's direction. Do not allow any weed control in the seeded areas. After applying the pre-emergent weed control, do not over-water any areas to prevent the washing away of pre-emergent weed control.

3.06 MAINTENANCE

A. Until the City Acceptance: The 2-month maintenance period will commence upon completion of the repairs and/or tree and shrub planting as verified by the City as a result of an on site visit. The Contractor shall request this on-site visit, in writing, five days in advance. Completion of the maintenance period shall be verified by another on-site visit. The Contractor shall also request this on-site visit, in writing, five days in advance. If landscaping or maintenance is unacceptable, the maintenance period shall continue until final acceptance of the job by the City.

B. Replacements: All dead plant materials and all plants not in a vigorous growing condition at the end of the maintenance period shall be replaced as weather conditions permit. Plants used for replacement shall be of the same variety and size (where possible) as those originally planted and shall be planted as specified.

C. Maintenance: Maintenance shall include all watering, reseeding, spraying, pruning, and weeding necessary to keep the planting areas neat and attractive throughout the maintenance period.

D. The Contractor is not expected to engage in long term maintenance of the new sod or seeded areas. However, he shall maintain the sod or seed until the completion

of the two month maintenance period referenced in Section 3.06. While the Contractor is maintaining the sod/seed, the following conditions shall be met.

1. Water as needed to promote growth and health of the sod. Water grass sufficient to moisten soil 3-5 inches deep.
2. Replant damaged areas. Roll when necessary to remove minor depressions or irregularities.
3. Control growth of weeds. When using herbicides, apply in accordance with manufacturer's recommendations. Remedy damage resulting from negligent or improper use of herbicides. Only use herbicides with the permission of the property owner. If the property owner does not allow the use of herbicides, Contractor will not be liable for weed control.

E. SPRINKLER SYSTEMS

1. With cooperation of the owner, contractor shall operate existing sprinkler system prior to any construction that may affect the system.
2. With cooperation of the owner, ensure sprinkler system settings are adequate to ensure adequate watering of the newly placed seed or sod.
3. Contractor shall submit a report of findings to the inspector.

3.07 POST CONSTRUCTION DOCUMENTATION

A. Produce Post-Construction photographs and video per City Standards.

****END OF SECTION****

SECTION 02575
PAVEMENT RESTORATION

PART 1 – GENERAL

1.01 DESCRIPTION

A. Work in this section includes reconstruction of all curbs, gutters, sidewalks, mow strips, driveways, road shoulders, pavement and similar items damaged as a result of the work. Reconstruction shall match the original materials and dimensions subject to the minimum requirements of the Contract Documents. All work shall match the appearance of the existing improvements. Work covered in this section shall be completed in accordance with the City of Placerville and El Dorado County Standard Specifications.

B. All work within Caltrans Right-of-Way shall conform to the encroachment permit requirements and Caltrans standards for pavement restoration.

C. Related Documents: The General and Supplementary Conditions and the applicable sections of Division 1, form a part of this section.

1.02 REFERENCE DOCUMENTS

A. Reference Specifications: Whenever the words "Standard Specifications" are referred to in the Specifications, the reference is to the State of California, Department of Transportation (CALTRANS), Standard Specifications (latest edition). Standard Specifications paragraphs concerning measurement and payment are excluded.

1.03 SUBMITTALS

A. General: Submit the following items in accordance with Section 01330 SUBMITTALS.

B. Certification: Certification from the material supplier that the materials supplied for this project meet the Specifications.

PART 2 – PRODUCTS

2.01 CONCRETE

A. Concrete shall meet the requirements of Section 03301 CAST-IN-PLACE CONCRETE.

2.02 HOT MIX ASPHALT (HMA) PAVEMENT

A. Hot Mix Asphalt Pavement is not considered minor hot mix asphalt and shall meet the requirements of Section 39 of the 2010 Standards and the City of Placerville Standard Specifications and approved Encroachment Permits.

1. Asphalt binder used in HMA Type A must be PG 64-16.
2. Aggregate used in HMA Type A must comply with the ½-inch HMA Types A and B gradation.

2.03 TRAFFIC STRIPES AND PAVEMENT MARKINGS

A. Traffic stripes and pavement markings shall be thermoplastic per the City of Placerville and Caltrans standards of Section 84.

PART 3 – EXECUTION

3.01 PAVEMENT CUTTING

A. After backfilling trenches or excavations and prior to paving, sawcut existing pavement parallel to the trench or excavation, using a concrete saw, to a minimum depth equal to or greater than one-half the pavement thickness. Any pavement damaged outside these lines shall be re-cut and restored at the expense of the Contractor. Should voids develop under existing pavement during construction, those affected areas shall be sawcut in straight orthogonal lines and replaced after the voids have been filled.

3.02 TEMPORARY PAVEMENT

A. Temporary resurfacing consisting of not less than 2 inches of hot mix asphalt concrete shall be placed and maintained wherever an excavation is made through an existing pavement. The temporary resurfacing shall be maintained to provide for the safety and convenience of the public. Temporary pavement shall be placed as soon as the condition of the trench backfill is considered by the City to be suitable to receive resurfacing. Temporary resurfacing shall be removed prior to permanent resurfacing. Temporary pavement shall be clearly marked “Temporary Pavement”.

3.03 PERMANENT PAVEMENT

A. Permanent hot mix asphalt (HMA) resurfacing and striping shall be placed in accordance with Section 39 of the 2010 Standards and the City of Placerville Standard Specifications and approved Encroachment Permits.

3.05 CONCRETE RESTORATION

A. Restore all concrete items per City of Placerville Standards and Caltrans Encroachment Permit.

B. Replace curb, gutter and sidewalk between the expansion joints at all locations where trenching across them.

C. Sidewalk repair shall be per City of Placerville Standards.

B. Restore all other concrete items to the same dimensions and thickness as the original items. Place concrete in accordance with the requirements of Section 03300 CONCRETE. Upper 6 inches of subgrade shall be compacted to a minimum 95 percent relative density prior to placement of concrete. Surface finish shall match existing surrounding surface.

****END OF SECTION****

SECTION 02615
DUCTILE IRON PIPE, FITTINGS AND COUPLINGS

PART 1 – GENERAL

1.01 SCOPE

A. This specification governs the furnishing and installation of ductile iron pipe material and main line fittings including laying, joining, bedding and approvals. All incidentals and appurtenant operations necessary for the construction of pipelines shall be accomplished in strict accordance with the drawings and other terms and conditions of the contract.

B. Fitting types covered under this section include bends, tees, crosses, reducers, couplings, caps, plugs, adapters and all other fittings necessary for a complete pipeline installation.

C. The Contractor shall also furnish all equipment, tools, labor and materials required to relocate sewers, conduits, ducts, pipes, or other structures as may be necessary to complete the installation as shown and specified.

D. All standard specifications, i.e., AWWA, ASTM, etc., made a portion of these specifications by reference shall be the latest edition and revision thereof.

E. The Contractor shall be responsible for all material furnished by him, and shall replace at his own expense, all material found defective in manufacture or damaged in handling after delivery by the manufacturer. This shall include the furnishings of all material and labor required to replace defective material discovered prior to final acceptance of the work.

F. The Contractor shall be responsible for the safe storage of material until it has been incorporated into the completed project. The interior of all pipe and fittings shall be kept free from dirt and foreign matter at all times.

G. Pipe surfaces shall be free from nicks, scratches and other blemishes. The joining surfaces of pipe spigots and bell sockets shall be free from gouges or other imperfections that might cause leakage.

1.02 SUBMITTALS

A. Submittals shall be provided for the following items plus all additional items required in the specifications for the particular type of pipe:

1. Pipe and joint material
2. Fittings
3. Specialties
4. Thrust block mix design

PART 2 – MATERIALS

2.01 DUCTILE IRON PIPE (DI)

A. Ductile iron pipe shall conform to the quality and strength requirements of AWWA C-151.

1. Markings - Each standard or random length of pipe shall be clearly marked with the following:
    a. The letters "DI" or "Ductile"
    b. Nominal size and class
    c. Year produced
    d. Manufacturer's trade name and country where cast
    e. Seal (mark) of testing agency
2. Pressure Class - Where the class is not indicated on the plans, the pipe shall be Class 350.
3. Laying Length - Standard laying lengths of 18- or 20-foot are acceptable.
4. Joint Type - Unless otherwise shown or specified, pipe joints shall be rubber gasket push-on type joint conforming to AWWA C-111.
    a. Flanged Joint - Where flanged joints are specified, pipe barrel shall be threaded and fitted with flanges in accordance to AWWA C-115 "Flanged Ductile Iron Pipe with Threaded Flanges."
5. Physical Test Requirements - Hydrostatic, tension test, and impact test shall be conducted at the factory in accordance with ASTM A 746. All testing shall be performed by a recognized testing laboratory with such testing available for inspection by the City. If required, the manufacturer shall supply a letter of certification attesting to their pipe meeting these specifications.
6. Lining and Coating - Protecto 401 Ceramic Coatings is only required on the interior of the pipe, fittings, and couplings as noted. The exterior shall be epoxy enamel coated.
7. Polyethylene Encasement - Pipe and fittings shall be wrapped in polyethylene. Polyethylene wrapping shall be in accordance to AWWA C-105, latest revision. Minimum thickness shall be 0.008 inch (8 mils).
8. Warning Tape - Two-inch-wide non-metallic tape marked "water main."

2.02 FITTINGS

A. All cast and ductile iron fittings shall be manufactured in accordance with the following AWWA Standards: C-110, "Gray-Iron and Ductile-Iron Fittings, 3 inches through 48 inches for Water and Other Liquids", C-111, "Rubber-Gasket Joints for Ductile-Iron and Gray-Iron Pressure Pipe and Fittings," with the following additional requirements or exceptions. All pipe, fittings, and couplings as noted shall be lined with Protecto 401 Ceramic Epoxy of standard thickness (40 mils minimum) as defined in referenced specifications. The exterior shall be epoxy enamel coated.

B. All fittings shall be rated equally to the class of pipe. End connections may be push-on, mechanical, or flanged joints.

C. Ductile iron compact fittings, per AWWA C-153, are allowed.

1. Flanges, Bolts and Gaskets - Flanges shall be flat-faced and meet either the requirements of AWWA C-207 for steel hub flange fittings, or AWWA C-110 Section 10-18 for ductile iron fittings. The flanges shall be marked with the size,

name or trademark of manufacturer and with the AWWA Class; i.e., "E", or pressure rating.

Bolts and nuts shall be cadmium plated, A307, Grade B of domestic origin. Cadmium plating shall conform to Federal Specification QQ-P-415-1956, Type 1, Class 1.

Gaskets shall be $^1/_8$-inch thick and be of the full-face self-centered type. The following table shows the bolt pattern for ASME/ANSI 16.1 Class 125 cast iron flange. This pattern is rated at 275 psi for Class E steel pipe flanges and 250 psi for ductile iron pipe fittings.

Bolt Hole			
Pipe Size	Diameter (Inches)	Bolt Diameter & Length (Inches)	Number of Bolts
6"	$^7/_8$	¾ x 3½	8
8"	$^7/_8$	¾ x 3½	8
10"	1	$^7/_8$ x 4	12
12"	1	$^7/_8$ x 4	12
14"	$1^1/_8$	1 x 4½	12
16"	$1^1/_8$	1 x 4½	16
18"	1¼	$1^1/_8$ x 5	16
20”	1¼	$1^1/_8$ x 5½	20

The Contractor shall uniformly tighten the bolts and prevent bending or torsional strains. Proper anchorage shall be provided.

2. Mechanical Joint Fittings - The mechanical joints shall meet AWWA C111. That standard covers the joint as well as gaskets and bolts. T-bolts and nuts shall be manufactured of corrosion-resistant high-strength low-alloy Cor-Ten steel or equal. Number and length of bolts shall be as follows:

Pipe Size	Number of Bolts	Bolt Diameter & Length (Inches)
6"	6	¾ x 3½
8"	6	¾ x 4
10"	8	¾ x 4
12"	8	¾ x 4
14"	10	¾ x 4
16"	12	¾ x 4½
18"	12	¾ x 4½
20”	16	¾ x 4½

3. Restrained Joints - Restrained joint pipe and fittings shall be U.S. Pipe TR FLEX or approved equal.
4. Coatings and Linings - Cast iron fittings shall be lined with Protecto 401 Ceramic Epoxy lining per ASTM A746 and receive a bituminous coating per AWWA C110.

   Threaded holes and mating surfaces shall not be coated. Flange faces shall be coated with asphaltic varnish only. There shall be no coating of materials, or mortar on gasket grooves.
5. Mechanical Couplings - Couplings include transition couplings, flanged coupling adapters, high deflection couplings, and flexible and insulated couplings.
   a. Coupling Sleeves and Flanges - Coupling sleeves and flanges may be of gray iron or carbon steel.
   b. Bolts and Nuts for Flanges - Bolts and nuts for buried and submerged flanges, flanges in underground vaults and structures, and flanges located outdoors above ground shall be cadmium plated, A307, Grade B. Provide one washer for each nut. Each washer shall be of the same material as the nut.

2.03 TRANSITION COUPLING

A. Scope: The following governs the furnishing and installation of transition couplings.

B. Manufacturers: Transition couplings shall be Romac 501, Smith-Blair Omni 441, Rockwell 433, or Ford FC1.

2.04 FLEXIBLE COUPLINGS

A. Scope: The following governs the furnishing and installation of flexible couplings.

B. Manufacturers: Flexible couplings shall be APAC, Baker 200 series, JCM, Rockwell 400 series or Romac.

2.05 HIGH DEFLECTION COUPLINGS

A. Scope: The following governs the furnishing and installation of high deflection couplings.

B. Manufactures: High deflection couplings shall be XTRA FLEX restrained joint high deflection fitting, by U.S. Pipe or approved equal.

2.06 FLANGED COUPLING ADAPTORS

A. Scope: The following governs the furnishing and installation of flange coupling adapters.

B. Manufacturers: Flanged coupling adapters shall be Romac FC400 Series, APAC, Baker, JCM, or Rockwell equal. Pipe restraining systems shall be Romac 600 Series, APAC, Baker, JCM, or Rockwell equal.

2.07 THRUST BLOCK

A. Thrust blocking is required at all fittings 11-1/4 degrees or larger in the pipe per these Plans and Specifications.

B. Refer to Section 03300 – Concrete and Reinforcing Steel for concrete mix requirements and backfill requirements.

PART 3 – EXECUTION

3.01 HANDLING AND TRANSPORTATION

A. Handling and transportation of pipe shall be in accordance with the pipe manufacturer's published instructions.

Heavy canvas, or nylon slings of suitable strength shall be used for lifting and supporting materials. Chains or cables shall not be used.

B. Pipe and fittings shall not be stored on rocks or gravel, or other hard material which might damage the pipe.

1. Rubber Gasket Storage - All rubber gaskets shall be stored in a cool, well ventilated place and not exposed to the direct rays of the sun. Gaskets shall not be allowed in contact with oils, fuels, petroleum, or solvents.

3.02 PIPE LAYING

A. Pipe shall be laid in accordance with the pipe manufacturer's published instructions, as complimented and modified herein.

1. Cleanliness - The interior of pipes shall be clean of foreign materials before sections of pipe are installed and shall be protected to prevent entry of foreign materials after installation.

Open ends of installed pipe shall be sealed with watertight plugs or other approved means at times when pipe installation is not in progress.

Ground water shall not be allowed to enter the pipe.

2. Inspection Before Installation - All pipe and fittings shall be carefully examined for cracks and other defects while suspended and before installation. Spigot ends shall be examined with particular care as this area is the most vulnerable to damage from handling. Defective pipe or fittings shall be laid aside for inspection by the City, who will prescribe corrective repairs or rejection.

3. Lowering of Pipe Material into Trench - Proper implements, tools, and equipment, satisfactory to the City, shall be provided and used by the Contractor for the safe and convenient performance of the work. All pipe, fittings, valves, and hydrants shall be carefully lowered into the trench piece by piece in such a manner as to prevent damage to the water main materials and protective coatings and linings.

Under no circumstances shall water main materials be dropped or dumped into the trench.

If damage occurs to any pipe, fittings, valves, hydrants or water main accessories in handling, the damage shall be immediately brought to the City's attention.

4. Laying of Pipe - Pipe shall be laid in trenches to the line and grade indicated on the plans and as specified.

   Every precaution shall be taken to prevent foreign material from entering the pipe while it is being placed in the trench. If the pipe laying crew cannot install the pipe into the trench without getting earth into it, the City's Inspector may require a heavy tightly woven canvas bag of suitable size, or plastic caps, be placed over each end of the pipe prior to installation and left there until the connection is made to the adjacent pipe. During laying operations, no debris, tools, clothing or other material shall be placed in the pipe. As each length of pipe is placed in the trench, the spigot end shall be centered in the bell or coupling, and the pipe forced home and brought to correct line and grade. The pipe shall be secured in place with approved backfill material tamped under it, except at the bells or couplings. Precautions shall be taken to prevent dirt from entering the joint space.

   Joints shall be assembled in accordance with the manufacturer's instructions. Each joint shall be checked with a feeler gauge to assure proper seating of the gasket.

5. Cutting of Pipe - Field cuts and connections shall be in accordance with the pipe manufacturer's published instructions.

   The cutting of pipe for inserting valves, fittings, or closure pieces, shall be done in a neat and workmanlike manner without damage to the pipe so as to leave a smooth end at right angles to the axis of the pipe.

6. Allowable Deflection - The maximum allowable angular deflection at the joints shall be 80 percent of manufacturer's recommendation for push-on and mechanical joints.

3.03 FITTINGS

A. Fittings shall be installed in the manner specified herein

   1. Anchorage for Fittings - All fittings shall be provided with a thrust block constructed against undisturbed soil as shown on the Standard Drawings.

   2. Thrust Blocks - Thrust blocks shall be constructed of Class B concrete. Care shall be taken not to obstruct the outlets of tees or crosses, which are intended for future connections. A waterproof paper or plastic bond-breaker shall be placed between plugs and caps and the concrete thrust block to facilitate their removal in the future. Thrust blocks shall be poured against undisturbed earth and shall have at least the minimum dimensions shown in the details on the Standard Drawings.

   3. Mechanical Couplings - Oil, scale, rust, and dirt shall be cleaned from pipe ends. The Contractor shall clean gaskets in couplings prior to installing the coupling in accordance with the manufacturer's recommendations.

      Bolt threads shall be lubricated with graphite and oil prior to installation.

a. Painting and Coating

1) The Contractor shall coat buried flexible pipe couplings, transition couplings, and flanged coupling adapters per Section 09900 and then wrap the couplings with polyethylene wrap per AWWA C-105.

2) The Contractor shall coat flexible pipe couplings (including joint harness assemblies), transition couplings, and flanged coupling adapters located indoors, in vaults and structures, and above-ground with the same coating system as specified for the adjacent pipe. A prime coat shall be applied at the factory.

3.04 POLYETHYLENE ENCASEMENT

A. The polyethylene encasement shall prevent contact between the pipe and the surrounding backfill and bedding materials, but is not intended to be a completely airtight or watertight enclosure. All lumps of clay, mud, cinders, etc. on the pipe surface shall be removed prior to installation of the polyethylene encasement. During installation, care shall be exercised to prevent soil or embedment material from becoming trapped between the pipe and the polyethylene.

The polyethylene film shall be fitted to the contour of the pipe to effect a snug, but not tight, encasement with a minimum space between the polyethylene and the pipe. Sufficient slack shall be provided in contouring to prevent stretching the polyethylene where it bridges irregular surfaces, such as bell-spigot interfaces, bolted joints, or fittings, and to prevent damage to the polyethylene due to backfilling operations. Overlaps and ends shall be secured with adhesive tape.

B. For installations below the water table, both ends of the polyethylene tube shall be sealed as thoroughly as possible with adhesive tape at the joint overlap.

C. Installation of polyethylene encasement shall be in accordance with the Standard Drawings and AWWA C-105, Method A. The following summarizes this method.

1. Installation of Polyethylene Encasement for Pipe - Cut polyethylene tube to a length approximately 2 feet longer than the pipe section. Slip the tube around the pipe, centering it to provide a 1-foot overlap on each adjacent pipe section, and bunching it accordion fashion lengthwise until it clears the pipe ends.

Lower the pipe into the trench and make up the pipe joint with the preceding section of pipe. A shallow bell hole must be made at the joints to facilitate installation of the polyethylene tube. After assembling the pipe joint, make the overlap of the polyethylene tube. Pull the bunched polyethylene from the preceding length of pipe, slip it over the end of the new length of pipe, and secure it in place. Then slip the end of the polyethylene from the new pipe section over the end of the first wrap until it overlaps the joint at the end of the preceding length of pipe. Secure the overlap in place. Take up the slack width at the top of the pipe to make a snug, but not tight, fit along the barrel of the pipe, securing the fold at quarter points.

Any cuts, tears, punctures, or other damage to the polyethylene, shall be repaired as described below. Proceed with installation of the next section of pipe in the same manner.

2. Installation of Polyethylene Encasement for Appurtenances - Cover bends, reducers, offsets, and other pipe-shaped appurtenances with polyethylene in the same manner as the pipe. When it is not practical to wrap tees, crosses, and

other odd-shaped pieces in a tube, the items shall be wrapped with a flat sheet or split length of polyethylene tube by passing the sheet under the appurtenance and bringing it up around the body. Seams shall be made by bringing the edges together, folding over twice, and taping down. Polyethylene shall be taped securely in place.

3. Repairs of Polyethylene Encasement - Repair any cuts, tears, punctures, or damage to polyethylene with adhesive tape, or with a short length of polyethylene sheet or a tube cut open, wrapped around the pipe to cover the damaged area, and secured in place.
4. Openings in Polyethylene Encasement - Provide openings for branches, service taps, blowoffs, air valves, and similar appurtenances by making an X-shaped cut in the polyethylene and temporarily folding back the fill. After the appurtenance is installed, tape the slack securely to the appurtenance and repair the cut, as well as, any other damaged areas in the polyethylene, with any resulting damaged areas being repaired, as described above.
5. Junctions with Unwrapped Pipe - Where polyethylene-wrapped pipe joins an adjacent pipe that is not wrapped, extend the polyethylene wrap, to cover the adjacent pipe for a distance of at least 3 feet away from the ductile iron pipe. Service lines of dissimilar metals shall be wrapped with polyethylene or a suitable dielectric tape for a minimum clear distance of 3 feet away from the ductile iron pipe.

***** END OF SECTION *****

SECTION 02622
POLYVINYL CHLORIDE PIPE AND FITTINGS (PVC) (PRESSURE FLOW)

PART 1 – GENERAL

1.01 SCOPE

A. This specification governs the furnishing and installation of PVC pipe material and main line fittings including laying, jointing, bedding, and approvals. All incidentals and appurtenant operations necessary for the construction of water mains shall be done in strict accordance with the drawings and other terms and conditions of the contract.

B. Fitting types covered under this section include bends, tees, crosses, reducers, couplings, caps, plugs, adapters and all other fittings necessary for a complete pipeline installation.

C. The Contractor shall also furnish all equipment, tools, labor and materials required to relocate sewers, conduits, ducts, pipes, or other structures as may be necessary to complete the installation as shown and specified.

D. All standard specifications; i.e., AWWA, ASTM, etc., made a portion of these specifications by reference shall be the latest edition and revision thereof.

E. The Contractor shall be responsible for all material furnished by him and shall replace at his own expense, all material found defective in manufacture or damaged in handling after delivery by the manufacturer. This shall include the furnishings of all material and labor required to replace defective material discovered prior to final acceptance of the work.

F. Pipe surfaces shall be free from nicks, scratches and other blemishes. The joining surfaces of pipe spigots and of integral bell and sleeve reinforced bell sockets shall be free from gouges or other imperfections that might cause leakage.

1.02 STORAGE AND CARE

A. The Contractor shall be responsible for the safe storage of material until it has been incorporated into the completed project. The interior of all pipe and fittings shall be kept free from dirt and foreign matter at all times.

B. Pipe shall be stored at the job site in unit packages provided by the manufacturer. Caution shall be exercised to avoid compression, damage or deformation to bell ends of the pipe. If pipe is to be exposed to direct sunlight for more than 14 days, pipe must be covered with an opaque material while permitting adequate air circulation above and around the pipe to prevent excessive heat accumulation. Gaskets shall be protected from excessive exposure to heat, direct sunlight, ozone, oil and grease. Solvent cement when used shall be stored in tightly sealed containers from excessive heat.

1.03 SUBMITTALS

A. Submittals shall be provided for the following items plus all additional items required in the specifications for the particular type of pipe:

1. Pipe and jointing material
2. Fittings
3. Specialties
4. Thrust block mix design

PART 2 – MATERIALS

2.01 POLYVINYL CHLORIDE PIPE (PVC)

A. PVC pipe shall conform to AWWA C-900, Class 235 (DR-18) and Class 305 (DR-14) and shall have the same outside diameter (O.D.) as that of cast iron pipe (C.I.P.O.D.) in the sizes furnished.

1. Markings - Each standard or random length of pipe shall be clearly marked with the following:

    a. Nominal size and O.D. base; i.e., 6 inch cast iron pipe size
    b. Material code "PVC 1120"
    c. Dimensional ratio; i.e., DR 14 or 18 where DR is equal to thickness "divided by" diameter
    d. AWWA pressure class; i.e., 305
    e. AWWA designation "AWWA C-900"
    f. Manufacturer's trade name and production record code
    g. Seal (mark) of testing agency

2. Pressure Class – PVC C900 DR-18 will be installed for typical pipe installation. Pressure class PVC C900 DR-14 will be required where specified on the Plans or required by Title 22 requirements.

3. Laying Length - The standard laying length shall be 20 feet (plus or minus 1 inch) in all classes. A maximum of 15 percent may be furnished in random lengths of not less than 10 feet each.

4. Joint Type - Pipe joints shall be made using an integral bell with an elastomeric gasket push-on type joint or using machined couplings of a sleeve type with rubber ring gaskets and machined pipe ends to form a push-on type joint.

    a. Solvent cement joints are strictly prohibited.

    b. One coupling complete with one gasket each shall be factory assembled to each length of standard length pipe furnished. The companion gasket for each coupling will be packaged separately for shipment. Couplings shall be the same class as the pipe. Manufacturer shall furnish gasket lubricant for each quantity of pipe furnished. When additional couplings are furnished as separate items, two gaskets shall be furnished and installed in the gasket recess of each coupling.

5. Couplings – Where couplings are used, they shall meet the requirements of AWWA C-900. Couplings shall be as furnished by the manufacturer. Couplings shall be marked with same information as the pipe.

6. Physical Test Requirements - Hydrostatic burst and sustained pressure and crushing tests shall be conducted at the factory in accordance with AWWA C-900. All testing shall be subject to inspection by the City. If required, the manufacturer shall supply a letter of certification attesting to their pipe meeting these specifications.

7. Locating Wire - Locating wire shall be single strand, 10-gauge copper wire, with solid thermoplastic insulation.

8. Warning Tape - Warning tape shall be 2-inch-wide blue non-metallic tape marked "WATER MAIN."

2.02 FITTINGS

A. Ductile Iron Fittings – All fittings 11-1/4 degrees and greater shall be ductile iron per this specification unless otherwise noted on the contract plans

B. Ductile Iron Fittings – All cast and ductile iron fittings shall be Protecto 401 Ceramic Epoxy lined and coated and shall be manufactured in accordance with the ASTM Standards:

C. All fittings shall be rated equally to the class of pipe. End connections may be push-on, mechanical, or flanged joints except where specifically shown otherwise on the plans or Standard Drawings.

D. All fittings shall be restrained and require thrust blocking per this specification.

E. Ductile Iron Mechanical Joint Sleeve - Mechanical Joint sleeves shall be allowed for vertical angles equal to or less than 1 1/2 degrees. Fitting angle shall be as specified on the plans or as necessary to achieve the desired minimum cover based on field conditions.

F. Ductile Iron High Deflection Coupling - High deflection couplings shall be allowed for horizontal angles equal to or less than 1/2 the manufacturers recommendation. Fitting angle is specified on the plans equal to or less than 5 degrees.

G. Ductile iron compact fittings, per AWWA C153, are allowed.

1. Flanges, Bolts and Gaskets - Flanges shall be flat-faced and meet either the requirements of AWWA C-207 for steel hub type flange fittings, or AWWA C-110 Section 10-18 for ductile iron fittings. The flanges shall be marked with the size, name or trademark of the manufacturer and with the AWWA Class; i.e., "E", or pressure rating.

Bolts and nuts shall be cadmium plated, A307, Grade B of domestic origin. Cadmium plating shall conform to Federal Specification QQ-P-415-1956, Type 1, Class 1.

Gaskets shall be $^{1}/_{8}$-inch thick and be of the full face self centered cloth impregnated type. The following table shows the bolt pattern for ASME/ANSI 16.1 Class 125 cast iron flange. This pattern is rated at 275 psi for Class E steel pipe flanges and 250 psi for ductile iron pipe fittings.

Bolt Hole			
Pipe Size	Diameter (Inches)	Bolt Diameter & Length (Inches)	Number of Bolts
6"	$^{7}/_{8}$	¾ x 3½	8
8"	$^{7}/_{8}$	¾ x 3½	8
10"	1	$^{7}/_{8}$ x 4	12
12"	1	$^{7}/_{8}$ x 4	12
14"	$1^{1}/_{8}$	1 x 4½	12
16"	$1^{1}/_{8}$	1 x 4½	16
18"	1¼	$1^{1}/_{8}$ x 5	16
20”	1¼	$1^{1}/_{8}$ x 5½	20

The contractor shall uniformly tighten the bolts and prevent bending or torsional strains. Proper anchorage shall be provided.

2. Mechanical Joint Fittings - The mechanical joints shall meet AWWA C111. That standard covers the joint as well as gaskets and bolts.

   T-bolts and nuts shall be manufactured of corrosion-resistant high- strength low-alloy Cor-Ten steel or equal. Number and length of bolts shall be as follows:

Pipe Size	Number of Bolts	Bolt Diameter & Length (Inches)
6"	6	¾ x 3½
8"	6	¾ x 4
10"	8	¾ x 4
12"	8	¾ x 4
14"	10	¾ x 4
16"	12	¾ x 4½
18"	12	¾ x 4½
20”	16	¾ x 4½

3. Coatings and Linings – All fittings shall be Protecto401 Ceramic Epoxy lined and coated in accordance with applicable ASTM Standards.

   Threaded holes and mating surfaces shall not be coated. Flange faces shall be coated with asphaltic varnish only. There shall be no coating materials or mortar in gasket grooves.

4. Mechanical Couplings - Couplings include transition couplings, flanged coupling adapters, flexible and insulated couplings.

   a. Coupling Sleeves and Flanges - Coupling sleeves and flanges may be of gray iron or carbon steel.

   b. Bolts and Nuts for Flanges - Bolts and nuts for buried and submerged flanges, flanges in underground vaults and structures, and flanges located outdoors above ground shall be cadmium plated, A307, Grade B. Provide one washer for each nut. Each washer shall be of the same material as the nut.

2.03 TRANSITION COUPLING

A. Scope: The following governs the furnishing and installation of transition couplings.

B. Manufacturers: Transition couplings shall be Romac 501, Smith-Blair Omni 441, Rockwell 433, or Ford FC1.

2.04 FLEXIBLE COUPLINGS

A. Scope: The following governs the furnishing and installation of flexible couplings.

B. Manufacturers: Flexible couplings shall be APAC, Baker 200 series, JCM, Rockwell 400 series or Romac.

2.05 FLANGED COUPLING ADAPTORS

A. Scope: The following governs the furnishing and installation of flange coupling adapters.

B. Manufacturers: Flanged coupling adapters shall be Romac FC400 Series, APAC, Baker, JCM, or Rockwell equal. Pipe restraining systems shall be Romac 600 Series, APAC, Baker, JCM, or Rockwell equal.

2.06 RESTRAINT

A. Custom PVC fittings per this specification shall be restrained using an EBAA Series 2500 joint restraint or approved equal.

2.07 THURST BLOCKING

A. Thrust blocking is required at all fittings 11-1/4 degrees or larger in the pipe per these Plans and Specifications. standards.

B. Refer to Section 03300 – Concrete and Reinforcing Steel for concrete mix requirements and backfill requirements.

PART 3 – EXECUTION

3.01 HANDLING AND TRANSPORTATION

A. Handling and transportation of pipe shall be in accordance with the pipe manufacturer's published instructions.

B. Heavy canvas, or nylon slings of suitable strength shall be used for lifting and supporting materials. Chains or cables shall not be used.

C. Pipe and fittings shall not be stored on rocks or gravel, or other hard material which might damage the pipe.

1. Rubber Gasket Storage - All rubber gaskets shall be stored in a cool, well-ventilated place and should not be exposed to the direct rays of the sun. Gaskets shall not be allowed in contact with oils, fuels, petroleum, or solvents.

3.02 PIPE LAYING

A. Pipe shall be laid in accordance with the pipe manufacturer's published instructions, as complimented and modified herein and in the plans.

1. Cleanliness - The interior of pipes shall be clean of foreign materials before sections of pipe are installed and shall be protected to prevent entry of foreign materials after installation.

   Open ends of installed pipe shall be sealed with watertight plugs or other approved means at times when pipe installation is not in progress.

   Ground water shall not be allowed to enter the pipe.

2. Inspection Before Installation - All pipe and fittings shall be carefully examined for cracks and other defects just prior to installation. Spigot ends shall be examined with particular care as this area is the most vulnerable to damage from handling. Defective pipe or fittings shall be laid aside for inspection by the City, who will prescribe corrective repairs or rejection.

3. Lowering of Pipe Material into Trench - Proper implements, tools, and equipment, satisfactory to the City, shall be provided and used by the Contractor, for the safe and convenient performance of the work. All pipe, fittings, valves, and hydrants shall be carefully lowered into the trench piece by piece in such a manner as to prevent damage to the water main materials and protective coatings and linings. Under no circumstances shall water main materials be dropped or dumped into the trench.

If damage occurs to any pipe, fittings, valves, hydrants or water main accessories in handling, the damage shall be immediately brought to the City's attention.

4. Laying of Pipe - Pipe shall be laid in trenches to the line and grade indicated on the plans and as specified.

   Every precaution shall be taken to prevent foreign material from entering the pipe while it is being placed in the trench. If the pipe laying crew cannot install the pipe into the trench without getting earth into it, the City Inspector may require a heavy tightly-woven-canvas bag of suitable size, or plastic caps to be placed over each end of the pipe prior to installation and left there until the connection is made to the adjacent pipe. During laying operations, no debris, tools, clothing or other material shall be placed in the pipe.

   As each length of pipe is placed in the trench, the spigot end shall be centered in the bell or coupling, and the pipe forced home and brought to correct line and grade. The pipe shall be secured in place with approved backfill material tamped under it, except at the bells or couplings. Precautions shall be taken to prevent dirt from entering the joint space.

   Joints shall be assembled in accordance with the manufacturer's instructions. Rubber rings and ring grooves shall not be lubricated. Each joint shall be checked with a feeler gauge to assure proper seating of the gasket.

5. Cutting of Pipe - Field cuts and connections shall be in accordance with the pipe manufacturer's published instructions.

   The cutting of pipe for inserting valves, fittings, or closure pieces shall be done in a neat and workmanlike manner without damage to the pipe so as to leave a smooth end at right angles to the axis of the pipe. The pipe shall be marked around its entire circumference prior to cutting to assure a square cut. A factory-finished beveled end shall be used as a guide for proper bevel angle (15deg) and depth of bevel plus the distance to the insertion reference mark. The end shall be beveled using a PVC pipe beveling tool. Round off any sharp edges on the leading edge of the bevel with a pocket knife or a file.

   When installing 8, 10 and 12-inch PVC pipe, mechanical joint or push-on type fittings designed for ductile iron pipe shall be used. When connecting PVC pipe into the bell end of cast iron pipe or into push-on type fittings, the end should be rebeveled, similar to the bevel on ductile iron pipe. When connecting to mechanical joint fittings, the end of the PVC pipe should not be beveled.

6. Allowable Deflection

   The maximum allowable angular deflection at each joint shall be zero (0) degrees in any direction. Twelve (12) inch PVC pipe can be joined with high-deflection couplings shall not exceed 5-degree total deflection per coupling

   The pipe shall not be deflected at the joints to a lesser radius than the minimum shown below:

Size, inches	Minimum Radius of Curvature, Ft.
6	200
8	250

12	Fitting Required

7. Locating Wire - Locating wire shall be installed with non-metallic pipe as indicated on the Standard Drawings.
8. Warning Tape - Warning tape shall be placed on top of pipe zone backfill centered over pipe as shown on the Standard Drawings.

3.03 FITTINGS

A. Fittings shall be installed in the manner specified herein for cleaning, laying and joining pipe.

1. Coat and wrap fittings per specification section 02615.
2. Anchorage for Fittings - All fittings, unless otherwise specified, shall be provided with a thrust block constructed against undisturbed soil as shown on the Standard Drawings.
3. Thrust Blocks - Care shall be taken not to obstruct the outlets of tees or crosses which are intended for future connections. A waterproof paper or plastic bond-breaker shall be placed between plugs and caps and the concrete thrust block to facilitate their removal of the concrete in the future. Thrust blocks shall be poured against undisturbed earth and shall have at least the minimum dimensions shown on the Standard Drawings.
4. Mechanical Couplings - Oil, scale, rust, and dirt shall be cleaned from pipe ends. The Contractor shall clean gaskets in couplings prior to installing the coupling in accordance with the manufacturer's recommendations:
   a. Bolt threads shall be lubricated with graphite and oil prior to installation.
      1) Painting and Coating -
         a) The Contractor shall coat buried flexible pipe couplings, transition couplings, and flanged coupling adapters per Section 09900 and then wrap the couplings with polyethylene wrap per AWWA C-105.
         b) The Contractor shall coat flexible pipe couplings (including joint harness assemblies), transition couplings, and flanged coupling adapters located indoors, in vaults and structures, and above-ground with the same coating system as specified for the adjacent pipe. A prime coat shall be applied at the factory.
5. Polyethylene Wrap - All ferrous metal shall be protected with polyethylene wrap. When it is not practical to wrap tees, crosses, and other odd-shaped pieces in a tube the item shall be wrapped with a flat sheet or split length of polyethylene tube by passing the sheet under the appurtenance and bringing it up around the body. Seams shall be made by bringing the edges together, folding over twice, and taping down. Polyethylene shall be taped securely in place.

   Cuts, tears, punctures, or damage to polyethylene shall be repaired with adhesive tape, or with polyethylene sheet secured in place with adhesive tape.

3.04 TESTING

A. Testing shall be performed on all pipelines in accordance with Section 02660.

***** END OF SECTION *****

SECTION 02640
GATE VALVES

PART 1 – GENERAL

1.01 SCOPE

A. This specification governs materials and installation for the installation of valves as shown on the plans.

1.02 SUBMITTALS

A. Prior to the purchase of valves to be used in the City system, the following items shall be submitted and approved by the City:

1. Manufacturer's catalog data showing valve type and size to be used, valve dimensions, pressure rating and materials of construction.
2. Manufacturer’s data and NSF certification seal on the lining to be used.

PART 2 – MATERIALS

2.01 GATE VALVES

A. Gate valves 3 inches and larger, shall be resilient seated suitable for buried service and meet the requirements of AWWA C-509, manually operated. All such valves shall be of the non-rising stem type, with double O-ring seal and shall tum to the left in a counter-clockwise direction to open the valve.
B. All valves shall be suitable for frequent operation as well as service involving long periods of inactivity. Valves shall be capable of operating satisfactorily with flows in either direction and shall provide zero leakage past the seat.
C. Valve Body – Body, bonnet, operating nut, and stuffing box shall be of iron with internal working parts of solid bronze. Exposed capscrews, bolts and nuts shall be stainless steel type 304.
D. The word "open" and an arrow indicating the direction to open, shall be cast on each valve body or operator.
E. Valve Operator – Valve operators shall be equipped with a 2-inch AWWA square operating nut. They shall be sealed and gasketed and lubricated for underground service. The operator shall be capable of withstanding an input torque of 450 ft. lbs. at extreme operator position without damage.
F. Coating and Lining - Interior surfaces, excluding seating areas, bronze, and stainless steel pieces, shall be epoxy lined to a dry film thickness of 12 mils.
G. Liquid epoxy linings shall be applied in two coats. Liquid epoxy coating materials shall be listed in the NSF Listing for Drinking Water Additives, Standard 61, as certified for use in contact with potable water. Powder epoxy coating materials shall contain 100 percent solids. Surface preparation shall include White Metal Blast Cleaning.
H. Exterior surfaces shall be shop coated with two coats of asphalt varnish conforming to AWWA C-509. Flange faces shall be coated with a rust preventive compound.
I. Marking – The manufacturer shall show on the valve the size, manufacturer,
J. class and year.
K. Gate – Gate shall be cast or ductile iron encapsulated in Buna-N rubber or nitrite elastomer.

L. Types of End Connection – End connections may be either flanged, push-on, or mechanical joint type per Section 02615 or Section 02622.

PART 3 – EXECUTION

3.01 STORAGE

A. Valves shall be delivered and stored in the field with the port openings covered with plastic, cardboard or wood. These covers shall remain in place until the valve is ready to be installed. Valves shall not be stored in contact with bare ground. Valves shall not be stacked on top of one another.

3.02 INSTALLATION

A. The weight of the valve shall be supported by firm ground or concrete blocking and not by the pipe. Buried valves having the top of the operating nut greater than three feet below the finished surface shall be provided with shaft extensions.
B. Flanged Connection – Bolt holes of flanged valves shall straddle the horizontal and vertical axis of the pipe to which the valves are attached. Flanges, bolts and nuts shall be cleaned by wire brushing before installing flanged valves.
C. Threads on nuts and bolts shall be lubricated with oil and graphite. Nuts and bolts shall be tightened uniformly and progressively. If flanges leak under pressure testing, the Contractor shall loosen or remove the nuts and bolts, reseat or replace the gasket, reinstall or retighten the bolts, and retest the joints. Joints shall be watertight. Bolts shall be tightened in an even manner by a series of steps until the torque required by the manufacturer is reached.
D. Threaded Connection – Threaded joints shall be cleaned by wire brushing or swabbing. Teflon joint compound or Teflon tape shall be applied to pipe threads before installing threaded valves. Joints shall be watertight.
E. Push-on Connection – Rubber ring grooves of joints shall be inspected before installation by the Contractor for ridges or holes that would interfere with the rubber ring. Interferences with the rubber rings shall be corrected to a satisfactory condition or the valve replaced, as required by the City. The pipe to be stabbed into the valve shall be beveled. Pipe shall be stabbed into the valve to the "Insertion Depth" as specified by the manufacturer.
F. Mechanical Joint – Valve socket, gland, and pipe plain end shall be wiped clean of all sand, dirt and other foreign material prior to valve installation. Bolts shall be tightened in a manner by a series of steps until the torque required by the manufacturer is reached.
G. Polyethylene Encasement – Valves and all bolted connections shall be encased with 10 mil polyethylene plastic film wrap installed as follows: The valves shall be wrapped by passing the flat sheet of film under the valve bottom and bringing the ends up around the body to the stem and securing it in place with 2-inch strips of the plastic adhesive tape. The polyethylene shall be secured
H. around the valve stem in such a manner as to leave the stem free to operate. The film shall be brought completely around the flanges and secured to the pipe with a plastic adhesive tape on either side of the valve, flange or fitting.

3.03 OPERATION

A. Immediately before installation, each valve shall be operated through one complete open-close cycle and visually checked for proper operation. Boxing of valves shall begin immediately after pipe sections containing the valve have been installed. All

valve boxes, paving rings, and lids shall be brought to grade after pavement has been constructed.

***** END OF SECTION *****

SECTION 02643
AIR AND VACUUM VALVE ASSEMBLIES

PART 1 – GENERAL

1.01 SCOPE

A. This specification governs materials and installation for air release, air and vacuum, or combination air-vacuum and air release valve assemblies. The type of air valve to be installed shall be as indicated on the plans. Valve assemblies include all items from the main pipeline to the valve vent as shown on the Standard Drawings.

1.02 SUBMITTALS

A. Prior to the purchase of valves to be used in the City system, the following items shall be submitted and approved by the City:

1. Manufacturer's catalog data showing valve type and size to be used, valve dimensions, pressure rating and materials of construction.

PART 2 – MATERIALS

2.01 VALVES

A. Valve bodies shall be of high strength cast iron. The float, seal, and all moving parts shall be of Type 316 stainless steel. Seat washers and gaskets shall be of Buna-N, Nutrile Rubber. Valves shall be designed for a minimum pressure of 150 psi unless otherwise shown. Valves shall be designed to perform the following function:
   1. Air Release Valve - Air release valves shall be designed to release small amounts of air that can accumulate at high points in systems once they are filled and under pressure.
   2. Air and Vacuum Valves - Air and vacuum valves shall be designed to: (1) expel large amounts of air from a system when it is being filled, (2) remain closed when the system is in operation and under pressure, and (3) open to allow air to enter when the line begins to drain and the internal pressure reverts to atmosphere.
   3. Combination Air-Vacuum and Air Release Valves - These valves combine the features of the air release, and the air and vacuum valves specified herein and shall be A.R.I.-D-020ST, flanged. No equal.

2.02 APPURTENANCES

A. Materials for gate valves, piping, boxes, and fittings shall conform to the requirements of Technical Specifications 02645 and as shown on the Standard Drawings.
B. Enclosure: Air Release Valve Enclosure shall be by Placer Waterworks, Inc. No Equal.

PART 3 – EXECUTION

3.01 INSTALLATION

A. The tap for the air valves shall be made in a level section of pipe no closer than 18 inches to a bell, coupling, joint, or fitting.
B. Tapping mains shall conform to the standard procedures for house services.

C. Air valve assemblies shall be installed in accordance with the Standard Drawing.
D. Threaded joints shall be cleaned by wire brushing or swabbing. Teflon joint compound or Teflon tape shall be applied to pipe threads before installing threaded valves. Joints shall be watertight.
E. Dielectric connections with PVC tape wrap shall be provided at all connections between steel or iron and brass or bronze. Copper, brass, and other nonferrous metal pipe shall be isolated from steel or cast iron by insulated couplings or unions
F. The Contractor shall also isolate nonferrous pipe from steel supports and pipe straps by means of insulating sleeves or tape wrapped around the pipe.

3.02 TESTING

A. Air valve assemblies shall be tested at the same time that the connecting pipelines are pressure tested.

***** END OF SECTION *****

SECTION 02644
FIRE HYDRANT ASSEMBLIES

PART 1 – GENERAL

1.01 SCOPE

A. This specification governs materials and installation for the installation for fire hydrant assemblies as shown on the plans. Fire hydrant assemblies includes all items from the main line tee to the fire hydrant as shown on the plans

1.02 SUBMITTALS

A. Prior to the purchase of fire hydrants to be used in the City system, the following items shall be submitted and approved by the City:

1. Manufacturer's catalog data showing valve type and size to be used, valve dimensions, pressure rating and materials of construction.

PART 2 – MATERIALS

2.01 FIRE HYDRANTS

A. Fire hydrants shall be dry barrel type meeting A WW A C502 and have a 6-inch bell inlet with two 2Y2-inch hose outlets and one 4Y2-inch pumper connection. Threads on the pumper and hose connections shall conform to the requirements of the fire department equipment of the area which they are to serve or if no standards exist, they shall conform to the "National Standard Screw Threads for Fire Hose Couplings and Fittings" published by the National Board of Fire Underwriters. Hydrants shall be designed to operate at a minimum of 200 psi working pressure and shall be tested hydrostatically to 400 psi. Fire hydrants shall open to the left (counterclockwise). The hydrant shall be cast iron and bronze mounted. Hydrants shall have a main valve opening size of four and one- half inches. The outlets shall be protected with caps attached to the hydrant head with a chain. Other specific requirements are:

1. Hydrant materials shall comply with AWWA C502.
2. Hydrant flanges shall contain six equally spaced bolt holes of 7/8-inch diameter on a 9 and 3/5-inch diameter.
3. All hydrants shall be permanently marked with the manufacturer's name and the year of the manufacture.
4. Caps shall be metal-type.

2.02 HYDRANT LATERALS

A. Six-inch DI or PVC pipe shall be used. Hydrant laterals shall be pressure rated appropriately. Thrust block sizes shall be as shown in the plans.

2.03 HYDRANT LATERAL VALVE

A. The lateral valve shall be a 6-inch gate valve. The valve shall be stacked to the surface as shown on the plans.

2.04 SPOOL AND BURY

A. Hydrant burys shall be 6-inches inside diameters and made of cast iron conforming to ASTM A-126. The burys shall be one piece with the top having a flange drilled

with six holes to receive the extension spool or hydrant. The bottom shall have a 90-degree bend. The bury end shall be a push joint or mechanical joint fitting.

2.05 BOLTS

A. Alloy steel break-off bolts shall be used to attach the fire hydrant to the extension spool.

PART 3 – EXECUTION

3.01 EXAMINATION OF MATERIAL

A. Prior to installation, all hydrants shall be inspected for direction of opening, nozzle threading, operating-nut and cap-nut dimensions, tightness of pressure-containing bolting, cleanliness of inlet elbow, handling damage, and cracks. Defective hydrants shall be corrected or held for inspection by the

3.02 PLACEMENT OF HYDRANT

A. All hydrants shall stand plumb and shall have their nozzles parallel with or at right angles to the curb, with pumper nozzle facing the curb.

3.03 ASSEMBLY INSTALLATION

A. The shoe of the fire hydrant bury must be anchored on a concrete thrust block.
B. The fire hydrant shall be positioned so that the bolts between the extension piece and the hydrant are accessible, both top and bottom, within the limits shown on the Standard Drawing. If the hydrant is either too low or too high, it shall be corrected.
C. Painting shall be per Section 09900 with all metal surfaces above ground being painted, including any extensions. The extension piece shall be painted before installation. Color of hydrant will be determined by the local fire department.
D. All underground iron fittings shall be wrapped with polyethylene.

3.04 TESTING

A. Hydrants are to be tested at same time with the main. Dry-barrel hydrants shall have the drain valves tested in the following manner:
    1. Following the pressure test, open fire hydrant valve a few turns and allow hydrant to fill until water is at bottom of nozzle.
    2. Close hydrant valve and observe water level drop. If drop in water level is not visible, place palm of hand over open nozzle to feel a noticeable suction. If water level drop is not detectable, the hydrant has failed the drainage test.
    3. If the hydrant fails the drainage test, the drain valve may be clogged or backfill material does not permit free drainage. The Contractor shall make the necessary corrections and repairs to correct improper drainage.

***** END OF SECTION *****

SECTION 02645
SERVICE LINES AND APPURTENANCES

PART 1 – GENERAL

1.01 SCOPE

A. This specification governs materials and installation for service line materials and fittings associated with the following:

1. Service line materials and fittings
2. Meter Boxes
3. Pressure Regulator Valve

1.02 SUBMITTALS

A. The following items shall be submitted and approved by the City

1. Manufacturer's catalog data showing model, part number, pressure ratings and materials of construction.

PART 2 – MATERIALS

2.01 SERVICE LINE MATERIALS AND FITTINGS

A. Service line materials and fittings include service line pipe, service saddles, service fittings, meter stops, corporation stops, curb stops, and ball valves.

1. Polyethylene Tubing (PE) – PE tubing shall be in accordance with AWWA C901 and correspond to copper tubing size (CTS). The tubing shall be marked with the following:

- Nominal size
- Materials code; ie PE 3406
- The word “Tubing” and dimension ratio
- AWWA pressure class, ie, PC 160
- AWWA designation AWWA C901
- Manufacturer’s name or trademark
- Seal of testing agency

a. The polyethylene material shall be type “3408” conforming to ASTM D3350. The pressure class shall be a minimum of 200psi.
b. Stainless steel liners or inserts shall be used with PE tubing when compression type connections are specified or shown.

2. Service Saddles – Service saddles shall be constructed of bronze, have AWWA iron pipe thread outlet taps, comply with AWWA C-800 "Threads for Underground Service Line Fittings" and have suitable means for attachment and sealing to a water main. The body shall be made to conform to outside configuration of the main. The service saddle shall be designed to provide a drip-tight connection when used as a service connection to the main. Saddles for ductile iron pipe shall be double strap. Straps for PVC pipe may also be stainless and shall provide full support around the circumference of the pipe and have a bearing

area of sufficient width so that the pipe will not be distorted when the saddle is tightened.

3. Corporation Stops – Corporation stops shall be constructed of bronze, have AWWA iron pipe inlet threads, and shall comply with the requirements of AWWA C-800, "Threads for Underground Service Line Fittings." Male iron pipe threads shall be provided on the outlet side of 1½-inch and 2-inch corporation stops.
4. Fittings – Fittings including PE tubing couplings, bends, unions, and adapters shall be constructed of bronze and shall be designed to join to CTS polyethylene tubing using a "stab type" connection (Mueller or approved equal) in ¾-inch and 1-inch sizes and compression type connections in 1-1/2 inch and 2-inch sizes. Fittings shall also have male or female iron pipe-size-threaded ends and/or meter coupling nut or meter flange as required.
5. Angle Meter Stops – Angle meter stops shall be constructed of bronze, have lock wings and be suitable for joining to CTS polyethylene using a "stab type" connection for ¾-inch and 1-inch angle meter stops and a compression type connection for 1-1/2 inch and 2-inch angle meter stops. Outlets for ¾-inch and 1-inch angle meter stops shall consist of a meter coupling nut. One-and-a-half inch and 2-inch angle meter stops shall have meter flange outlets.

2.02 IN-TRACT PIPE

A. In-tract pipe material shall be Schedule 40 PVC solvent welded joints, or Schedule 80 PVC if threaded joints are used. Pipe diameter shall match that of the Meter Service Table included in the plans unless approved in writing by the Engineer.

2.03 METER

A. The meter shall be furnished and installed by the Contractor. The meter shall be a Sensus (SRII) with a bronze sealed register, positive displacement type with magnetic drive, and strainer. Contractor shall submit meter cut-sheet to the City for approval prior to ordering meters.

B. Typical meter installations shall be 1-inch meters unless specified otherwise in the plans.

2.04 METER BOXES

A. The meter boxes for ¾-inch, 1-inch, 1-1/2 inch and 2-inch meters shall be to the dimension listed below. Meter boxes in traffic areas shall be traffic rated with steel lids and shall be submitted for City approval. Meter boxes in non-traffic areas shall be Christy "R-series Enclosures or approved equal.

Meter Size	Box Inside Dimensions (Min)
¾-inch and 1-inch	10 x 17-inches
1-1/2 inch and 2-inch	13 x 24-inches

2.05 PRESSURE REGULATING VALVE

A. The pressure regulating valve shall match the service line diameter and shall be a Cla-Val 990 or approved equal. The Contractor shall furnish and install all fittings and valves necessary to make the connection. All fittings shall be bronze. The PR valve shall be installed in accordance with the Plans.

PART 3 – EXECUTION

3.01 INSTALLATION

A. Polyethylene Tubing – Tubing and fittings should be stored in a way that prevents damage due to crushing or piercing, excessive heat, harmful chemicals, or exposure for prolonged periods. The manufacturer's recommendations regarding storage should be followed.

1. Handling operations and trench installation and backfill shall be performed with reasonable care to prevent scratches, nicks, and gouges in the conduit.
2. Pipe excessively cut or kinked shall not be used.
3. Bends in PE tubing shall not occur closer than 10 diameters from any fitting or valve. The minimum radius of curvature is 30 diameters or the coil radius when bending with the coil. Bending of coiled tubing against the coil shall not go beyond straight. Polyethylene tubing that becomes kinked during handling or installation shall not be used and care should be taken to ensure that kinking does not develop after installation. Service line from the main line tap to the angle meter stop shall be one continuous length of tubing.
4. PE tubing shall be installed in trench bottoms with 6-inches of bedding material to provide continuous and uniform support. The initial backfill shall be 6-inches above the tubing and shall be materials free from rock, stones and debris.
5. All new service line and in-tract piping shall have tracer wire fastened in accordance with the City standards and the plans.

B. Service Saddles - The service saddle shall be no closer than 18 inches to a valve, coupling, joint, or fitting, unless it is at the end of the main.

1. The surface of the pipe shall be free of all loose material and have a hard, clean surface before placing the service saddle.
2. The service saddle shall be tightened firmly to ensure a tight seal, however, care shall be used to prevent damage or distortion of either the pipe, corporation stop or service saddle by overtightening.
3. The drilling of the pipe shall be performed in accordance with the pipe manufacturer's recommendation. Hot tapping of service saddles will not be permitted.

3.02 FITTINGS, ANGLE METER STOPS, METER AND BOXES

A. Installation of fittings, meter stops, and boxes shall be as recommended by the manufacturer. Pipe or fittings made of nonferrous metals (bronze) shall be isolated from ferrous metals with insulating unions or couplings.

B. Contractor shall furnish and install the meter. Contractor shall record the date, address and location (dimensions north/south or east/west from the closest property line and dimension north/south or east/west of permanent City road feature (e.g. road centerline, back of walk, back or curb), serial number of meter, make of meter for submittal to City Representative. Submittal shall be made within 24-hours of installation for commercial properties and two (2) business days for residential properties.

3.03 HYDROSTATIC TESTING

A. The Contractor shall record and report to the City Representative the hydrostatically pressure at each property before and after installing the new service line and appurtenances.

B. The Contractor may choose how they hydrostatically test the service line. Service lines tested with the mainline shall be hydrostatic tested up to the City angle meter valve. Service lines tested separate from the mainline hydrostatic test shall include all appurtenances in place.

3.04 LOCATING EXISTING SERVICES

A. The existing services shown on the plans have been surveyed and/or are shown in their approximate location. Typically service locations are either in or back of sidewalk. The existing service line material connected to mainlines to be abandoned are unknown. In-tract line between house and the existing meter box is typically PVC or galvanized pipe.

B. The Contractor shall be responsible for excavating to expose the existing in-tract line to make the tie-in and abandonment as required by the specifications. The Contractor shall locate the service lines.

3.05 MAKING SERVICE CONNECTION

A. All services shall be located on the correct lot. The service line from the water main to the meter box shall be constructed after the construction of the main. Prior to making the final service connection to the existing in-tract pipe and/or downstream of the new meter/meter box, the water main and service line shall be pressure tested, disinfected and shall pass bacteriological testing.

B. Service Connection and Cross-over Procedure [Alternate procedures proposed by the Contractor shall be submitted to the City for approval]:

1. The new service line from the main to the new meter box location shall be installed, tested and disinfected prior to making the new service connection and cross-over.
2. Contractor shall locate, expose and identify material of the existing in-tract piping, and located and close the customer shut-off valve at the house.
3. Contractor shall record the static pressure at the hose bib that will be used for flushing in the proceeding steps, and shall request that the resident operate their irrigation system (if one exist) and document its condition.
4. The Contractor shall notify the City Representative upon exposing the existing in-tract pipe to evaluate the in-tract existing condition. If the existing in-tract pipe is determined to be in poor condition, the Contractor shall be responsible for exposing and replacing up to five (5) feet of in-tract pipe to make a connection to pipe in good condition.
5. Contractor shall excavate and set the new meter box and install the necessary piping, meter, and appurtenances in accordance with the Plans and Specifications, and connect the new service line to the new meter assembly.
6. Contractor shall close the existing meter valves and cut the existing in-tract pipe at the location agreed upon with the City Representative. The contractor shall be responsible for furnishing and installing all piping, fittings, and approved transition

coupling between the existing in-tract pipe and the new in-tract pipe and/or customer valve downstream to restore service to the property.

a. Contractor shall take preventative measures from introducing any new pipe and appurtenances to contamination, and shall disinfect and flush such pipe prior to connecting to the existing in-tract pipe.
b. Some properties may have or require pressure reducing valves or backflow prevention devises. The Contractor shall refer to the plans for specific properties and shall be responsible for furnishing and installing or re-connecting these features in with the new water service.

7. Upon connecting the new service to the existing in-tract pipe, the Contractor shall slowly* open the City's angle valve and allow the in-tract pipe to recharge. Contractor shall check for leaks and tighten fittings if needed.
8. Contractor shall open the outside residence/parcel hose bid closet to the meter box and/or house shutoff valve. Contractor shall slowly* open the customer's meter angle valve and allow water to flow through the hose bib for 1 to 2 minutes or until all entrapped air and/or cloudiness has been expelled from the line.
9. Contractor shall contact the property owner prior to re-activating their service into their house or commercial property, and shall slowly* open the customer valve to the house/commercial property.
    a. Water service to a house/commercial property shall not be re-activated without notifying the property owner in the event that a failure to their existing system occur and goes undetected.

[*Caution: Introducing water too quickly into the meter and new and old pipe can damage the meter's internal components and send a pressure surge through pipes that can cause damage, contractor responsible for repairs].

10. Contractor shall notify the City Representative when the work is complete and shall record and report the static pressure at the hose bib and the meter serial number.

C. Where in-tract pipe is required to be installed, the diameters of new in-tract pipe shall be in accordance with the size listed in the Plans unless approved otherwise by the Engineer. Lengths shall be measured from the new meter box to the point of connection at the existing in-tract water pipe as shown on the meter location sheet. Contractor shall follow the steps listed above when installing, disinfecting, flushing, and making the final connection to the property.
D. The Contractor shall refer to Section 01140 – Work Restrictions regarding property owner notifications and water service shutdowns and service outage limitations.
E. Excavated materials shall be replaced and repaired to existing or better condition they were in prior to excavation. This includes sub-grade materials and compaction, surface repairs, and any other repairs required.
F. Contractor shall make every effort to minimize damage to customer's property during installation of the new private water service line. Excavations shall be the minimum necessary to satisfactorily complete the work.

G. All existing facilities and structures broken or damaged shall be replaced or repaired to their original or better condition at the Contractor's expense.

H. Existing underground service are shown as accurately as available data permits. Locations are approximate and may not show all lines to be encountered in the excavation for this project. Contractor shall be responsible for verifying the location of all existing underground facilities prior to starting excavation and shall be responsible for repair or replacement of all facilities damaged due to work on this project.

I. Provide an as-built plan of the in-tract service line noting property address with adequate dimension to identify the in-tract line location in the future. Contractor shall record the as-built markings on the Plans and provided meter locations sheets.

3.06 EXISTING SERVICE ABANDONMENT

A. The abandonment of the existing service line shall follow under the following conditions. All existing services are to remain active until the Contractor is ready to cross over to the new service and abandon the existing service.

1. Existing Service Abandonment (Type 1) – Existing Mainline to Remain In Service

   Shut off the pipeline at the appropriate mainline valve. Remove the existing service saddle and replace with a new full circle band. Cut and cap the existing service line near the location of the new service line. Abandon in place all existing service line between the new full circle band and the point of connection to the new service line. Remove existing curb stop and valve box and salvage.

2. Existing Service Abandonment (Type 2) – Existing Mainline to be Abandoned In Place

   Shut the existing service line corporation stop at the existing mainline. Disconnect the existing service line from the existing corporation stop. Abandon in place all service line between the existing corporation stop and the point of the new service line. Remove existing curb stop and valve box and salvage.

3. For both abandonment types, if a new in-tract line connects to the property other than reconnecting to the existing in-tract line a ¾-inch hose bib shall be installed on the remaining active in-tract line. The hose bib is to be located at a location agreeable to the City and the property owner.

B. Existing meters and valves shall be removed, cleaned, and returned to the City corp yard. All evidence of the valve box shall be demolished and removed and the area finished to match the surrounding area.

***** END OF SECTION *****

SECTION 02660
TESTING AND DISINFECTING WATER MAINS

PART 1 – GENERAL

1.01 SCOPE

All completed pipelines, as well as the air-release assemblies and appurtenant structures, will be tested by the Contractor in the Inspector's presence prior to field acceptance of the work. The Contractor shall correct all defects in workmanship or materials which become evident by inspection or testing at any time during the work. Testing shall be done after the complete installation and compaction of all underground utilities, except as modified below.

The Contractor shall furnish all pipe and fittings for connection to the main, pumps, pressure regulator, a calibrated water storage tank, and all other materials, fittings and pipelines required to perform the tests and make the necessary repairs.

When lines to be tested are in areas that will be paved, testing shall be done after the rock subgrade is placed and compacted. No lines shall be accepted as passing until all underground construction that may disturb the waterline is compacted.

The pressure test and the test for allowable leakage shall be performed simultaneously. Testing shall not commence until the main and all appurtenances have been completely installed. The Contractor may, at any time and at his expense, perform his own pressure and leak test; however these tests will in no way offset the requirement for a final pressure and leak test.

After successfully testing the water main and appurtenances, they shall be flushed and disinfected.
After having been successfully tested and disinfected, the sewer main may be connected to the District's sewer system.

1.02 SUBMITTALS

The Contractor shall notify the District a minimum of 3 business days in advance of its proposed testing schedule for review and concurrence. If requested, the Contractor's proposed plans for water conveyance, disinfection, control, and disposal, shall also be submitted in writing.

PART 2 – MATERIALS

2.01 GENERAL

All test equipment, temporary valves, bulkheads, or other water control equipment and materials shall be determined and furnished by the Contractor, subject to the District's review. No materials shall be used which would be injurious to the construction or its future function.

2.02 HYDROSTATIC TESTING EQUIPMENT

The Contractor shall be responsible for supplying and operating all testing equipment. In general, the testing equipment configuration shall consist of a pump receiving water from a calibrated storage tank. The pump discharge shall enter the

water main through a tap or appurtenance. A pressure sustaining valve shall be placed on a tee located in the pump discharge line. Discharge from the pressure sustaining valve shall return to the calibrated storage tank. Other types or configurations of testing equipment shall be subject to District approval. The pressure pump shall operate continuous throughout the testing period. If the pump is stopped, the pressure shall not be allowed to drop more than 2 psi below test pressure before starting the pump.

2.03 CHLORINE

Chlorine for disinfection shall be in the form of liquid chlorine, sodium hypochlorite solution, or calcium hypochlorite granules or 5-g tablets.

Liquid chlorine shall be in accordance with requirements of AWWA-B 301. Liquid chlorine shall be used only:

1. In combination with appropriate gas flow chlorinators and ejectors.
2. Under the direct supervision of an experienced technician.
3. When appropriate safety practices are observed.

Sodium hypochlorite and calcium hypochlorite shall be in accordance with the requirements of AWWA-B 300, and containing approximately 65 percent available chlorine by weight.

PART 3 – EXECUTION

3.01 GENERAL

The Contractor shall make all necessary provisions for securing a water source to perform the pressure test.
All pressure pipelines shall be tested. Release of water from pipelines, shall be in accordance with a written disposal plan reviewed by the Engineer.

3.02 HYDROSTATIC TESTING

The purpose of the hydrostatic test is both to test the ability of the pipeline to withstand pressure and test for allowable leakage. These tests shall run simultaneously.

1. Preparation - Prior to testing, the main shall be slowly and carefully filled with water. All air shall be expelled slowly from the pipe and appurtenances in a manner so as not to create excessive surge pressures. All appurtenances shall be left on during the testing procedure. The line shall be filled with water at least twenty-four hours prior to testing when the pipeline has a mortar lining, thus allowing the lining material to become saturated. Water for testing shall be introduced at the low end of the section being tested to facilitate the elimination of air in the pipeline prior to testing. Where air valves or other suitable outlets are not available for releasing air before applying the test, approved taps and fittings shall be installed and later securely plugged.

   The Contractor may, at his own risk, test against existing valves. Suspected leaking of these valves will not be accepted as a reason for having not passed the leakage test requirements. These valves shall either be repaired or replaced prior to the start of another testing sequence. All new valves shall be tested

against a reduced pressure side. Butterfly valves shall be tested in both directions.

2. Test Section Length - The length of pipe being tested at any one time shall not exceed 2,000 feet unless otherwise approved by the District.

3. Test Pressure - The test pressure shall be 200 psi or 50 psi greater than design pressure of the system, whichever is greater, measured at the lowest point of the section of the pressure zone being tested.

4. Test Duration - The test duration shall be two hours. Pressure in the water main shall be maintained within 2 psi of the calculated test pressure for the full two-hour duration. The individual testing of the valves may be of a shorter duration as approved by the District.

5. Allowable Leakage – The allowable leakage per test section shall be calculated from the formula contained in this subsection. Different sized mains and different main materials that might be contained within the same test section shall be calculated separately and then added together.

$$W = ND\frac{\sqrt{P}}{7400} WHERE:$$

W = Allowable leakage in gal/hr.
N = Number of joints in the length of pipeline tested
D = Normal diameter in inches
P = Average test pressure in psi

6. Repairs - During the pressure and leakage test, all accessible appurtenances shall be inspected for visual signs of leakage. All visual leaks shall be corrected immediately, regardless of the amount of leakage and the test shall be run again for its full duration. All leaks detected shall be repaired to a water tight condition. All repairs made shall be retested in accordance with the specifications.

3.03 DISINFECTING

After completion of testing operations, the Contractor shall sterilize all water mains, services and appurtenances. Sterilization shall be accomplished in accordance with the latest revision of A WW A C-601.

The basic disinfection procedure consists of:

- Preventing contamination materials from entering the water main during storage, construction, or repair.
- Removing, by flushing or other means, those materials that may have entered the water main.
- Chlorinating any residual contamination that may remain, and flushing the chlorinated water from the main.
- Determining the bacteriological quality by laboratory test after disinfection.

Three methods of chlorination are: tablet, continuous feed, and slug. The tablet

method is preferred and shall be used unless an alternate method is approved by the Engineering Department.

1. Tablet Method - The tablet method consists of placing calcium hypochlorite granules and tablets in the water mains as it is being installed and filling the main with potable water when installation is completed.

2. This method may be used only if the pipes and appurtenances are kept clean and dry during construction.

Placing of Calcium Hypochlorite Granules - During construction, calcium hypochlorite granules shall be placed at the upstream end of the first section of pipe, at the upstream end of each branch main, and at 500 foot intervals. The quantity of granules shall be as shown in Table 1.

WARNING: This procedure must not be used on solvent-welded plastic or on screwed-joint pipe because of the danger of fire or explosion from the of the joint compounds with the calcium hypochlorite.

TABLE 1

OUNCES OF CALCIUM HYPOCHLORITE GRANULES TO BE PLACED AT BEGINNING OF MAIN AND AT EACH 500-FT INTERVAL

Pipe Diameter Inches	Calcium Hypochlorite Granules oz.
4	0.5
6	1.0
8	2.0
12	4.0
16 and Larger	8.0

Placing of Calcium Hypochlorite Tablets - During construction 5-g calcium hypochlorite tablets shall be placed in each section of the pipe and also one such tablet shall be placed in each hydrant, hydrant branch, and other appurtenances. The number of 5-g tablets required for each pipe section shall be .0012d2L rounded to the next higher integer, where "d" is the pipe diameter in inches and *"V"* is the length of pipe section in feet. Table 2 shows the number of tablets required for commonly used sizes of pipe .

TABLE 2

NUMBER OF 5-G CALCIUM HYPOCHLORITE TABLETS REQUIRED FOR DOSE OF25MG/L*

Length of Pipe Section
Ft.

Pipe Diameter m.	13 or less	18	20	30	40
	Number of 5-g Calcium Hypochlorite Tablets				
4	1	1	1	1	1
6	1	1	1	2	2
8	1	2	2	3	4
10	2	3	3	4	5
12	3	4	4	6	7
16	4	6	7	10	13
18	5	7	8	12	16

*Based on 3.25g available chlorine per tablet; any portion of tablet rounded to next higher number.

The tablets shall be attached by a food-grade adhesive such as Permatex Form-A-Gasket No. 2 or equal. There shall be no adhesive on the tablet except on the broad side attached to the surface of the pipe. Attach all the tablets inside and at the top of the main, with approximately equal numbers of tablets at each end of a given pipe length. If the tablets are attached before the pipe section is placed in the trench, their position shall be marked on the section so it can be readily determined that the pipe is installed with the tablets at the top.

Filling and Contact – When tablet installation has been completed, the main shall be filled with water at a rate such that the water within the main will flow at a velocity no. greater than 1 ftls. Precautions shall be taken to assure that air pockets are eliminated. This water shall remain in the pipe for at least twenty-four hours. If the water temperature is less than 41° F (5° C), the water shall remain in the pipe for at least forty-eight hours. Valves shall be positioned so that the strong chlorine solution in the treated main will not flow into water mains in active service.

Final Flushing – After the applicable retention period, heavily chlorinated water should not remain in ·prolonged contact with pipe. In order to prevent damage to the

pipe lining or corrosion damage to the pipe itself, the heavily chlorinated water shall be flushed from the main until chlorine measurements show that the concentration in the water leaving the main is no higher than that which is generally prevailing in the system or is acceptable for domestic use.

Disposal of testing and disinfection water shall be per the Contractor obtained dewatering permit.

Bacteriological Tests – After completion of testing and sterilization, prior to final acceptance, the District will take water samples for bacteriological examination. Should any of the samples fail to meet minimum State of California requirements, the Contractor will continue to chlorinate and flush the system, as directed, until a satisfactory sample is obtained.

Redisinfection – If the initial disinfection fails to produce satisfactory bacteriological samples, the main may be reflushed and shall be resampled. If check samples show the presence of coliform organisms, then the main shall be rechlorinated by the continuous-feed or slug method of chlorination until satisfactory results are obtained.

NOTE: High velocities in the existing system, resulting from flushing the new main, may disturb sediment that has accumulated in the existing mains. When check samples are taken, it is well to also sample water entering the new main.

***** END OF SECTION *****

SECTION 02670
ABANDONMENT OF FACILITIES

PART 1 – GENERAL

1.01 SCOPE

A. This section governs abandonment of pipelines, services, valve and meter, and other existing structures.

1.02 SUBMITTALS

A. Upon request, schedules and method of abandonment shall be submitted to the City for approval.

PART 2 – MATERIALS

2.01 GENERAL

A. Concrete, fittings, backfill material and other material used for abandonment shall comply with Specification 03301 – Cast in Place Concrete and 02081 – CLSM.

2.02 FACILITY ABANDONMENT

A. Cement-based slurry shall be used for filling the pipe ends and valves boxes as shown on the drawings and shall consist of a mixture of Type II Portland cement, water and mortar sand specified below. The slurry shall be in accordance with ASTM C94 for controlled low strength material (CLSM).

B. Concrete plugs shall be used to cap the ends of pipelines as shown on the plans.

C. The sand shall consist of clean grains of hard, strong, durable materials, free from alkali, organic matter or other deleterious substances. The flowability shall be 100%.

D. The Contractor shall not use quick-setting cement, accelerators or other constituents, without the Engineer's written approval.

E. Materials

1. Compressive Strength. Grout shall have a minimum penetration resistance of 100 psi in 24 hours when tested in accordance with ASTM C403 and a minimum compressive strength of 300 psi in 28 days, and maximum compressive strength of 600 psi in 28 days when tested in accordance with ASTM C495 or C109.
2. Shrinkage. The grout shall have less than one percent shrinkage by volume.
3. Viscosity. The apparent viscosity shall not exceed 35 seconds in accordance with ASTM C939.
4. Provide mix design in accordance with ACI and ASTM standards for approval.
5. Provide mix design in accordance with ASTM standards for approval.

PART 3 – EXECUTION

3.01 PIPELINES

A. Procedures (Pipe Abandonment)

1. All existing pipelines shall be abandoned in place. The ends of the pipeline to be abandoned shall be cut and capped with a minimum of 2-feet of concrete

mixture. No pipeline shall be abandoned until the new pipeline system and all services are installed, tested and in service. An abandonment plan must be prepared by the Contractor and approved by the City prior to abandonment of any facilities.

2. Cement slurries – Neat cement or concrete slurries shall be prepared by adding cement or sand-and-cement to the calculated required volume of clean water. The material shall be mixed in the mixing equipment until it is adequately mixed and free of lumps, then immediately pumped into the pipe without delay.

3.02 SERVICE LATERALS

A. Typically laterals will be abandoned in place and replaced. No portion of the previous service lateral shall be present inside the meter box after abandonment. Service shall be cut and capped below grade to avoid accidental reconnection.

3.03 STRUCTURES (VALVE BOXES)

A. Valve boxes to be abandoned shall be removed to a point 12 inches below the proposed street grade or ground surface and filled with ¾-inch crushed rock for pipeline trench backfill or cement slurry, where in the street and filled with top soil where in front yards.

3.04 DISPOSAL OF MATERIALS

A. Contractor is responsible to legally dispose of all materials (including existing AC Pipe removed during abandonment and tie-ins). Reference Section 01354 for additional information.

**** END OF SECTION ****

SECTION 03003
PRECAST CONCRETE STRUCTURES

PART 1 – GENERAL

1.01 DESCRIPTION

A. Section Includes:

1. Water Meter pre-cast box

B. Reference Section 3002 Concrete for Quality Assurance requirements

PART 2 – PRODUCTS

2.01 PRECAST CONCRETE

A. The intake structure shall be precast and set in place per the contract drawings and as specified herein.
   1. Precast structures shall be in accordance with ASTM C478.
   2. Structure bottom and sides shall be a single unit with penetration predrilled or precast based on contract drawings and field exploration.

B. Concrete shall have a compressive strength (f'c) of 5,000 psi and shall conform to Caltrans Standard Specification Section 51: Concrete Structures.

C. All reinforcing steel (rebar) shall have yield strength (fy) of 60,000 psi and shall conform to Caltrans Standard Specification Section 52: Reinforcement.
   1. All reinforcing steel bars shall conform to the standard specifications for deformed billet steel for concrete reinforcement, ASTM Designation A615.
   2. Provide rebar with ACI Class B lap splice minimum unless otherwise noted. Stagger lap splices 24 inches minimum.
   3. Unless otherwise noted, maintain 2" coverage to the face of the bar.

D. Precast concrete structures shall be designed and stamped by a licensed professional Engineer registered in the State of California. The manufacturer of the structures shall provide complete design calculations for review and approval.

E. Exposed surfaces of pre-cast structures shall be coated with:
   1. One (1) coat Dunn Edwards "Super-Loc" W718 or approved equal.
   2. Two (2) coats Dunn Edwards "Endurawall" W370 – 100% acrylic elastomeric wall coating or approved equal.

PART 3 – EXECUTION

3.01 STRUCTURE EXCAVATION.

A. Excavation shall be to the lines, grades, and dimensions shown on the drawings. The original material at foundation surfaces shall be undisturbed and carefully graded. Where unsuitable material is found at planned foundation grade it shall be removed to a depth as directed by the Engineer, and replaced with structure backfill placed and compacted as specified herein. If directed by the Engineer, minor disturbance can be repaired by scarifying, moisture-conditioning, and recompacting the native material in place.

B. Foundations: Surfaces upon or against which concrete is to be placed shall be free of standing water, mud, debris, and loose material. The surfaces shall be inspected and approved by the Engineer before any concrete is placed.

3.02 STRUCTURE BACKFILL.

A. Structure backfill shall be compacted to a relative compaction of not less than ninety-five percent (95%) relative compaction. Relative compaction is based on laboratory test procedure ASTM D-1557.

**** END OF SECTION ****

SECTION 05999
ANCHOR/EXPANSION BOLTS AND MISCELLANEOUS METALS

PART 1 – GENERAL

1.01 SCOPE

A. This specification covers the installation and fabrication of metal shapes, plates, rods, bars castings checkered floor plate and the installation of expansion and epoxy set anchors for equipment and structures.

1.02 SUBMITTALS

A. Prior to installation the following shall be submitted by the City and approved.

B. Manufacturer's catalog data and detail sheets showing size, material and installation procedures.

PART 2 – MATERIALS

2.01 ANCHOR AND EXPANSION BOLTS

A. Materials that meet the following specification are acceptable.

1. Bolts:
    a. Carbon steel: ASTM A307.
    b. Stainless steel: ASTM 276, Grade 316.
    c. Galvanized steel: Carbon steel, hot-dip galvanized, ASTM A153; or zinc plated ASTM A164 type GS.

2. Nuts:
    a. Same material as bolts.
    b. Carbon steel: ASTM A307, Grade B heavy hexagonal.
    c. Stainless steel: ASTM 276, Grade B heavy hexagonal.
    d. Self-locking: Prevailing torque, IFI-100, grade A.

3. Washers:
    a. Same material as bolts.
    b. Flat: ANSI B27.2.
    c. Locking: Spring type ANSI B27.1.

4. Sleeves:
    a. Pipe: ASTM A120, galvanized.
    b. Bearing Plates: ASTM A36, galvanized.

5. Expansion anchors:
    a. FS FF-S-325.
    b. In hardened concrete:
        1) Wedge type: Group II, Type 4, Class I
        2) Self-drilling: Group III, Type I.
        3) Non-drilling, internally threaded: Group VIII, Type 1.
        4) Non-drilling, externally threaded: Group VIII, Type 2.

c. In masonry:
    1) Lag shield: Group II, Type 1, Class 1.
    2) Split sleeve: Group II, Type 3, Class 3.

6. Epoxy set anchors:

    a. FS FF-S-325
    b. In hardened concrete:
        1) Parabond capsule anchors.
        2) Ceramic 6 epoxy threaded rod anchors.
        3) Stainless steel studs, nuts and washers.

2.02 MISCELLANEOUS METAL

A. Materials that meet the following specifications are acceptable:

1. Steel:
    a. Plates and shapes: ASTM A36.
    b. Sheets: ASTM A366 or A569 zinc coated.
    c. Pipe: ASTM A120.
    d. Bolts:
        1) High strength: ASTM A325.
        2) Unfinished: ASTM A307.
        3) Self-locking nuts: Prevailing torque type; IFI-100, Grade A.
        4) Flat washers: ANSI B27.2.
        5) Lock washers: Spring type, ANSI B27.1.
        6) Beveled washers: Table 1 of Specifications for Structural Joints Using ASTM A325 or A490 Bolts, AISC Steel Construction Manual.
    e. Welds:
        1) Part 5 Specifications and Codes, AISC Steel Construction Manual.
        2) AWS D1.1-77 American Welding Society.
        3) Welding Electrodes: AWS 5.20 E70TX
    f. Checkered plate: FS QQ-F-461.

2. Cast iron: ASTM A48, Class 25 or better

3. Stainless steel: 18-8
    a. Plates: ASTM A167
    b. Bolts: IFI-104, Grade 303 or 305

4. Aluminum:
    a. Sheet and plate: ASTM B209, alloy 6061-T6.
    b. Rolled sections: ASTM B308, alloy 6061-T6.
    c. Rod and bar: ASTM B211, alloy 6061-T6 or 2017-T4.
    d. Extrusions: ASTM B221, alloy 6063-T5 or T6.
    e. Pipe: ASTM B429, alloy 6061-T6 or 6063-T6.
    f. Rivets: ASTM B316, alloy 6061-T6.
    g. Bolts: IFI-104, Grade 24T4.
    h. Castings: ASTM B26 or B85.
    i. Checkered plate: Alcoa C102.

5. Shop Coatings:
    a. Provides shop coatings per Section 09900:

1) Rust inhibitive shop primer for steel.
2) Zinc rich primer.
3) Coal tar paint.

b. Galvanizing.
   1) Bolt galvanizing:
      a) Zinc: ASTM A164, Type GS.
      b) Cadmium: ASTM A165, Type NS.
   2) Aluminum.
      a) Standard mill finish.
      b) Clear anodize.

2.03 FABRICATION

A. All items shall be fabricated in accordance with dimensions, arrangement, sizes and weights or thickness indicated on drawings or specified. All members shall be free of winds, warps, local deformations or unauthorized bends. Holes and other provisions for field connection shall be accurate and shop checked for proper fit. All field connection materials shall be provided. Anchor bolts shall be ¾-inch minimum L shape hook type unless indicated otherwise on plans. Expansion anchors shall be ¾-inch maximum and Epoxy set anchors shall be ¾-inch minimum.

PART 3 – EXECUTION

3.01 PREPARATION

A. Before assembly, thoroughly clean all parts which will be in contact with each other.

3.02 INSTALLATION

A. All installation shall be done according to the following:

1. General – Assemble all parts accurately as indicated on the Drawings. Set base plates level and grout in place. Verify that holes for anchor bolts in forms and templates match applicable equipment shop drawings.

2. Connections – Where welding is permitted or required, butt, miter, and fillet welds shall be continuous. Exposed welds shall be ground smooth. Intermittent welds shall have a minimum effective length of 2 inches and maximum spacing of 6 inches.

   Light drifting is permitted to draw parts together. Enlarge holes, if necessary, by reaming with twist drills. Burning is not allowed to enlarge holes.

3. Anchor bolts – Where installed in cast-in-place concrete, install a nut on the concrete side of the form or supporting template. Provide three (3) nuts for each anchor bolt for which a lock nut is indicated, two (2) for others.

   Sleeved anchor bolts shall be centered in pipe sleeve. Sleeve ID shall be approximately 2-1/2 times bolt OD and sleeve length shall be approximately eight (8) times bolt OD. Bearing plate minimum thickness shall be ½ times bolt OD.

   Through bolts shall be sleeved when used with bearing plates. Bearing plates shall be welded to bolt and plate welded to sleeve.

4. Expansion anchors – Install expansion anchors according to the manufacturer's instructions. Minimum hole depth shall be 4-bolt diameters and the minimum

distance between expansion anchor centerline and any edge or exterior corner of concrete shall be 4-1/2 bolt hole diameters.

5. Epoxy set anchors – Install epoxy set anchors according to manufacturer's recommendation clean hole and inspect prior to installation. Minimum hole depth shall be according to manufactures recommendation but not less than 6-5/8 inches. Diameter of drilled holes shall be according to ANSI B94.12.

3.03 STORAGE AND HANDLING

A. Store all materials on blocking so that no metal touches the ground and water can not collect thereon. Protect from bending under its own weight or superimposed loads.

3.04 SCHEDULES

A. Anchorage materials to be as noted on plans.

B. If materials are not noted on plans, the materials shall be:

1. Submerged: 316 stainless steel.
2. Encased in concrete: Carbon steel.
3. Wet wells, effluent channels and other areas near sewage: 316 stainless steel.
4. Other general areas: Carbon steel.
5. Exposed outdoors: Galvanized.
6. Chemical feed areas: 316 stainless steel.

***** END OF SECTION *****

SECTION 09900
PAINTING AND COATING

PART 1 – GENERAL

1.01 SCOPE

A. This section governs materials and application of painting and coating for exposed pipe and appurtenances.

1.02 SUBMITTALS

A. Prior to application, the following shall be submitted:

1. Paint or coating manufacturer's product data sheet showing suitability of material for intended use including instruction on surface preparation and application.

1.03 COLOR SCHEDULE

A. Above-ground or exposed facilities shall be color coded to differentiate from potable water, reclaimed water, and wastewater facilities as follows:

Potable Water:	Medium Blue
Reclaimed Water:	OSHA Safety Purple
Wastewater:	OSHA Safety Green

PART 2 – MATERIALS

2.01 CERAMIC EPOXY LINING

A. The interior of all steel or ductile-iron service pipe, fitting, and couplings shall be lined with Protecto 401 Ceramic lining.

2.02 EPOXY ENAMEL COATING

A. Exterior surface of all steel or ductile-iron service pipe, fittings, couplings and other exterior metal surfaces shall be epoxy enamel coated in accordance with AWWA C210.07

B. Primer shall be per manufactures recommendation with use of Epoxy Enamel.

2.03 BITUMINOUS MASTIC

A. Bituminous mastic shall be coal-tar pitch based and shall have a minimum of 68% solids by volume.

2.04 EPOXY PAINT

A. Epoxy shall be a colored polyamide cured epoxy with not less than 49% solids by volume.

B. All coatings and pigments to be used on potable water services shall have FDA approval for use with potable water.

PART 3 – EXECUTION

3.01 PROJECT COATINGS

A. Scope: The following governs specific coating systems to be used in each area of work.

1. Valve Vault (for services only)
   a. Interior and exterior of pipe and ferrous metal: Epoxy
   b. Interior and exterior of valves and fittings: Epoxy
   c. Buried valves: Epoxy

2. Miscellaneous Surfaces
   a. Exposed electrical boxes and conduit: Urethane
   b. Exposed piping and valves: Epoxy Enamel
   c. Interior of ductile iron pipe: Protecto401 Ceramic Epoxy

3. Underground/ aboveground
   a. Interior and Exterior of valves: shall be coated with Protecto401 Ceramic Epoxy
   b. Interior and Exterior of fittings shall be coated with Protecto401 Ceramic Epoxy

3.02 GENERAL

A. The requirements for painting and coating ferrous surfaces shall generally conform to the SSPC (Steel Structures Painting Council) and to the manufacturer's recommendations. Application of the paint or coating system shall not be permitted if, in the opinion of the City, the equipment, climate, or safety conditions do meet the above recommendations.

B. The Contractor shall stir, strain, and keep coating materials at a uniform consistency during application. Each coating shall be applied evenly, free of brush marks, sags, runs and other evidence of poor workmanship. Finished surfaces shall be free from defects and blemishes.

C. The Contractor shall not use thinners unless permitted by the City. If thinning is allowed, the maximum allowable amount of thinner per gallon of coating material as recommended by the manufacturer shall be used. Coating materials shall be stirred at all times when adding thinner and the coating material surface shall not be flooded with thinner prior to mixing. The Contractor shall not reduce coating materials more than is absolutely necessary to obtain the proper application characteristics and to obtain the specified dry film thickness.

D. Deliver all paints to the job site in the original, unopened containers.

3.03 SURFACES NOT TO BE COATED

A. The following surfaces shall not be painted and shall be protected during the painting of adjacent areas:

1. Mortar-coated pipe and fittings
2. Concrete surfaces (i.e. vaults)
3. Stainless steel
4. Anodized aluminum
5. Nameplates
6. Manhole frames and covers
7. Grease fittings

8. Glass
9. Brass, copper or bronze
10. Platform gratings
11. Buried pipe, unless specifically required in the piping specifications

3.04 SURFACE PREPARATION

A. The Contractor shall not prepare more surface area than can be coated in one day. Pipe that has already been factory primed or painted shall not be sandblasted. All surfaces shall be prepared in accordance with the manufacturer's recommendations.

B. Wherever the words "solvent cleaning", "hand tool cleaning", "wire brushing", or "blast cleaning", or similar words are used in these specifications or in paint manufacturer's specifications, they shall be understood to refer to the applicable SSPC (Steel Structure Painting Council).

3.05 SHOP APPLIED PRIMER

A. Surfaces that are shop primed shall receive a field touchup of primer to cover all scratches or abraded areas.

3.06 BITUMINOUS MASTIC

A. Buried metal (flanges, non-stainless steel nuts and bolts, flexible couplings, exposed reinforcing steel, etc.) shall be coated with a minimum of 20 mils of bituminous mastic.

B. All surfaces coated with bituminous mastic shall be covered with 8 mil polyethylene wrap.

3.07 EPOXY COATING

A. All exposed steel and ductile-iron piping, fitting, and couplings are to have exterior surfaces epoxy enamel coated.

B. Only those metal surfaces specifically called out, shall be epoxy coated and applied as follows:

1. Surfaces to be epoxy coated shall be sandblasted.
2. Sandblasted surfaces shall be coated with primer to a dry film thickness of 3 mils.
3. Two coats of epoxy paint shall be applied (4 mils each) to the primed surface. The manufacturer's recommended drying time between coats shall be followed.
4. The Contractor shall prepare multiple-component coatings using all of the contents of the container for each component as packaged by the paint manufacturer. Partial batches and multiple component coatings that have been mixed beyond their pot life shall not be used. Touchup paint shall be provided. The Contractor shall mix only the components specified and furnished by the paint manufacturer. The Contractor shall not intermix additional components for reasons of color or otherwise, even within the same generic type of coating.

3.08 PROTECTO401 CERAMIC EPOXY COATING

A. All Ductile Iron Pipe, valves and fittings shall be lined with a Protecto401 Ceramic Epoxy.

B. After surface preparation and within 12 hours of surface preparation, the interior of the pipe shall receive 40 mils nominal dry film thickness of Protecto 401. No lining shall take place when the substrate or ambient temperature is below 40° F. The

surface also must be dry and dust free. All lining shall be per manufacturer standards.

3.09 APPLICATION LIMITATION

A. Paint or coating shall not be applied under the following conditions:

1. When the surrounding air temperature or the temperature of the surface to be coated is below 40□ F or as recommended by the manufacturer of the specified coating system.
2. When the temperature of the surface to be coated is more than 5□ F below the air temperature or when the surface temperature is over 120□ F.
3. When the surface to be coated is wet, moist, or contaminated with any foreign matter.
4. During rain, fog, or mist, or when the relative humidity exceeds 80 percent.
5. When the temperature is less than 5º F above the dewpoint.
   a. If above conditions are prevalent, the application of coating shall be delayed or postponed until conditions are favorable. Dew or moisture condensation should be anticipated and if such conditions are prevalent, coating work shall be delayed until mid-morning to be certain that the surfaces are dry.
   b. The day's coating shall be completed in time to permit the film sufficient drying time prior to damage by climatic conditions.
   c. If a change in climatic conditions damages a coating application, the Contractor shall repair the damaged coating to its specified condition as directed by the City.
   d. Paint shall be applied in such a manner as to assure an even, smooth, uniform adhering coat free from dirt, runs, brush marks and laps, and shall be applied as recommended by the manufacturer. Paint shall not be applied when freshly painted surfaces can become damaged by rain, fog, or condensation or when inclement weather can be anticipated. Fresh paint damaged by the elements shall be replaced by the contractor at his expense. Drop cloths shall be used to protect floors, equipment, piping and other exposed surfaces from spattering and spillage. Paint shall be allowed to dry thoroughly between applications of successive coats. The manufacturer's recommended time between coats will be used as a guide by the City as to when the next coat of paint may be applied. The City must give approval before successive coats are applied.
   e. The Contractor shall notify the City after surface preparation and after the application of each coat of paint.

PART 4 – TESTING

4.01 GENERAL

A. The City will perform such tests as are required to ensure compliance with all phases of the work including surface preparation, abrasive blast cleaning, and the application of the coating systems.

1. If the item has an improper finish color or insufficient film thickness, the surface shall be cleaned and topcoated with the specified paint material to obtain the specified color and coverage. Visible areas of chipped, peeled, or abraded paint shall be hand or power-sanded, feathering the edges. The areas shall then be

primed and finish coated in accordance with the specifications. Work shall be free of runs, bridges, shiners, laps, or other imperfections.

***** END OF SECTION *****

CITY OF PLACERVILLE, CALIFORNIA\
DEVELOPMENT SERVICES DEPARTMENT
ENGINEERING DIVISION

Pardi/Big Cut/Sacramento Street Area Waterline Relocation Project

Project No. 41109

APPENDIX A – GEOTECHNICAL REPORT

April 25, 2016

8331 Sierra College Blvd., Suite 208
Roseville, CA 95661
Phone: 916.757.6150
www.wreco.com

March 17, 2016

City of Placerville
3101 Center Street
Placerville, CA 95667

Attention: Ms. Rebecca Neves

Subject: Waterline Replacement Project
Pardi Way/Big Cut Road/Sacramento Street
Placerville, California

This memorandum provides geotechnical recommendations for use in construction of the proposed waterline replacement project for Pardi Way/Big Cut Road/Sacramento Street per your request. Details of the geotechnical study performed at the site are provided herein.

Background
The City of Placerville has proposed to replace existing and construct new waterlines within the City limits. The project is located on Pardi Way, Big Cut Road, Sacramento Street/Highway 49, Chamberlain Street, and Gilmore Street, located south of Highway 50. The site location generally slopes steeply downhill to the northeast. The surrounding property use is largely residential and some commercial with narrow two-lane and single-lane asphalt paved streets. The Vicinity Map is included as Figure 1.

The existing 12 inch and 6 inch waterlines are located between Big Cut Road and Pardi Way and Gilmore Street, respectively. The existing waterline will be capped with concrete and abandoned in place.

The proposed waterlines will vary in size from 8 inch to 12 inch diameter PVC pipe with bottom of pipe located approximately 5 feet below existing road grade. The top of pipe will have minimum 36 inches of cover on Sacramento Street/Highway 49 per Caltrans requirements. The remainder of the project site will required 30 inches of cover from top of pipe. Work within the project scope also includes 1" diameter service laterals and tracer wire installation within the trench, roughly adjacent to the waterline. Warning tape will be placed 14" below finished grade.

There are existing underground sanitary sewer lines along Sacramento Street/Highway 49, Big Cut Road, Gilmore Street, and Chamberlain Street. There is an existing underground storm drain along Sacramento Street and a portion of Big Cut Road. There are existing overhead and underground dry utilities along Sacramento Street/Highway 49 and Gilmore Street.

Site Reconnaissance
A limited investigation of the project site was performed for this study. On March 8, 2016, a site review/reconnaissance was performed by Amanda Kahn, G.I.T. This reconnaissance was performed by walking traverse along the proposed cut locations. The Site Photographs are included as Appendix I.

BAY AREA GREEN BUSINESS

WRECO also retained the services of Gasch Geophysical Services, Inc. (GGSI) to perform a limited seismic refraction investigation on March 8, 2016 to evaluate excavatability and rippability characteristics of the earth materials at the site. A summary of GGSIs work performed and findings is included as Appendix I.

Subsurface Conditions

The subsurface conditions at the project site were characterized by means of the available published geology, visual observation of surficial soils during the site review, and results of the seismic refraction study.

According to the Geologic Map of the Sacramento Quadrangle, California (CDMG, 1981) the project site is underlain by Jurassic-aged Mariposa Formation which is described as slate, greywacke, and conglomerate.

Based on site observations, surficial conditions at the south terminus of Gilmore Street along Philip Road appear to consist of rounded cobbles 6 inch to 8 inches in diameter in a matrix of weakly cemented sands and fines. Cobbles were present on the inboard side of Philip Road that appeared to have slid down from upslope.

Along the inboard of Big Cut Road, rounded cobbles 4 inch to 6 inch diameter were observed in a friable matrix of sand and fines.

Along the inboard slope of Pardi Way, subrounded cobbles 4 inch to 6 inch diameter were observed in a matrix of sand and fines. An intensely weathered detached block of rock was observed along the inboard slope, near the intersection with Big Cut Road. Along the outboard of Pardi Way, the surficial materials appeared to be intensely weathered decomposed rock with quartzitic coarse gravel and cobbles (3 inch to 6 inch in diameter.).

Groundwater

Site reconnaissance was performed after a multiple day storm event. Flowing water was observed along the inboard side of the roads and there was seepage along exposed slope faces.

In general we expect seepage along the soil/rock interface during the winter months or extended periods of rainfall, and seepage within the underlying less-weathered rock to be discontinuous, likely transmitted through rock discontinuities (e.g. fractures, joints, etc.).

Findings

Results of the geophysical surveys performed generally indicate that near surface earth materials (0 to 15 feet depth below ground surface) are consistent with low to moderate (1,500 ft/s to 4,000 ft/s) seismic velocities which suggest weathered and/or decomposed rock, native soil and fill material. Areas with higher velocities (>5,000 ft/s) were identified along Sacramento Street/Highway 49 and Gilmore Street which suggest localized locations of more competent bedrock. Near the south terminus of Gilmore Street there is a high velocity area (8,000± ft/s)

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which may indicate either a large hard object such as a boulder or an unmarked/abandoned utility.

Recommendations

Based upon the visual observations made of the surficial soils and rock along with the results of the limited seismic refraction we expect that the majority of the materials can be excavated using standard heavy-duty hydraulic excavation equipment such as a CAT 345 or equal horsepower excavator. Rock with a seismic velocity over about 6,000 ft/s was identified along Sacramento Street/Highway 49 and Gilmore Street. These areas of higher seismic velocities will require the use of a hydraulic rock hammer in order to remove the materials. The hydraulic rock hammer should have a minimum of 11,000 foot pounds of breaker force. Blasting should not be used as it may disrupt/degrade the surrounding earth materials and residences.

The majority of the surficial soils observed consisted of sand/gravel/cobble with cobbles up to 8 inches in diameter. During construction, the excavations to install the new water line will likely disrupt/dislodge the cobble sized surficial materials causing them to cave into the open excavation thereby creating a larger excavation. Also, due to the high cobble fraction, it will be extremely difficult to excavate steep trench side slopes. Shoring may be required.

Along Pardi Way between Sta. 4+20 to 5+00, "AA" alignment, excavation depths will reach 12±ft depth below existing ground surface. The contractor should be responsible for design and implementation of excavations (and shoring, if required) in accordance with CalOSHA requirements. Construction site safety generally is the sole responsibility of the Contractor, who shall also be solely responsible for the means, methods, and sequencing of construction operations. It will be extremely difficult to install driven shoring due to the large fraction of cobbles in the overall soil matrix. Trench shields and trench boxes used for shoring are anticipated to require larger excavations to install and there is the possibility of lateral translations towards the shields of the existing pavements.

Groundwater was observed seeping from free faces in the existing cuts and this seeping water is from up gradient infiltrated surface water flowing downhill through the existing cracks in the rock mass and through the existing site soils. Depending on the depth of the excavation, proximity to a confining layer beneath the excavation, and how much recent precipitation has occurred near and up gradient of the excavations, significant quantities of groundwater can be expected to be encountered and will need to be cut off and controlled in order to excavate the trench and backfill. All water removed from the trenches will need to be stored, tested, and disposed of per State Water Quality Control Board requirements.

Limitations

This Memorandum was performed in accordance with generally accepted geotechnical engineering principles and practices. No other warranty, expressed or implied, is made as to the conclusions and professional recommendations included within this report.

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This Memorandum is intended for use with the Pardi Way/Big Cut Road/Sacramento Street Waterline Replacement Project located in City of Placerville, California. Any changes in the design or location of the proposed new waterline, however slight, should be brought to our attention so that we may determine how they may affect our recommendations. The recommendations contained in this report are based upon the data relating only to this specific project and locations discussed herein.

We would like to thank City of Placerville for the opportunity to prepare this memorandum. If you have any questions or wish to discuss this report in greater detail, please contact us at (916) 757-6150.

Sincerely,
WRECO



Robert Lawrence, PE, GE
Senior Geotechnical Engineer

Attachments:

Figure 1: Vicinity Map

Appendix I: Site Photographs
Appendix II: Gasch Geophysical Services, Inc. Report of Findings

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Roseville, CA 95661
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References

Cal/OSHA, 2007. State of California Department of Industrial Relations, California Division of Occupational Safety and Health, 2007, California Code of Regulations, Title 8, Article 6, Sections 1540-1541.1, Excavations.

Handbook of Ripping, 12th Edition, Caterpillar, Inc., Peoria, Illinois, 2000.

Wagner, D.L., Jennings, C.W., Bedrossian, T.L., and Bortugno, E.J., 1981, Geologic map of the Sacramento quadrangle, California, 1:250,000: California Division of Mines and Geology, Regional Geologic Map 1A, scale 1:250,000



Figure 1

Vicinity Map

Waterline Replacement Project

Pardi Way/ Big Cut Road/ Sacramento Street

Placerville, CA

WRECO Project No. P15010

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Appendix I Site Photographs



Photograph 1. Southern terminus of Gilmore Street at Philips Court; facing south.


Photograph 2. View of Gilmore Street; facing north.



Photograph 3. Intersection of Sacramento Street and Gilmore Street; facing north.


Photograph 4. Intersection of Sacramento Street and Gilmore Street; facing southwest.



Photograph 5. View of Chamberlain Street; facing west.



Photograph 6. View of Chamberlain Street; facing east.



Photograph 7. View of Sacramento Street; facing east.



Photograph 8. View of Sacramento Street; facing west.



Photograph 9. View of Sacramento Street; facing east.


Photograph 10. View of Big Cut Road north of City maintenance yard; facing west.



Photograph 11. View of Big Cut Road north of City maintenance yard; facing southeast.



Photograph 12. View of Big Cut Road looking towards intersection with Philips Court; facing southwest.



Photograph 13. View of Big Cut Road near intersection with Sickrad drive; facing north.



Photograph 14. View of Pardi Way near existing water treatment facility; facing west.



Photograph 15. Outboard shoulder of Pardi way; facing west.



Photograph 16. View of Pardi Way; facing west.

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Appendix II Gasch Geophysical Services, Inc. Report of Findings

Refraction Seismic Investigation
at the
City of Placerville's
Pardi Way/Big Cut Road/Sacramento Street
Waterline Replacement Project
Placerville, El Dorado County, California

GGSI Project No. 2016-04.01

Prepared by:

Gasch Geophysical Services, Inc.
Rancho Cordova, California 95742-6576

Submitted to:

Mr. Robert Lawrence
WRECO
8331 Sierra College Blvd, Suite 208
Roseville, California 95661

March, 2016

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FOR THE ENGINEERING,
GROUNDWATER, OIL & GAS
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Since 1969

March 11, 2016

Mr. Robert Lawrence
WRECO
8331 Sierra College Blvd.
Suite 208
Roseville, California 95661

Re: Refraction Seismic Investigation at the City of Placerville's Pardi Way/Big Cut Road/Sacramento Street Waterline Replacement Project in Placerville, El Dorado County, California.
City of Placerville Project No. 41109

Dear Mr. Lawrence:

At your request and authorization, Gasch Geophysical Services, Inc. (GGSI) has completed a refraction seismic investigation to evaluate the excavatability characteristics of the sub-surface materials at the City of Placerville's Pardi Way/Big Cut Road/Sacramento Street Waterline Replacement Project in Placerville, El Dorado County, California (Figure 1).

Purpose

The purpose of this investigation was to determine the depth to higher velocity material and also define the rippability (excavatability) characteristics of the sub-surface materials along portions of the planned waterline replacement alignment. The refraction seismic (RS) method was used to evaluate the rock velocities on site, as seismic primary-wave travel times are used to quantify the rock velocities and as a result, can determine the general competency/rippability in areas of various rock types.

Method, Instrumentation and Software

The RS method measures the velocity at which a seismic wave propagates through a soil or rock medium. In this case, the primary (p-wave) or compressional seismic wave was measured. Higher seismic p-wave velocities (measured in feet per second, ft/s) indicate material of higher density, thus quantifying the competency, or strength of the soil or rock medium and providing an estimation of the rippability and/or excavatability of the sub-surface materials.

GGSI's seismic data acquisition system was a Seistronix EX-6 Explorer which is a distributed, 24-bit digital instrument with data output to electronic media for subsequent processing. Geophones were single, 10-Hz, digital grade units manufactured by OYO

Geospace Corporation. Spread cables were manufactured by Pro-Seismic Services. The energy source for this project was a twelve pound sledge hammer with a hardwire connection for system triggering. All data were processed in house, on our data reduction and plotting workstation.

Our refraction seismic data reduction and processing software is Rayfract® version 3.33. This refraction seismic processing software utilizes Wavepath Eikonal Traveltime (WET) tomography which models multiple signal propagation paths contributing to one first break (the Fresnel volume approach), while conventional ray tracing tomography is limited to the modeling of just one ray path per first break. The WET inversion method is founded upon a back-projection formula for inverting velocities from travel times computed by a finite-difference solution to the Eikonal equation (Qin, et al. 1992). An Eikonal solver is used for traveltime field computation which models diffraction in addition to refraction and transmission of acoustic waves. As a result, the velocity anomaly imaging capability is enhanced with the WET tomographic inversion method compared to conventional ray tomography. This software is developed by Intelligent Resources, Inc. of Vancouver, British Colombia, Canada.

A color-coded seismic velocity cross-section of the subsurface has been generated for each RS line, where cool colors (blues) indicate lower seismic velocities and warm colors (reds, purple) indicate higher velocities. Color scaling of these seismic velocity sections is based on the range of seismic velocity values calculated. Velocity scaling has been normalized on all RS velocity sections.

Data Acquisition Parameters

A total of 6 RS lines were acquired during this investigation. RS Line locations were suggested by WRECO personnel and slightly adjusted in the field to allow for safe and efficient data acquisition. All RS Lines were acquired with geophone stations spaced at 10-foot intervals and energy source points were located between every third geophone station as well as off the ends of each line. All RS Lines were acquired with 15 geophone stations with the exception of Line 5 which utilized 24 geophone stations. A total of 1,050 lineal feet of data was collected for this investigation. Collection of the field data was carried out on March 8th, 2016. The field crew consisted of Professional Geophysicist Kent Gasch and geophysical technician Israel Murillo. The location and lengths of the RS lines are presented on Figure 2.

Rippability

Rippability is dependent on the physical condition of the rock masses to be excavated. In addition to rock type and degree of weathering, structural features in the rock such as bedding planes, cleavage planes, joints, fractures, consolidation and shear zones also influence rippability. Rock masses tend to be more easily ripped if they have well defined, closely spaced fractures, joints, or other planes of weakness. Massive rock

bodies which lack discontinuities may allow for slow and difficult ripping or refusal, even where partially weathered, and may require blasting to break the rock for efficient removal.

The association between the seismic velocity of any given earth material and its rippability varies greatly from one type of earth-moving equipment to another. For example, although a large track laying dozer with a single ripper tooth can sometimes rip material with seismic velocities in excess of 10,000 ft/s. GGSI has experienced a limiting (refusal) velocity for large excavators to range from 3,500 ft/s to 4,500 ft/s, and a standard backhoe may meet refusal at seismic velocities as low as 2,000 ft/s. Although low seismic velocities in any rock type indicate probable rippability; if the fractures, bedding and/or joints do not allow tooth penetration, the material still may not be ripped efficiently, and in some cases, drilling and blasting may be required to induce sufficient fracturing to allow for excavation. Ultimately, the relationship between seismic velocity and rippability is dependent on both: site conditions *and* equipment and/or operator ability.

Seismic Velocities

Generally, seismic p-wave velocities less than 3,000 ft/s indicate native soil, fill material or highly weathered and/or decomposed rock, while velocities in excess of 10,000 ft/s indicate fresh (essentially non-weathered) rock. Seismic velocities between these two values typically indicate rock with varying degrees of weathering and/or fracturing. Consolidation and cementation, as well as, fracture spacing and density also affect the measured seismic velocities. Moderate velocities may indicate compacted soil, moderately weathered rock or loosely consolidated sediment such as gravel, sand and silt. Saturated sediment below the water table characteristically displays seismic velocities near or slightly above 5,000 ft/s.

Extremes in seismic velocities may range from below 1,000 ft/s to over 20,000 ft/s. Very low seismic velocities usually indicate highly weathered or poorly compacted material, either natural or man-made. Extremely high velocities are rare in the near-surface, and only possible in certain types of rock. Rock velocities are dependent on the physical condition of the rock masses evaluated, as a result, seismic p-wave velocities are related to rock hardness, fracture density and sediment consolidation, saturation and cementation.

Findings

The results of this refraction seismic investigation are summarized by Figures 3 through 8. These seismic velocity sections, which were created through the inversion process, have very low error and provide a high degree of lateral definition of the seismic velocity horizons found beneath each line. The seismic velocity sections have been scaled from 1,500 ft/s to 14,000 ft/s for the velocity window. Horizontal and vertical axes have been

scaled to 20 feet per inch in the horizontal and 10 feet per inch in the vertical on all RS lines. In addition, the depth of the planned pipeline is displayed on each Seismic Velocity Section for ease in evaluating the subsurface conditions.

RS Line 1 (Figure 3)

RS Line 1 is located on Sacramento Street between Chamberlain Street and Fiske Street and is oriented approximately north to south (see Figure 2). This line is parallel to alignment stations 2+30 to 3+90, as shown along the bottom axis of the seismic section. The seismic velocities measured at this location show a moderate gradation from the low to moderate velocities (1,500 ft/s to 4,000 ft/s), with a southerly dip. Velocity measurements along this line suggest rippable material, with a large excavator, to the depth of the planned pipeline, however, slower excavation progress should be expected as higher seismic velocities areas are encountered.

RS Line 2 (Figure 4)

This Line is also located on Sacramento Street, but between Gilmore Street and Skyline Drive. Orientation of this line is approximately east to west (see Figure 2). This line was acquired along the planned alignment between stations 4+07 to 5+67. Seismic velocities along this line grade moderately from low velocities at some locations and alternate with moderate velocities at the surface. Based on the planned depth of the pipeline, excavation with a large excavator should not be problematic, however, slower excavation progress should be expected as higher seismic velocities areas are encountered.

RS Line 3 (Figure 5)

RS Line 3 is located along Big Cut Road just east of Phillips Court and is oriented approximately east to west See Figure 2). Line 3 was acquired along pipeline alignment stations 2+30 to 3+90. The velocities measured along this line are low from ground surface to a depth of 15+ feet bgs, suggesting native soil, fill material or highly weathered and/or decomposed rock. Based on the measured seismic velocities along this line, excavation should not be problematic.

RS Line 4 (Figure 6)

RS Line 4 is located on Gilmore Street between Sacramento Street and Phillip Court. This line is oriented north to south and was acquired along pipeline alignment stations 1+94 to 3+54. The seismic velocities measured at this location show a large variation of velocities at the surface to the depth of the planned pipeline. For the most part, excavation should not be problematic, however, between stations 2+65 to 3+00 a high velocity area is present at the surface. This area appears anomalous compared to the remainder of the velocity section and may be an erroneous measurement, a large, hard

object or possibly an unmarked utility just below ground surface. Caution should be exercised during excavation due to the possibility that this could be an unmarked utility.

RS Line 5 (Figure 7)

This Line is located on Pardi Way from the existing water facility at the top of the hill (east) and extends 250 feet downhill to the west (see Figure 2). This line was acquired along the planned alignment between stations 1+78 to 4+28. Seismic velocities along this line grade slowly from low velocities to low-moderate velocities at a depth of 15+ feet bgs. Excavation with a large excavator should not be problematic along this Line.

RS Line 6 (Figure 8)

RS Line 6 is located on Chamberlain Street between Sacramento Street and Lillian Court and is oriented approximately east to west (see Figure 2). This line is along alignment stations 3+14 to 4+74. The seismic velocities measured at this location show a moderate gradation from the low to moderate velocities (1,500 ft/s to 4,000 ft/s), with a moderate easterly dip. Velocity measurements along this line suggest rippable material, with a large excavator, to the depth of the planned pipeline, however, slower excavation progress should be expected in the area of stations 3+20 to 3+40 as this area measured a small, isolated higher velocity zone.

Summary

This refraction seismic investigation was designed to provide a good sampling of the subsurface conditions along portions of the planned waterline replacement alignment. This investigation revealed a low to moderate degree of variation in the calculated seismic velocities of the subsurface materials, with the highest seismic velocity of greater than 12,000 ft/s measured at the maximum depth of exploration, on Line 1. Low velocity material was encountered in the near surface on most Lines which suggests highly weathered/fractured rock and soil or fill. The moderate velocity range of 3,000 ft/s to approximately 4,500 ft/s, suggests highly compacted soil/fill, moderately weathered/fractured rock or loosely consolidated sediment such as gravel, sand and silt. All RS Lines show this low to moderate velocity section of material from surface to varying depths. In general, rippability with a large track laying excavator should not be problematic to the depth of the planned replacement pipeline, however, excavation may be slower as zones of higher velocity material is encountered.

Warranty and Limitations

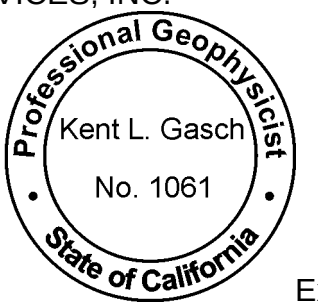
Gasch Geophysical Services, Inc. has performed these services in a manner which is consistent with standards of the profession. Site conditions can cause some variations of the calculated seismic velocities. Refraction seismic velocities assume that velocities increase with depth; therefore, a lower seismic velocity layer beneath a higher seismic

velocity layer will not be resolved. No guarantee, with respect to the results and performance of services or products delivered for this project, is implied or expressed by Gasch Geophysical Services, Inc.

We trust that this is the information you require; however, should you have comments or questions, please contact our Rancho Cordova office at your convenience. Thank you for this opportunity to again be of service.

Sincerely,

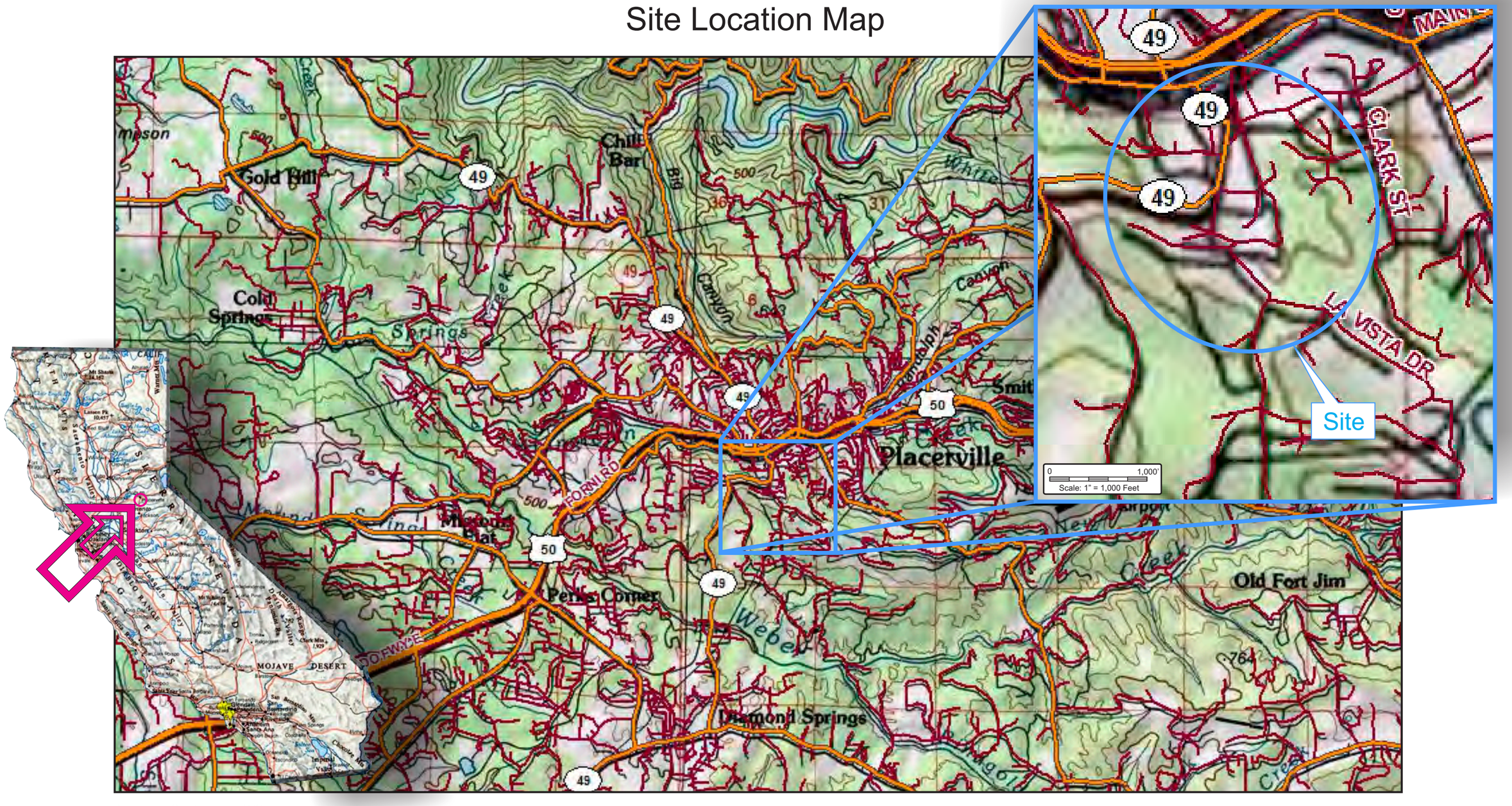
GASCH GEOPHYSICAL SERVICES, INC.



Expires 12/31/2017

Kent L. Gasch
Professional Geophysicist #1061

Site Location Map



Base Maps Courtesy of: USGS

Figure 1

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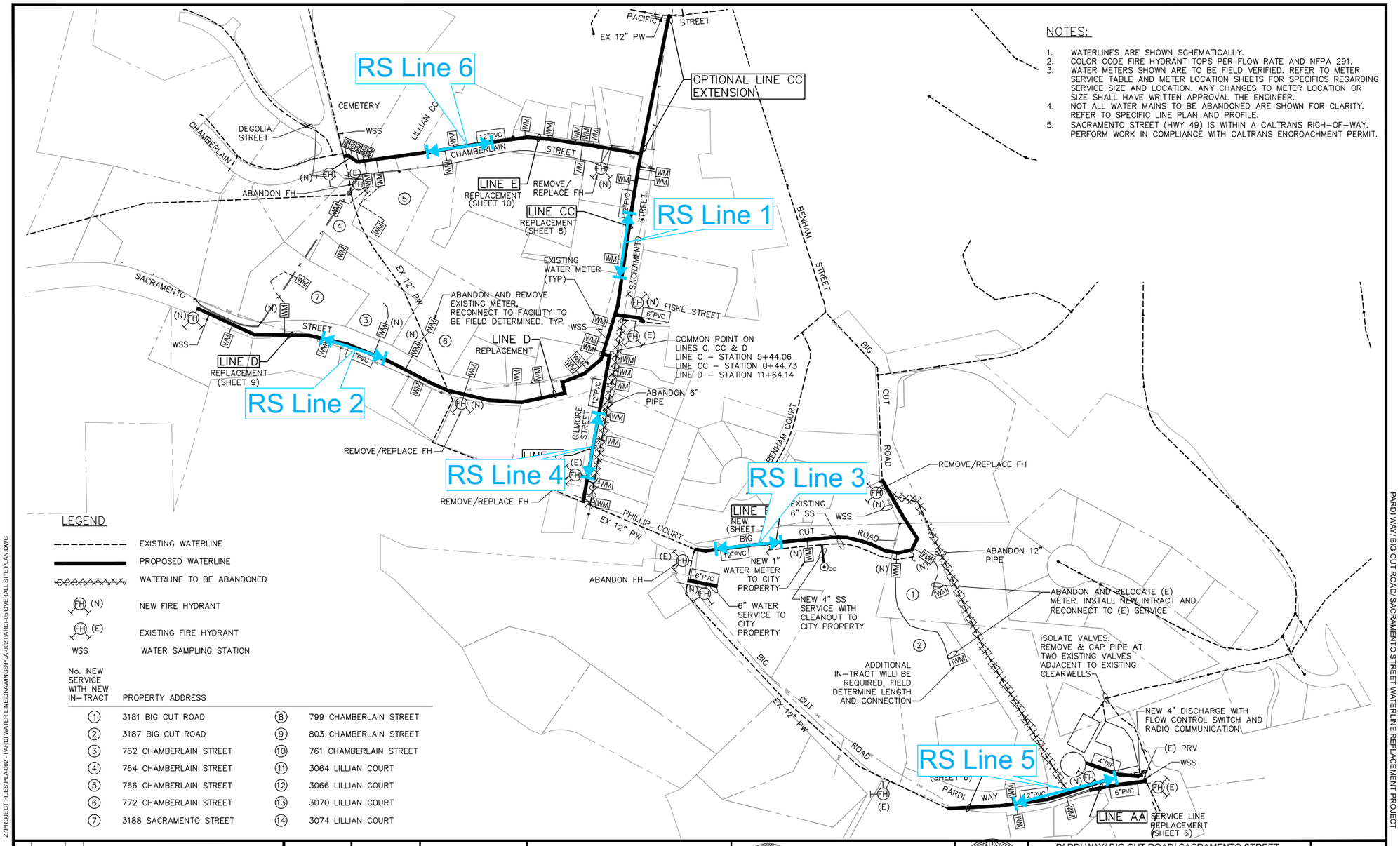
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Refraction Seismic Investigation:
Placerville Waterline Replacement

Prepared for: *WRECO*

Project Number: 2016-04.01 ***Date:*** March, 2016

RS Line Location Map



NOTES:

1. WATERLINES ARE SHOWN SCHEMATICALLY.
2. COLOR CODE FIRE HYDRANT TOPS PER FLOW RATE AND NFPA 291.
3. WATER METERS SHOWN ARE TO BE FIELD VERIFIED. REFER TO METER SERVICE TABLE AND METER LOCATION SHEETS FOR SPECIFICS REGARDING SERVICE SIZE AND LOCATION. ANY CHANGES TO METER LOCATION OR SIZE SHALL HAVE WRITTEN APPROVAL THE ENGINEER.
4. NOT ALL WATER MAINS TO BE ABANDONED ARE SHOWN FOR CLARITY. REFER TO SPECIFIC LINE PLAN AND PROFILE.
5. SACRAMENTO STREET (HWY 49) IS WITHIN A CALTRANS RIGH–OF–WAY. PERFORM WORK IN COMPLIANCE WITH CALTRANS ENCROACHMENT PERMIT.

LEGEND

- EXISTING WATERLINE
- PROPOSED WATERLINE
- WATERLINE TO BE ABANDONED
- (N) FH — NEW FIRE HYDRANT
- (E) FH — EXISTING FIRE HYDRANT
- WSS — WATER SAMPLING STATION

No. NEW SERVICE WITH NEW IN–TRACT	PROPERTY ADDRESS	No. NEW SERVICE WITH NEW IN–TRACT	PROPERTY ADDRESS
1	3181 BIG CUT ROAD	8	799 CHAMBERLAIN STREET
2	3187 BIG CUT ROAD	9	803 CHAMBERLAIN STREET
3	762 CHAMBERLAIN STREET	10	761 CHAMBERLAIN STREET
4	764 CHAMBERLAIN STREET	11	3064 LILLIAN COURT
5	766 CHAMBERLAIN STREET	12	3066 LILLIAN COURT
6	772 CHAMBERLAIN STREET	13	3070 LILLIAN COURT
7	3188 SACRAMENTO STREET	14	3074 LILLIAN COURT

Z:\PROJECT FILES\PLA-002 - PARDI WATER LINE\DRAWINGS\PLA-002 PARDI-05 OVERALL SITE PLAN.DWG

PARDI WAY/ BIG CUT ROAD/ SACRAMENTO STREET WATERLINE REPLACEMENT PROJECT

REV	DATE	BY	DESCRIPTION

20160208.183444

SCALE: 1" = 250'

WARNING 0 1/2 1 — IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

DESIGNED A.J.M
DRAWN J.A.C.
CHECKED S.M. ROGERS

DOMENICHELLI & ASSOCIATES
1101 Investment Blvd. Suite 115
El Dorado Hills, CA 95762
Ph: (916) 933–1997
Fax: (916) 933–4778

CITY OF PLACERVILLE
3101 CENTER STREET
PLACERVILLE, CA 95667
PHONE: (530) 642-5250

REGISTERED PROFESSIONAL ENGINEER SARA M. ROGERS NO. C64226 Exp. 6/30/17 STATE OF CALIFORNIA CIVIL

PARDI WAY/ BIG CUT ROAD/ SACRAMENTO STREET WATERLINE REPLACEMENT PROJECT

OVERALL SITE PLAN

SHEET 5

5 OF 20

Base Map Courtesy of Domenichelli & Associates

0' 125' 250' 500' 750'

Scale: 1 inch = 250 feet

N W E S

Figure 2

Refraction Seismic Investigation:
Placerville Waterline Replacement

Prepared for: ***WRECO***

Project Number: 2016-04.01 ***Date:*** March, 2016

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Seismic Velocity Section • RS Line 1

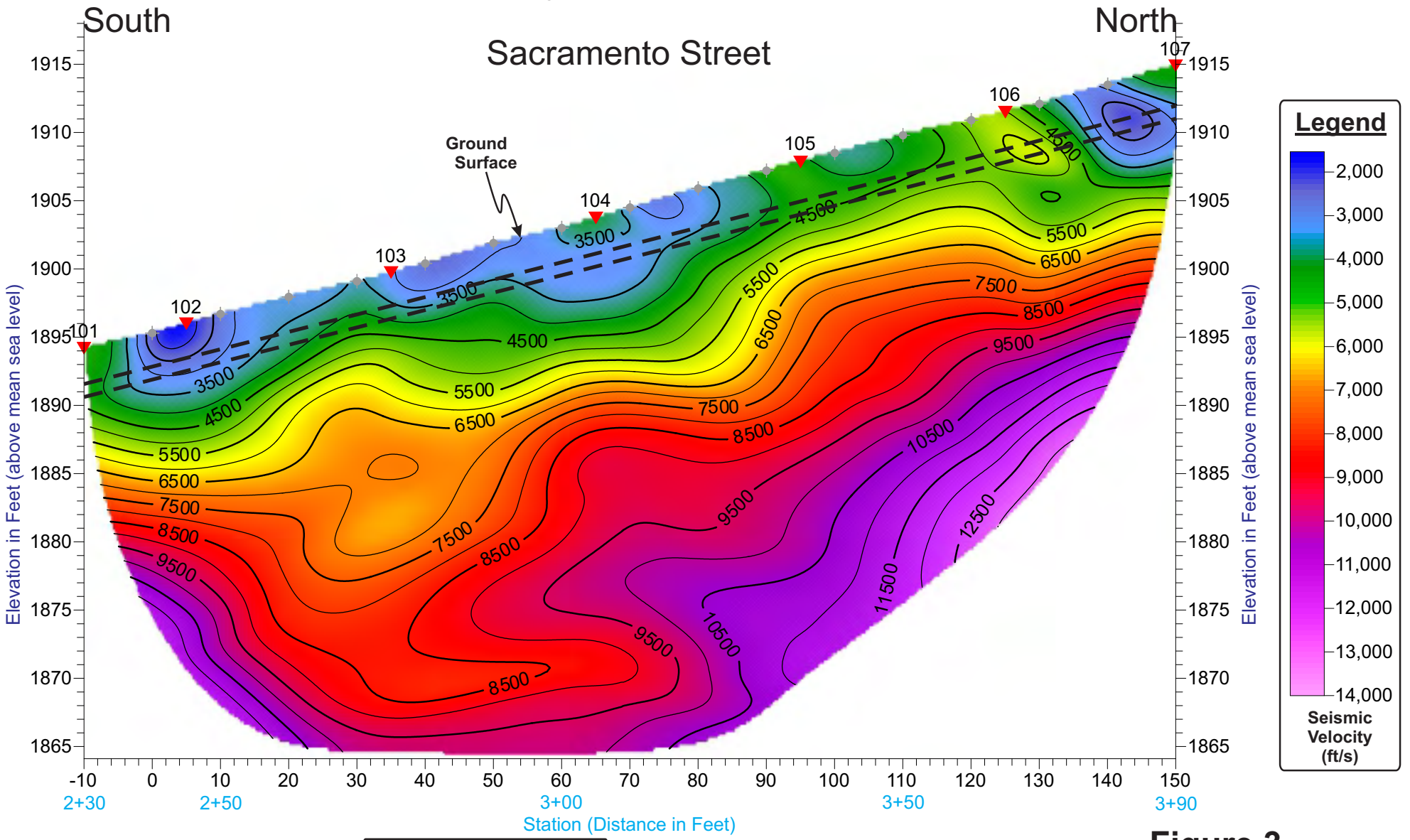


Figure 3

Legend

- Planned Pipeline Depth
- Geophone Station
- 101 Energy Source Locations

Scale:
Horizontal: 1” = 20’
Vertical: 1” = 10’

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Refraction Seismic Investigation:
Placerville Waterline Replacement

Prepared for: ***WRECO***

Project Number: 2016-04.01 ***Date:*** March, 2016

Seismic Velocity Section • RS Line 2

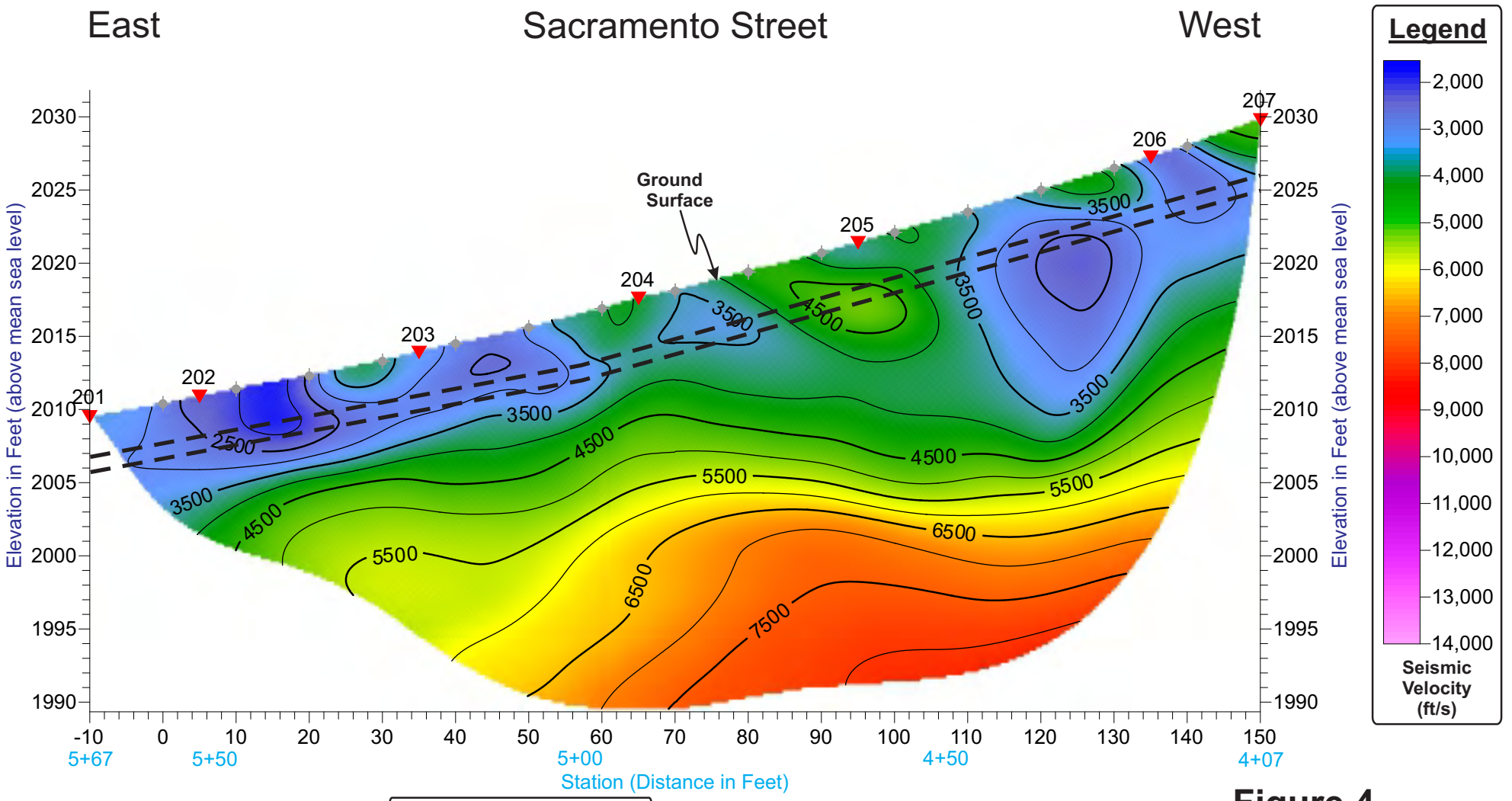


Figure 4

Legend

- Planned Pipeline Depth
- Geophone Station
- 201 Energy Source Locations

Scale:
Horizontal: 1” = 20’
Vertical: 1” = 10’

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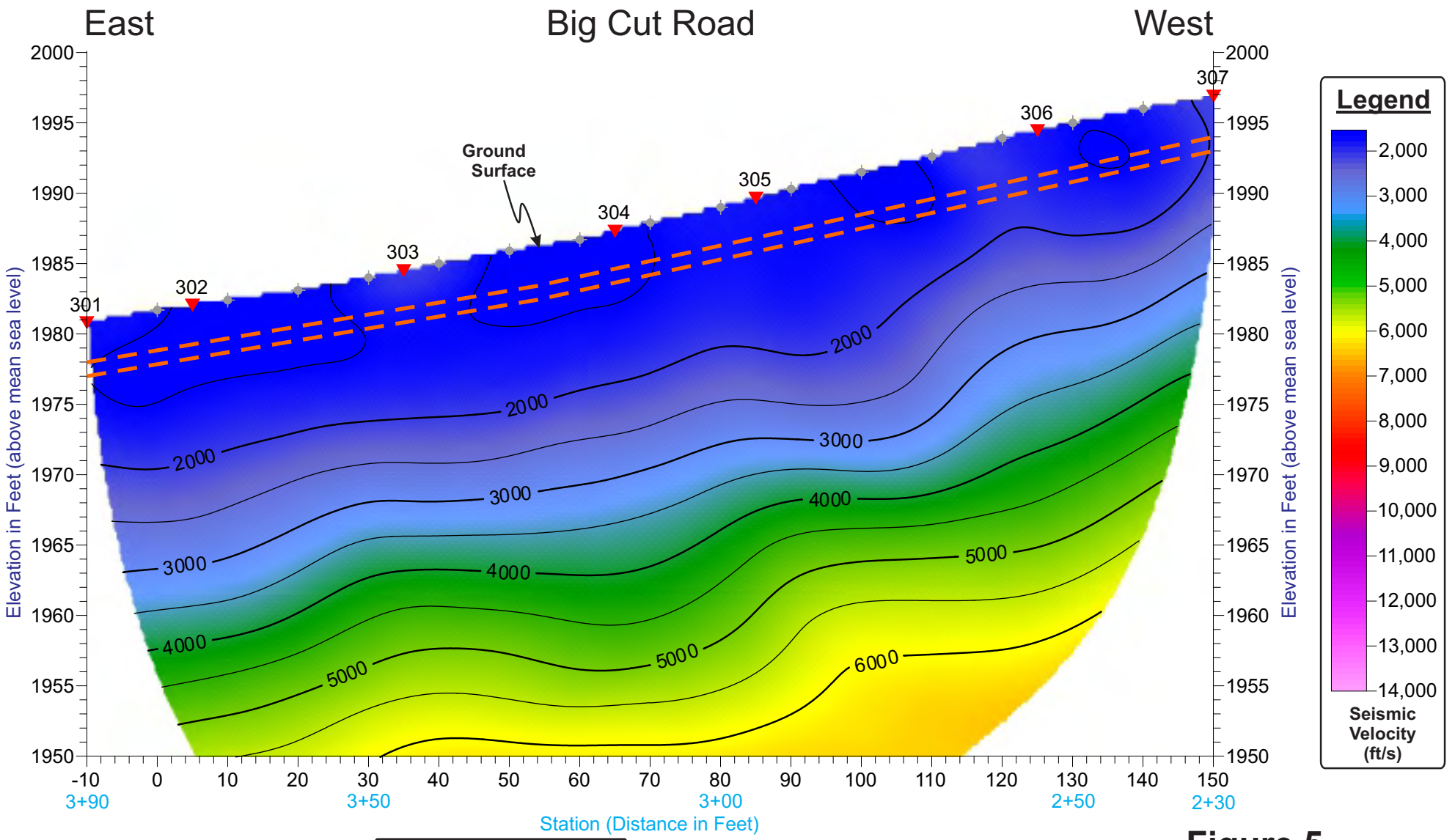
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Refraction Seismic Investigation:
Placerville Waterline Replacement

Prepared for: ***WRECO***

Project Number: 2016-04.01 ***Date:*** March, 2016

Seismic Velocity Section • RS Line 3



Legend

- Planned Pipeline Depth
- Geophone Station
- 301 Energy Source Locations

Scale:
Horizontal: 1" = 20'
Vertical: 1" = 10'

Figure 5

G²S Consultants in Geophysics for the Engineering, Groundwater, Oil & Gas and Blasting Industries

Gasch Geophysical Services, Inc. Since 1969
www.geogasch.com

3174 Luyung Drive, Building #2
Rancho Cordova, California 95742 U.S.A.
(916) 635-8906 • FAX (916) 635-8907

Refraction Seismic Investigation:
Placerville Waterline Replacement

Prepared for: ***WRECO***

Project Number: 2016-04.01 ***Date:*** March, 2016

Seismic Velocity Section • RS Line 4

North Gilmore Street South

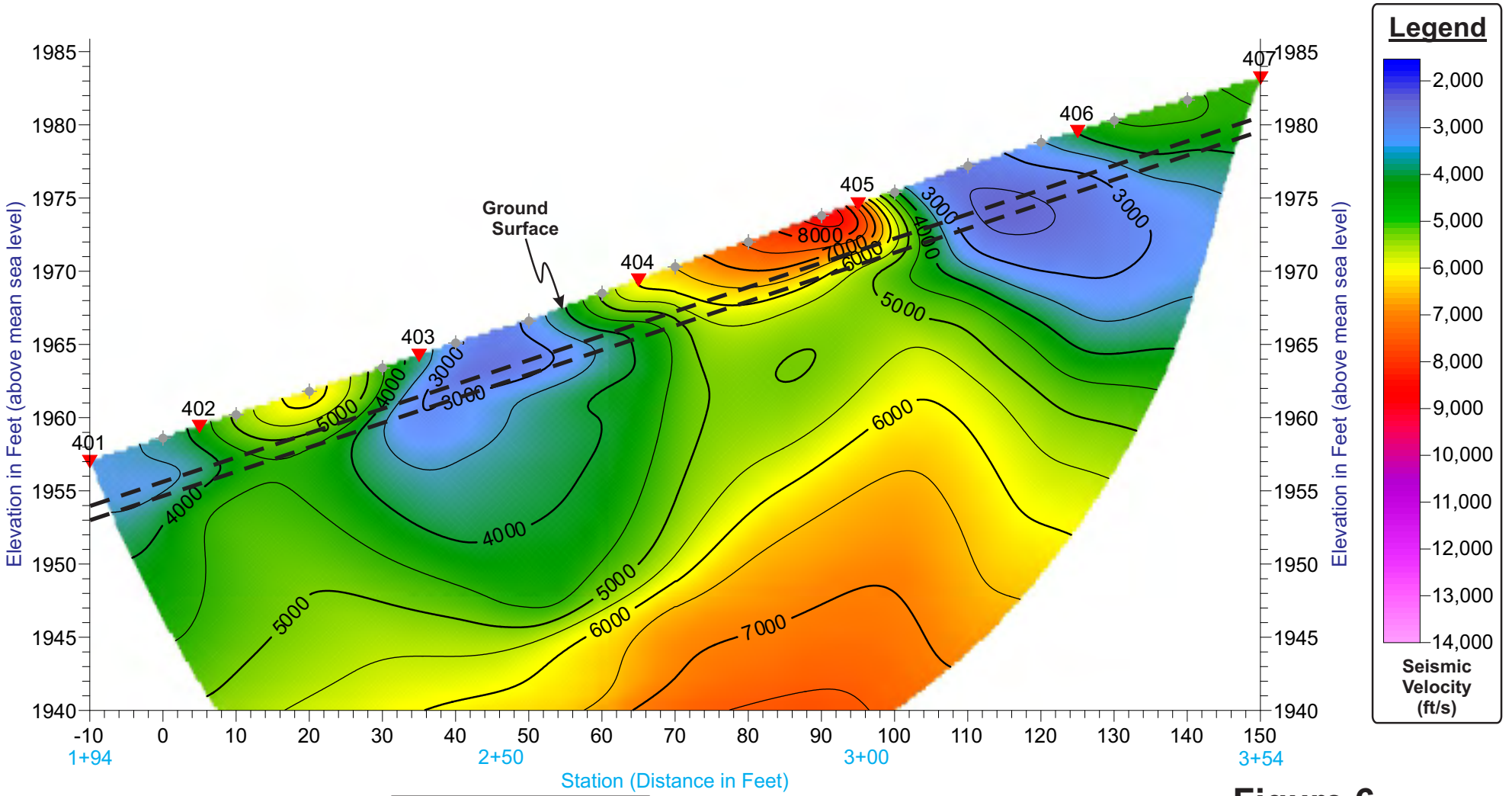


Figure 6

Legend

- Planned Pipeline Depth
- Geophone Station
- 401 Energy Source Locations

Scale:
Horizontal: 1” = 20’
Vertical: 1” = 10’

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Refraction Seismic Investigation:
Placerville Waterline Replacement

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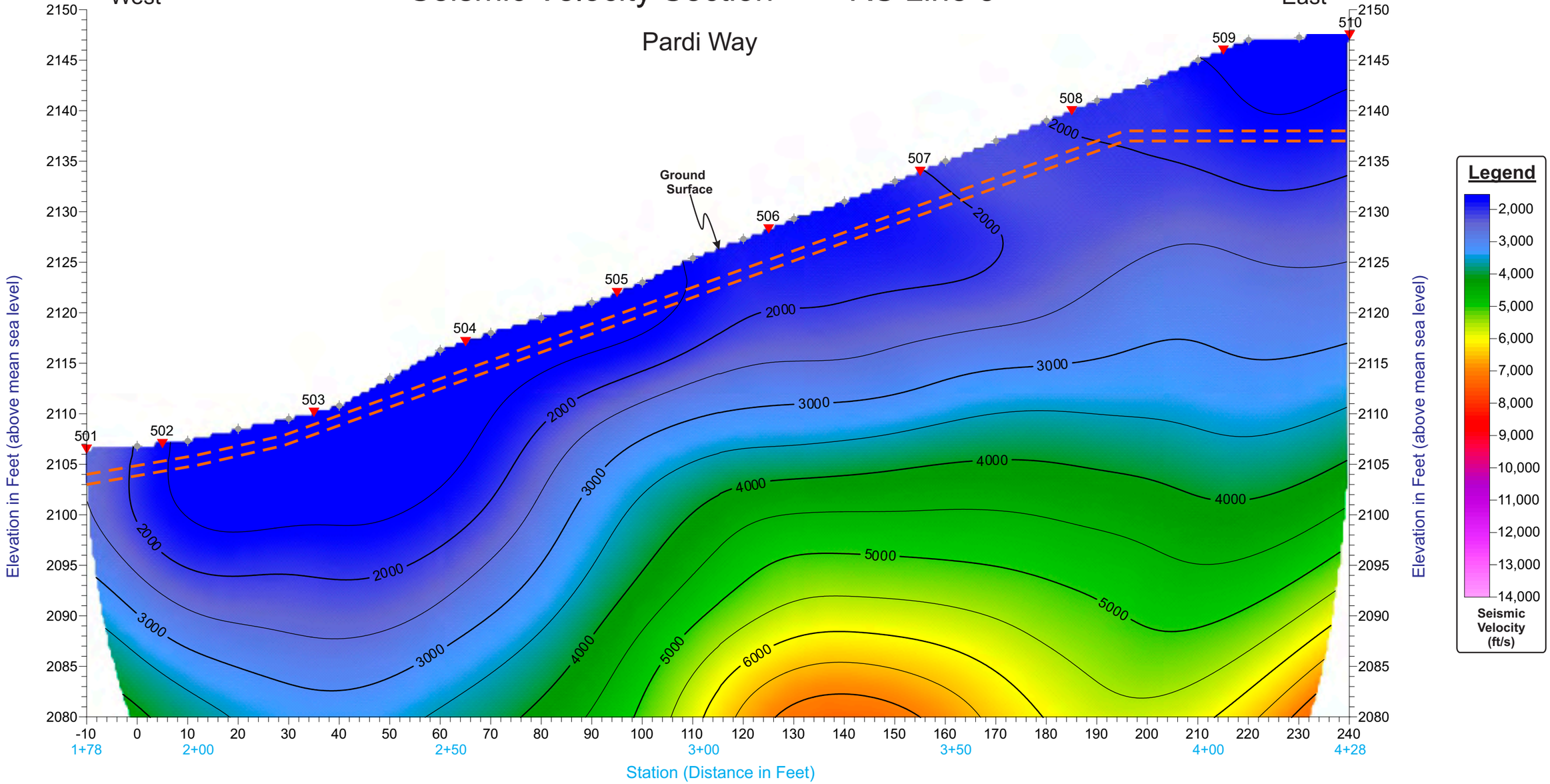
Project Number: 2016-04.01 ***Date:*** March, 2016

Seismic Velocity Section • RS Line 5

West

East

Pardi Way



Legend

- Planned Pipeline Depth
- Geophone Station
- 501 Energy Source Locations

Scale:
Horizontal: 1” = 20’
Vertical: 1” = 10’

Figure 7

G2S Consultants in Geophysics for the Engineering, Groundwater, Oil & Gas and Blasting Industries

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(916) 635-8906 • FAX (916) 635-8907

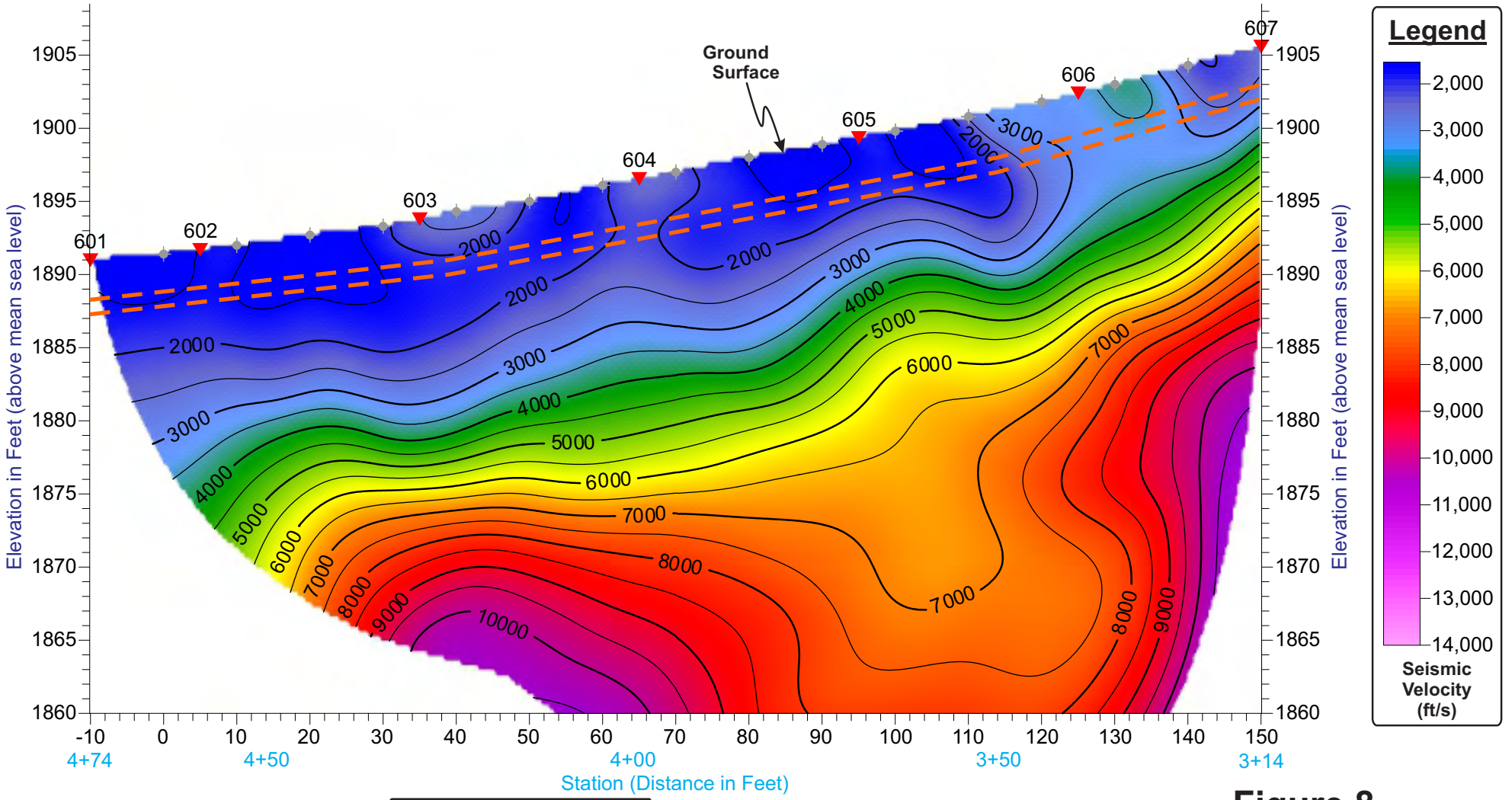
Refraction Seismic Investigation:
Placerville Waterline Replacement

Prepared for: ***WRECO***

Project Number: 2016-04.01 ***Date:*** March, 2016

Seismic Velocity Section • RS Line 6

East Chamberlain Street West



Legend

- Planned Pipeline Depth
- Geophone Station
- 601 Energy Source Locations

Scale:
Horizontal: 1” = 20’
Vertical: 1” = 10’

Figure 8

G²S Consultants in Geophysics for the Engineering, Groundwater, Oil & Gas and Blasting Industries

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Refraction Seismic Investigation:
Placerville Waterline Replacement

Prepared for: ***WRECO***

Project Number: 2016-04.01 ***Date:*** March, 2016

CITY OF PLACERVILLE, CALIFORNIA\
DEVELOPMENT SERVICES DEPARTMENT
ENGINEERING DIVISION

Pardi/Big Cut/Sacramento Street Area Waterline Relocation Project

Project No. 41109

APPENDIX B – CITY AND CALTRANS ENCROACHMENT PERMIT REQUIREMENTS

April 25, 2016

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

ENCROACHMENT PERMIT

TR-0120 (REV 6/2012)

Permit No.
0316-NUT0111

Dist/Co/Rte/PM	
03-ED-49-14.25/14.53	
Date	
April 18, 2016	
Fee Paid	Deposit
$ Exempt	$ N/A
Performance Bond Amount (1)	Payment Bond Amount (2)
$ N/A	$ N/A
Bond Company	
Bond Number (1)	Bond Number (2)

In compliance with (Check one):

☒ Your application of February 4, 2016

☐ Utility Notice No. _____ of _____

☐ Agreement No. _____ of _____

☐ R/W Contract No. _____ of _____

TO: City of Placerville
c/o Domenichelli and Associates, Inc.
1101 Investment Blvd.
El Dorado Hills, CA 95762
Attn: Sara Rogers
(916) 933-1997

, **PERMITTEE**

and subject to the following, PERMISSION IS HEREBY GRANTED to:

Trench to install approximately 600-ft of 12-inch C900 PVC potable water main between Chamberlain Street to Gilmore Street, and 1,114-ft of 8-inch C 900 PVC potable water main from Gilmore Street to approximately 1,100-feet west on State Route 49 in Placerville as shown in attached plans received on March 26, 2016. In addition to the General Provisions the following conditions apply:

1. Permittee shall grind out and pave the entire lane and repair delineation, where pipe is placed after trenching.
2. This work will require night work.
3. Contract Department representative three (3) weeks in advance for pre-construction meeting.
4. Permittee is responsible for ensuring that plans are buildable and to Caltrans Standards.

.....CONTINUE ON PAGE 2.....

THIS PERMIT IS NOT A PROPERTY RIGHT AND DOES NOT TRANSFER WITH THE PROPERTY TO A NEW OWNER.

The following attachments are also included as part of this permit *(Check applicable)*:

☒ Yes	☐ No	General Provisions
☐ Yes	☒ No	Utility Maintenance Provisions
☒ Yes	☐ No	Special Provisions **TC, TR-0400,TR-0163, TR-0157**
☐ Yes	☒ No	A Cal-OSHA permit, if required: Permit No. _____
☐ Yes	☒ No	As-Built Plans Submittal Route Slip for Locally Advertised Projects
☐ Yes	☒ No	Storm Water Pollution Protection Plan

In addition to fee, the permittee will be billed actual costs for:

☐ Yes	☒ No	Review
☐ Yes	☒ No	Inspection
☒ Yes		Field work

(if any Caltrans effort expended)

☐ Yes ☒ No The information in the environmental documentation has been reviewed and considered prior to approval of this permit.

This permit is void unless the work is completed before November 1, 2016

This permit is to be strictly construed and no other work other than specifically mentioned is hereby authorized.
No project work shall be commenced until all other necessary permits and environmental clearances have been obtained

Tara McCann-Mook, Permit Inspector

cc: Rusty Grout, Sunrise Maint. Region

APPROVED:

AMARJEET BENIPAL, District Director

BY: Berinder Dhaliwal
CHARLES W. LAUGHLIN, Chief-Encroachment Permits Branch

ADA Notice For individuals with sensory disabilities, this document is available in alternate formats. For information call (916) 654-6410 or TDD (916) 654-3880 or write Records and Forms Management, 1120 N Street, MS-89, Sacramento, CA 95814.

FM 91 1436

PERMISSIONS Conditions Continued:

5. Centerline is recessed pavement markings and will need to be replaced in kind.
6. Notwithstanding General Provision #4, your contractor is required to apply for and obtain an encroachment permit (double permit) prior to starting work. A deposit of $820.00 is required at the time of application.

The Department representative's contact information is:
Tara McCann - Cell: (530) 755-7371, Email: tara.mccann@dot.ca.gov

1. **AUTHORITY:** The Department's authority to issue encroachment permits is provided under, Div. 1, Chpt. 3, Art. 1, Sect. 660 to 734 of the Streets and Highways Code.

2. **REVOCATION:** Encroachment permits are revocable on five days notice unless otherwise stated on the permit and except as provided by law for public corporations, franchise holders, and utilities. These General Provisions and the Encroachment Permit Utility Provisions are subject to modification or abrogation at any time. Permittees' joint use agreements, franchise rights, reserved rights or any other agreements for operating purposes in State highway right of way are exceptions to this revocation.

3. **DENIAL FOR NONPAYMENT OF FEES:** Failure to pay permit fees when due can result in rejection of future applications and denial of permits.

4. **ASSIGNMENT:** No party other than the permittee or permittee's authorized agent is allowed to work under this permit.

5. **ACCEPTANCE OF PROVISIONS:** Permittee understands and agrees to accept these General Provisions and all attachments to this permit, for any work to be performed under this permit.

6. **BEGINNING OF WORK:** When traffic is not impacted (see Number 35), the permittee shall notify the Department's representative, two (2) days before the intent to start permitted work. Permittee shall notify the Department's Representative if the work is to be interrupted for a period of five (5) days or more, unless otherwise agreed upon. All work shall be performed on weekdays during regular work hours, excluding holidays, unless otherwise specified in this permit.

7. **STANDARDS OF CONSTRUCTION:** All work performed within highway right of way shall conform to recognized construction standards and current Department Standard Specifications, Department Standard Plans High and Low Risk Facility Specifications, and Utility Special Provisions. Where reference is made to "Contractor and Engineer," these are amended to be read as "Permittee and Department representative."

8. **PLAN CHANGES:** Changes to plans, specifications, and permit provisions are not allowed without prior approval from the State representative.

9. **INSPECTION AND APPROVAL:** All work is subject to monitoring and inspection. Upon completion of work, permittee shall request a final inspection for acceptance and approval by the Department. The local agency permittee shall not give final construction approval to its contractor until final acceptance and approval by the Department is obtained.

10. **PERMIT AT WORKSITE:** Permittee shall keep the permit package or a copy thereof, at the work site and show it upon request to any Department representative or law enforcement officer. If the permit package is not kept and made available at the work site, the work shall be suspended.

11. **CONFLICTING ENCROACHMENTS:** Permittee shall yield start of work to ongoing, prior authorized, work adjacent to or within the limits of the project site. When existing encroachments conflict with new work, the permittee shall bear all cost for rearrangements, (e.g., relocation, alteration, removal, etc.).

12. **PERMITS FROM OTHER AGENCIES:** This permit is invalidated if the permittee has not obtained all permits necessary and required by law, from the Public Utilities Commission of the State of California (PUC), California Occupational Safety and Health Administration (Cal-OSHA), or any other public agency having jurisdiction.

13. **PEDESTRIAN AND BICYCLIST SAFETY:** A safe minimum passageway of 4' shall be maintained through the work area at existing pedestrian or bicycle facilities. At no time shall pedestrians be diverted onto a portion of the street used for vehicular traffic. At locations where safe alternate passageways cannot be provided, appropriate signs and barricades shall be installed at the limits of construction and in advance of the limits of construction at the nearest crosswalk or intersection to detour pedestrians to facilities across the street. Attention is directed to Section 7-1.09 Public Safety of the Department Standard Specifications.

14. **PUBLIC TRAFFIC CONTROL:** As required by law, the permittee shall provide traffic control protection warning signs, lights, safety devices, etc., and take all other measures necessary for traveling public's safety. While providing traffic control, the needs and control of all road users [motorists, bicyclists and pedestrians, including persons with disabilities in accordance with the Americans with Disabilities Act of 1990 (ADA)] shall be an essential part of the work activity.

    Day and night time lane closures shall comply with the California Manual on Uniform Traffic Control Devices (Part 6, Temporary Traffic Control), Standard Plans, and Standard Specifications for traffic control systems. These General Provisions are not intended to impose upon the permittee, by third parties, any duty or standard of care, greater than or different from, as required by law.

15. **MINIMUM INTERFERENCE WITH TRAFFIC:** Permittee shall plan and conduct work so as to create the least possible inconvenience to the traveling public; traffic shall not be unreasonably delayed. On conventional highways, permittee shall place properly attired flagger(s) to stop or warn the traveling public in compliance with the California Manual on Uniform Traffic Control Devices (Chapter 6E, Flagger Control).

16. **STORAGE OF EQUIPMENT AND MATERIALS:** The storage of equipment or materials **is not** allowed within State highway right-of-way, **unless specified** within the Special Provisions of this specific encroachment permit. If Encroachment Permit Special Provisions allow for the storage of equipment or materials within the State right of way, the equipment and material storage shall comply with Standard Specifications, Standard Plans, Special Provisions, and the Highway Design Manual. The clear recovery zone widths must be followed and are the minimum desirable for the type of facility indicated below: freeways and expressways - 30', conventional highways (no curbs) - 20', conventional highways (with curbs) – 1.5'. If a fixed object cannot be eliminated, moved outside the clear recovery zone, or modified to be made yielding, it should be shielded by a guardrail or a crash cushion.

17. **CARE OF DRAINAGE:** Permittee shall provide alternate drainage for any work interfering with an existing drainage facility in compliance with the Standard Specifications, Standard Plans and/or as directed by the Department's representative.

18. **RESTORATION AND REPAIRS IN RIGHT OF WAY:** Permittee is responsible for restoration and repair of State highway right of way resulting from permitted work (State Streets and Highways Code, Sections 670 et. seq.).

19. **RIGHT OF WAY CLEAN UP:** Upon completion of work, permittee shall remove and dispose of all scraps, brush, timber, materials, etc. off the right of way. The aesthetics of the highway shall be as it was before work started.

20. **COST OF WORK:** Unless stated in the permit, or a separate written agreement, the permittee shall bear all costs incurred for work within the State right of way and waives all claims for indemnification or contribution from the State.

21. **ACTUAL COST BILLING:** When specified in the permit, the Department will bill the permittee actual costs at the currently set hourly rate for encroachment permits.

22 **AS-BUILT PLANS:** When required, permittee shall submit one (1) set of folded as-built plans within thirty (30) days after completion and approval of work in compliance with requirements listed as follows:

1. Upon completion of the work provided herein, the permittee shall send one vellum or paper set of As-Built plans, to the State representative. Mylar or paper sepia plans are not acceptable.
2. All changes in the work will be shown on the plans, as issued with the permit, including changes approved by Encroachment Permit Rider.
3. The plans are to be stamped or otherwise noted AS-BUILT by the permittee's representative who was responsible for overseeing the work. Any original plan that was approved with a State stamp, or Caltrans representative signature, shall be used for producing the As-Built plans.
4. If As-Built plans include signing or striping, the dates of signing or striping removal, relocation, or installation shall be shown on the plans when required as a condition of the permit. When the construction plans show signing and striping for staged construction on separate sheets, the sheet for each stage shall show the removal, relocation or installation dates of the appropriate staged striping and signing.
5. As-Built plans shall contain the Permit Number, County, Route, and Post Mile on each sheet.
6. Disclaimer statement of any kind that differ from the obligations and protections provided by Sections 6735 through 6735.6 of the California Business and Professions Code, shall not be included on the As-Built plans. Such statements constitute non-compliance with Encroachment Permit requirements, and may result in the Department of Transportation retaining Performance Bonds or deposits until proper plans are submitted. Failure to comply may also result in denial of future permits, or a provision requiring a public agency to supply additional bonding.

23. **PERMITS FOR RECORD PURPOSES ONLY:** When work in the right of way is within an area under a Joint Use Agreement (JUA) or a Consent to Common Use Agreement (CCUA), a fee exempt permit is issued to the permittee for the purpose of providing a notice and record of work. The Permittee's prior rights shall be preserved without the intention of creating new or different rights or obligations. "Notice and Record Purposes Only" shall be stamped across the face of the permit.

24. **BONDING:** The permittee shall file bond(s), in advance, in the amount set by the Department. Failure to maintain bond(s) in full force and effect will result in the Department stopping of all work and revoking permit(s). Bonds are not required of public corporations or privately owned utilities, unless permittee failed to comply with the provision and conditions under a prior permit. The surety company is responsible for any latent defects as provided in California Code of Civil Procedures, Section 337.15. Local agency permittee shall comply with requirements established as follows: In recognition that project construction work done on State property will not be directly funded and paid by State, for the purpose of protecting stop notice claimants and the interests of State relative to successful project completion, the local agency permittee agrees to require the construction contractor furnish both a payment and performance bond in the local agency's name with both bonds complying with the requirements set forth in Section 3-1.02 of State's current Standard Specifications before performing any project construction work. The local agency permittee shall defend, indemnify, and hold harmless the State, its officers and employees from all project construction related claims by contractors and all stop notice or mechanic's lien claimants. The local agency also agrees to remedy, in a timely manner and to State's satisfaction, any latent defects occurring as a result of the project construction work.

25. **FUTURE MOVING OF INSTALLATIONS:** Permittee understands and agrees to relocate a permitted installation upon notice by the Department. Unless under prior property right or agreement, the permittee shall comply with said notice at his sole expense.

26. **ARCHAEOLOGICAL/HISTORICAL:** If any archaeological or historical resources are revealed in the work vicinity, the permittee shall immediately stop work, notify the Department's representative, retain a qualified archaeologist who shall evaluate the site, and make recommendations to the Department representative regarding the continuance of work.

27. **PREVAILING WAGES:** Work performed by or under a permit may require permittee's contractors and subcontractors to pay appropriate prevailing wages as set by the Department of Industrial Relations. Inquiries or requests for interpretations relative to enforcement of prevailing wage requirements are directed to State of California Department of Industrial Relations, 525 Golden Gate Avenue, San Francisco, California 94102.

28. **RESPONSIBILITY FOR DAMAGE:** The State of California and all officers and employees thereof, including but not limited to the Director of Transportation and the Deputy Director, shall not be answerable or accountable in any manner for injury to or death of any person, including but not limited to the permittee, persons employed by the permittee, persons acting in behalf of the permittee, or for damage to property from any cause. The permittee shall be responsible for any liability imposed by law and for injuries to or death of any person, including but not limited to the permittee, persons employed by the permittee, persons acting in behalf of the permittee, or for damage to property arising out of work, or other activity permitted and done by the permittee under a permit, or arising out of the failure on the permittee's part to perform his obligations under any permit in respect to maintenance or any other obligations, or resulting from defects or obstructions, or from any cause whatsoever during the progress of the work, or other activity or at any subsequent time, work or other activity is being performed under the obligations provided by and contemplated by the permit.

The permittee shall indemnify and save harmless the State of California, all officers, employees, and State's contractors, thereof, including but not limited to the Director of Transportation and the Deputy Director, from all claims, suits or actions of every name, kind and description brought for or on account of injuries to or death of any person, including but not limited to the permittee, persons employed by the permittee, persons acting in behalf of the permittee and the public, or damage to property resulting from the performance of work or other activity under the permit, or arising out of the failure on the permittee's part to perform his obligations under any permit in respect to maintenance or any other obligations, or resulting from defects or obstructions, or from any cause whatsoever during the progress of the work, or other activity or at any subsequent time, work or other activity is being performed under the obligations provided by and contemplated by the permit, except as otherwise provided by statute.

The duty of the permittee to indemnify and save harmless includes the duties to defend as set forth in Section 2778 of the Civil Code. The permittee waives any and all rights to any type of expressed or implied indemnity against the State, its officers, employees, and State contractors. It is the intent of the parties that the permittee will indemnify and hold harmless the State, its officers, employees, and State's contractors, from any and all claims, suits or actions as set forth above regardless of the existence or degree of fault or negligence, whether active or passive, primary or secondary, on the part of the State, the permittee, persons employed by the permittee, or acting on behalf of the permittee.

For the purpose of this section, "State's contractors" shall include contractors and their subcontractors under contract to the State of California performing work within the limits of this permit.

29. **NO PRECEDENT ESTABLISHED:** This permit is issued with the understanding that it does not establish a precedent.

30. **FEDERAL CIVIL RIGHTS REQUIREMENTS FOR PUBLIC ACCOMMODATION:**
A. The permittee, for himself, his personal representative, successors in interest, and assigns as part of the consideration hereof, does hereby covenant and agree that:
1. No person on the grounds of race, color, or national origin shall be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities.
2. That in connection with the construction of any improvements on said lands and the furnishings of services thereon, no discrimination shall be practiced in the selection and retention of first-tier subcontractors in the selection of second-tier subcontractors.
3. That such discrimination shall not be practiced against the public in their access to and use of the facilities and services provided for public accommodations (such as eating, sleeping, rest, recreation), and operation on, over, or under the space of the right of way.
4. That the permittee shall use the premises in compliance with all other requirements imposed pursuant to Title 15, Code of Federal Regulations, Commerce and Foreign Trade, Subtitle A. Office of the Secretary of Commerce, Part 8 (15 C.F.R. Part 8) and as said Regulations may be amended.
5. That in the event of breach of any of the above nondiscrimination covenants, the State shall have the right to terminate the permit and to re-enter and repossess said land and the land and the facilities thereon, and hold the same as if said permit had never been made or issued.

31. **MAINTENANCE OF HIGHWAYS:** The permittee agrees, by acceptance of a permit, to properly maintain any encroachment. This assurance requires the permittee to provide inspection and repair any damage, at permittee's expense, to State facilities resulting from the encroachment.

32. **SPECIAL EVENTS:** In accordance with subdivision (a) of Streets and Highways Code Section 682.5, the Department of Transportation shall not be responsible for the conduct or operation of the permitted activity, and the applicant agrees to defend, indemnify, and hold harmless the State and the city or county against any and all claims arising out of any activity for which the permit is issued.

The permittee understands and agrees to comply with the obligations of Titles II and III of the Americans with Disabilities Act of 1990 in the conduct of the event, and further agrees to indemnify and save harmless the State of California, all officers and employees thereof, including but not limited to the Director of Transportation, from any claims or liability arising out of or by virtue of said Act.

33. **PRIVATE USE OF RIGHT OF WAY:** Highway right of way shall not be used for private purposes without compensation to the State. The gifting of public property use and therefore public funds is prohibited under the California Constitution, Article 16.

34. **FIELD WORK REIMBURSEMENT:** Permittee shall reimburse State for field work performed on permittee's behalf to correct or remedy hazards or damaged facilities, or clear debris not attended to by the permittee.

35. **NOTIFICATION OF DEPARTMENT AND TMC:** The permittee shall notify the Department's representative and the Transportation Management Center (TMC) at least 7 days before initiating a lane closure or conducting an activity that may cause a traffic impact. A confirmation notification should occur 3 days before closure or other potential traffic impacts. In emergency situations when the corrective work or the emergency itself may affect traffic, TMC and the Department's representative shall be notified as soon as possible.

36. **SUSPENSION OF TRAFFIC CONTROL OPERATION:** The permittee, upon notification by the Department's representative, shall immediately suspend all lane closure operations and any operation that impedes the flow of traffic. All costs associated with this suspension shall be borne by the permittee.

37. **UNDERGROUND SERVICE ALERT (USA) NOTIFICATION:** Any excavation requires compliance with the provisions of Government Code Section 4216 et. seq., including, but not limited to notice to a regional notification center, such as Underground Service Alert (USA). The permittee shall provide notification at least 48 hours before performing any excavation work within the right of way.

STORM WATER SPECIAL PROVISIONS for MINIMAL or NO IMPACT

TR-0400 (Rev 09/2012)

1. GENERAL: The purpose of these Special Provisions is to provide the Permittee with specifications for water pollution control to minimize, prevent, or control the discharge of material into the air, surface waters, groundwater, and storm sewers owned by the State or local agencies. These provisions are not intended to take the place of the Caltrans Water Pollution Control Program (WPCP) for projects where soil disturbance from work activities less than one acre, or work activities of one acre or more subject to the preparation of the Caltrans Storm Water Pollution Prevention Plan (SWPPP) that would require a waste discharge identification number or coverage under the California Construction General Permit *(Order No. 2009-0009-DWQ, NPDES No CAS000002)*. The Permittee shall comply with the following Special Provisions and the direction of the State Representative.

2. NPDES REQUIREMENTS: The Permittee shall be responsible for full compliance with the Caltrans Storm Water Program and the Caltrans National Pollutant Discharge Elimination System (NPDES) Permit requirements. It is the Permitte's responsibility to install, inspect, and repair or maintain facilities and devices used for water pollution control practices before performing daily work activities. Installation and maintenance responsibilities on the job site include: 1) soil stabilization materials in work areas that are inactive or prior to storm events, 2) water pollution control devices to control sediment and erosion, 3) implementation of spill and leak prevention procedures for chemical and hazardous substances stored on the job site. 4) material storage, 5) stockpile management, 6) waste management, 7) non-stormwater management, 8) water conservation, and 9) illicit connection, illegal discharge detection and reporting. The Permittee shall report to the state representative when discharges enter into receiving waters, adjacent property, drainage systems or when discharges could be a cause or a threat for water pollution. The Permittee shall also control illicit discharges or illegal dumping prior to start of daily work schedule. Copies of written notices or orders from the Regional Water Quality Control Board or other regulatory agency shall be provided to the State representative within 48 hours of reported activity. For additional information on storm water compliance, visit the State Water Resources Control Boards storm water Website at http://www.waterboards.ca.gov/water_issues/programs/stormwater

3. RESPONSIBILITY FOR DEBRIS REMOVAL: The Permittee shall be responsible for preventing sediment, trash, debris, and other construction waste from entering the street, the storm drains, local creeks, or any other bodies of water.

4. SPOILS AND RESIDUE: The Permittee shall vacuum any saw-cut concrete waste material, debris, residue, etc. No spoils, debris, residue, etc. shall be washed into a drainage system.

5. SWEEPING: Sweep paved roads at construction entrance and exit locations and surrounding paved areas daily within the job site during: 1) clearing and grubbing, 2) earthwork, 3) trenching, 4) soil disturbance, 5) pavement grinding and/or cutting, and 6) after observing tracking of material onto or off the State property. Keep dust to a minimum during sweeping activities. Use vacuum whenever dust generation is excessive or sediment pickup is ineffective. Roadways or work areas shall not be washed down with water. Street sweeping operations must conform to Section 13 Water Pollution Control of the State of California standard specifications for construction (most current version) http://www.dot.ca.gov/hq/esc/oe/specifications/SSPs/2010-SSPs/ .

6. VEHICLES AND EQUIPMENT: Permittee shall prevent all vehicles, equipment, etc. from leakage or mud tracking onto roadways. If leaks cannot be repaired immediately, remove the vehicle or equipment from the job site.

7. MAINTENANCE AND FUELING OF VEHICLES AND EQUIPMENT: Maintenance and fueling of equipment shall not result in any pollution at the job site. The Permittee shall immediately clean up spills/leaks, and properly dispose of contaminated soil and materials.

8. CLEANING VEHICLES AND EQUIPMENT: Limit vehicle and equipment cleaning or washing at the job site except what is necessary to control vehicle tracking or hazardous waste. The Permittee shall clean all equipment within a bermed area or over a drip pan large enough to prevent run-off. No soaps, solvents, degreasers, etc shall be used in State right of way. Any water from this operation shall be collected and disposed of at an appropriate site. Containment berms or dikes shall be used for fueling, washing, maintaining and washing vehicles or equipment in outside areas. Containment must be performed at least 100 feet from concentrated flows of storm water, drainage courses, and storm drain inlets if within a flood plain, otherwise at least 50 feet if outside the floodplain. Keep adequate quantities of absorbent spill-cleanup material and spill kits in the fueling or maintenance area and on fueling trucks.

9. DIESEL FUELS: The use of diesel fuel from petroleum or other fossil fuel as a form-oil or solvent is not allowed.

10. WEATHER CONDITIONS AT WORKSITE: Any activity that would generate fine particles or dust that could be transported off site by stormwater shall be performed during dry weather.

11. HOT MIX ASPHALT: Runoff from washing hot mix asphalt shall not enter into any drainage conveyances.

12. PROTECTION OF DRAINAGE FACILITIES: The Permittee shall protect/cover gutters, ditches, drainage courses, and inlets with gravel bags, fiber rolls, State approved fabric filters, etc., to the satisfaction of the State representative during grading, paving, saw-cutting, etc. and materials must conform to Section 13-6.02 Materials for Water Pollution Control of the State of California standard specifications for construction (most current version). No such protection measures shall cause an obstruction to the traveling public. The Permittee shall implement spill and leak prevention procedures for chemicals and hazardous substances stored on the job site in accordance to section 13-4.03B(1-3) Spill Prevention and Control, Water Pollution Control, of the State of California standard specifications for construction (2010 version).

13. PAINT: Rinsing of painting equipment and materials is not permitted in state right-of-way. When thoroughly dry, dispose of the following as solid waste: dry latex paint, paint cans, used brushes, rags, gloves, absorbent materials, and drop cloths. Oil based paint sludge and unusable thinner shall be disposed of at an approved hazardous waste site.

14. CONSTRUCTION MATERIALS: Stockpile of all construction materials, including, but not limited to; pressure treated wood, asphalt concrete, cold mix asphalt concrete, concrete, grout, cement containing premixes, and mortar, shall conform to section 13-4.03C Material Management (Storage & Stockpiles), Water Pollution Control, of the State of California standard specifications for construction (2010 version).

15. CONCRETE EQUIPMENT: Concrete equipment shall be washed in a designated washing area in a way that does not contaminate soil, receiving waters, or storm drain systems.

16. EXISTING VEGETATION: Established existing vegetation is the best form of erosion control. Minimize disturbance to existing vegetation. Damaged or removed vegetation shall be replaced as directed by the State Representative.

17. SOIL DISTURBANCE: Soil disturbing activities shall be avoided during the wet weather season. If construction activities during wet weather are allowed in your permit, all necessary erosion control and soil stabilization measures shall be implemented in advance of soil disturbing activity.

18. SLOPE STABILIZATION AND SEDIMENT CONTROL: Consider a certified expert in Erosion and Sediment control in cases where slopes are disturbed during construction. The Permittee is directed to comply with Section 13.5 Temporary Soil Stabilization and Section 21 Erosion Control of the State of California (2010 version) standard specifications for construction during application of temporary soil stabilization measures to the soil surface. Fiber rolls or silt fences may be required down slope until permanent soil stabilization is established. Remove the accumulated sediment whenever the sediment accumulates to 1/3 of the linear sediment barrier height.

19. STOCKPILES: Stockpiles containing aggregate and/or soil shall be stored at least 100 feet from concentrated flows of storm water, drainage courses, and storm drain inlets if within a flood plain, otherwise at least 50 feet if outside the floodplain, and shall be covered and protected with a temporary perimeter sediment barrier. Cold mix stockpiles shall be stored on an impermeable surface and covered with 9mil plastic to prevent contact with water.

20. DISCOVERY OF CONTAMINATION: The State Representative shall be notified in case any unusual discoloration, odor, or texture of ground water, is found in excavated material or if abandoned, underground tanks, pipes, or buried debris are encountered.

21. SANITARY AND SEPTIC WASTE: Do not bury or discharge wastewater from a sanitary or septic system within the highway. Properly connected sewer facilities are free from leaks. With State Representative approval place portable sanitary facility at least 50 feet away from storm drains, receiving waters, and flow lines. Permittee must comply with local health agency provisions when using an on-site disposal system.

22. LIQUID WASTE: Prevent job site liquid waste from entering storm drain systems and receiving waters. Drilling slurries, grease or oil-free waste water or rinse water, dredging, wash water or rinse water running off a surface or other nonstorm water liquids not covered under separate waste water permits shall be held in structurally sound, leak-proof containers, such as portable bins or portable tanks. Store containers at least 50 feet away from moving vehicles and equipment. Liquid waste may require testing to determine hazardous material content prior to disposal

23. WATER CONTROL AND CONSERVATION: Manage water use in a way that will prevent erosion and the discharge of pollutants into storm drain systems and receiving waters. Direct runoff water, including water from water line repair from the job site to areas where it can infiltrate into the ground. Direct water from off-site sources around the job site or from contact with jobsite water.

24. PILE DRIVING: Keep spill kits and cleanup materials at pile driving locations. Park pile driving equipment over drip pans, absorbent pads, or plastic sheeting with absorbent material, and away from storm water run-on when not in use.

25. DEWATERING: Dewatering consists of discharging accumulated storm water, groundwater, or surface water from excavations or temporary containment facilities. All dewatering operations shall comply with the latest Caltrans guidelines. Contact State representative for approval of dewatering discharge by infiltration or evaporation, otherwise, any effluent discharged into a permitted storm water system requires approval from the Regional Water Quality Control Board. Prior to the start of dewatering, the Permittee shall provide the State Representative with a dewatering and discharge work plan that complies with section 13-4.01B Submittals, Water Pollution Control, of the State of California standard specifications for construction (2010 version). A copy of the Waste Discharge Permit and a copy of a valid WDID number issued by the Regional Board shall be provided to the State representative.

CITY OF PLACERVILLE, CALIFORNIA\
DEVELOPMENT SERVICES DEPARTMENT
ENGINEERING DIVISION

Pardi/Big Cut/Sacramento Street Area Waterline Relocation Project

Project No. 41109

APPENDIX C – PROJECT SIGN REQUIREMENTS

April 25, 2016

36"

YOUR MEASURE H SALES TAX DOLLARS AT WORK







YEAR OF COMPLETION: 2015
CITY OF PLACERVILLE

54"

CITY OF PLACERVILLE, CALIFORNIA\
DEVELOPMENT SERVICES DEPARTMENT
ENGINEERING DIVISION

Pardi/Big Cut/Sacramento Street Area Waterline Relocation Project

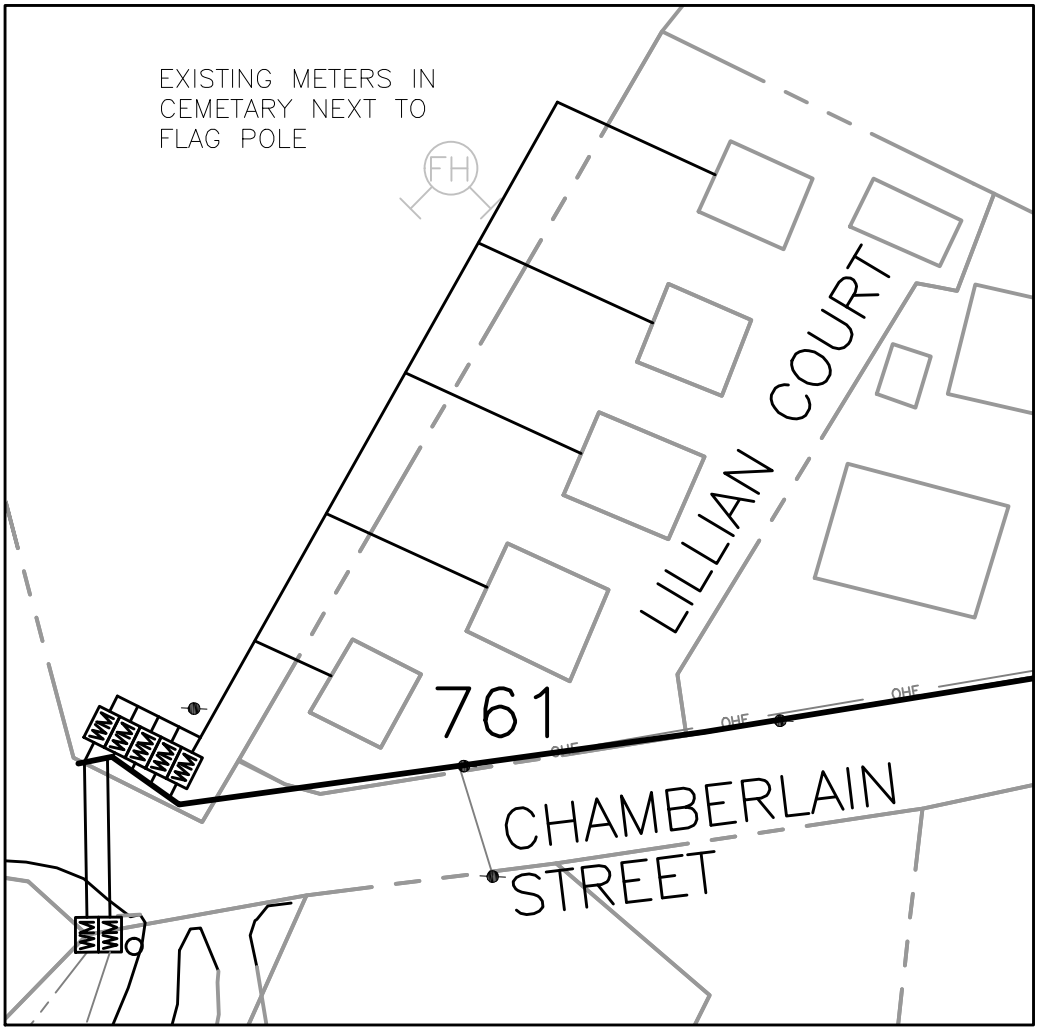
Project No. 41109

APPENDIX D – SERVICE LOCATION SURVEY SHEETS (FOR 12 PROPERTIES REQUIRING IN-TRACT LINES)

April 25, 2016

CITY OF PLACERVILLE PARDI WY/BIG CUT RD/SACRAMENTO ST WATERLINE REPLACEMENT PROJECT
SERVICE LOCATION SHEET

O



THE PROPOSED METER LOCATION AND IN-TRACT LINE ARE APPROXIMATE LOCATIONS AND ARE SUBJECT TO CHANGE BASED ON FIELD CONDITIONS. CONTRACTOR TO FIELD VERIFY FINAL LOCATIONS PRIOR TO INSTALLATION.

[M] WATER METER ⊗ CORP STOP

[BF][VAL] BACKFLOW DEVICE ★ POINT OF CONNECTION

—— SERVICE LINE

PROPERTY LINES SHOWN HERE ARE APPROXIMATE

SIZE OF WATER TAP
☐ 3/4" ☒ 1" ☐ OTHER:____
☐ UNKNOWN

BACKFLOW DEVICE
☐ YES SIZE:____ ☒ NO
☐ UNKNOWN

WATER SOFTENER?
☐ YES ☐ NO ☐ UNKNOWN

INSTANT WATER HEATER?
☐ YES ☐ NO ☐ UNKNOWN

☐ HYDRANT LOCATION ☐ DOG ON PROPERTY
☒ OWNER ☐ TENANT

FOR USE DURING CONSTRUCTION
PRESSURE @ HOSE BIB: _____
STATIC PRESSURE (p.s.i.): _____
RESIDUAL PRESSURE (p.s.i.):_____
DATED CHECKED: _____



Notes (property type, obstructions such as structures, trees, or concrete walkways, any other important info):
SET ALL 4 METERS TO 761 CHAMBERLAIN AND 4 SERVICES ON LILLIAN IN PLANTER AND CONNECT IN CEMETARY. ALL OF THE HOUSES ARE CONNECT IN CEMETARY. THERE IS ALSO A METER IN CEMETARY BY THE FLAG POLE AND A 4" HYDRANT. RENTAL UNIT. ALL 4 ALONG LILLIAN OWNED BY SAME PERSON.

Picture File: _____
Address: 761 Chamberlain St, Placerville, CA 95667
APN: 0030712210
New Service Size:
Old Service Loc.:

1st Attempt:_____ Surveyor's Name/Date
2nd Attempt:_____ Surveyor's Name/Date
3rd Attempt:_____ Surveyor's Name/Date

Landowner Signature:_____ Contact Number:_____ Date:_____

City of Placerville
3101 Center Street
Placerville, CA, 95667
PH: (530) 642-5250

DWG NAME: *761 Chamberlain St*
SCALE: *NTS*
DATE: *June 2015*
CF NAME: *Water Meter Relocation*

Domenichelli & Associates 06-03-15

CITY OF PLACERVILLE PARDI WY/BIG CUT RD/SACRAMENTO ST WATERLINE REPLACEMENT PROJECT SERVICE LOCATION SHEET

O



THE PROPOSED METER LOCATION AND IN-TRACT LINE ARE APPROXIMATE LOCATIONS AND ARE SUBJECT TO CHANGE BASED ON FIELD CONDITIONS. CONTRACTOR TO FIELD VERIFY FINAL LOCATIONS PRIOR TO INSTALLATION.

[M] WATER METER ⊗ CORP STOP

[BF] [VAL] BACKFLOW DEVICE ★ POINT OF CONNECTION

—— SERVICE LINE

PROPERTY LINES SHOWN HERE ARE APPROXIMATE

SIZE OF WATER TAP
☐ 3/4" ☐ 1" ☐ OTHER:____
☐ UNKNOWN

BACKFLOW DEVICE
☐ YES SIZE:____ ☒ NO
☐ UNKNOWN

WATER SOFTENER?
☐ YES ☒ NO ☐ UNKNOWN

INSTANT WATER HEATER?
☐ YES ☐ NO ☐ UNKNOWN

☐ HYDRANT LOCATION ☐ DOG ON PROPERTY
☐ OWNER ☒ TENANT

FOR USE DURING CONSTRUCTION
PRESSURE @ HOSE BIB: _____
STATIC PRESSURE (p.s.i.): _____
RESIDUAL PRESSURE (p.s.i.):_____
DATED CHECKED: _____



KEY MAP

Notes (property type, obstructions such as structures, trees, or concrete walkways, any other important info):
OPTION A: SET METER 15' WEST OF DRIVEWAY CONNECT TO EAST SIDE OF HOUSE. CONTRACTOR WIILL HAVE TO REMOVE PVC AND TIE IN TO GALVANIZED PIPE. OPTION B: CONNECT NEAR EXISTING METER.

Picture File: _____
Address: 762 Chamberlain St. Placerville, CA 95667
APN: 003-091-08-100
New Service Size:
Old Service Loc.:

1st Attempt: 1-26 _____ Surveyor's Name/Date
2nd Attempt: 2-4 _____ Surveyor's Name/Date
3rd Attempt: _____ Surveyor's Name/Date

Landowner Signature: _____ Contact Number: _____ Date: _____

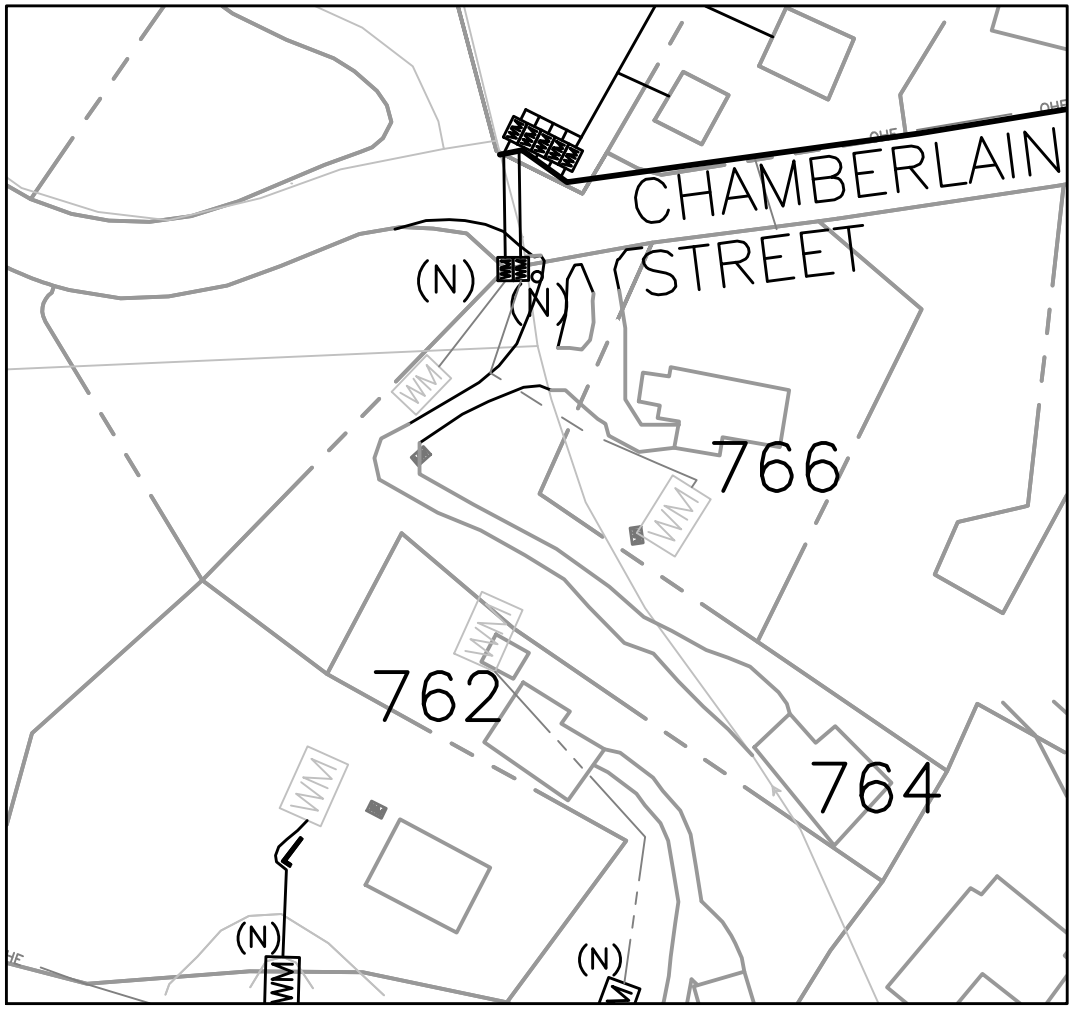
City of Placerville
3101 Center Street
Placerville, CA, 95667
PH: (530) 642-5250

DWG NAME: *762 Chamberlian St*	
SCALE: *NTS*	
DATE: *June 2015*	CF NAME: *Water Meter Relocation*

Domenichelli & Associates 06-03-15

CITY OF PLACERVILLE PARDI WY/BIG CUT RD/SACRAMENTO ST WATERLINE REPLACEMENT PROJECT
SERVICE LOCATION SHEET

O



[M] WATER METER ⊗ CORP STOP

[BF VAL] BACKFLOW DEVICE ★ POINT OF CONNECTION

—— SERVICE LINE

PROPERTY LINES SHOWN HERE ARE APPROXIMATE

SIZE OF WATER TAP
☐ 3/4" ☒ 1" ☐ OTHER:____
☐ UNKNOWN

BACKFLOW DEVICE
☐ YES SIZE:____ ☒ NO
☐ UNKNOWN

WATER SOFTENER?
☐ YES ☐ NO ☐ UNKNOWN

INSTANT WATER HEATER?
☐ YES ☐ NO ☐ UNKNOWN

☒ HYDRANT LOCATION ☐ DOG ON PROPERTY
☐ OWNER ☐ TENANT

FOR USE DURING CONSTRUCTION
PRESSURE @ HOSE BIB: _____
STATIC PRESSURE (p.s.i.): _____
RESIDUAL PRESSURE (p.s.i.):_____
DATED CHECKED: _____



KEY MAP

Notes (property type, obstructions such as structures, trees, or concrete walkways, any other important info):
SET METER 7' WEST OF DRIVEWAY IN PLANTER OR 2' EAST OF DRIVEWAY. TRENCH SERVICE LINE IN PLANTER AS FAR AS POSSIBLE. CONNECT NEAR EXISITNG METER. MATCH EXISTING SEAL COAT ON ASPHALT.

Picture File: _____
Address: 764 Chamberlain St. Placerville, CA 95667
APN: 003-091-25-100
New Service Size:
Old Service Loc.:

1st Attempt:_____ Surveyor's Name/Date
2nd Attempt:_____ Surveyor's Name/Date
3rd Attempt:_____ Surveyor's Name/Date

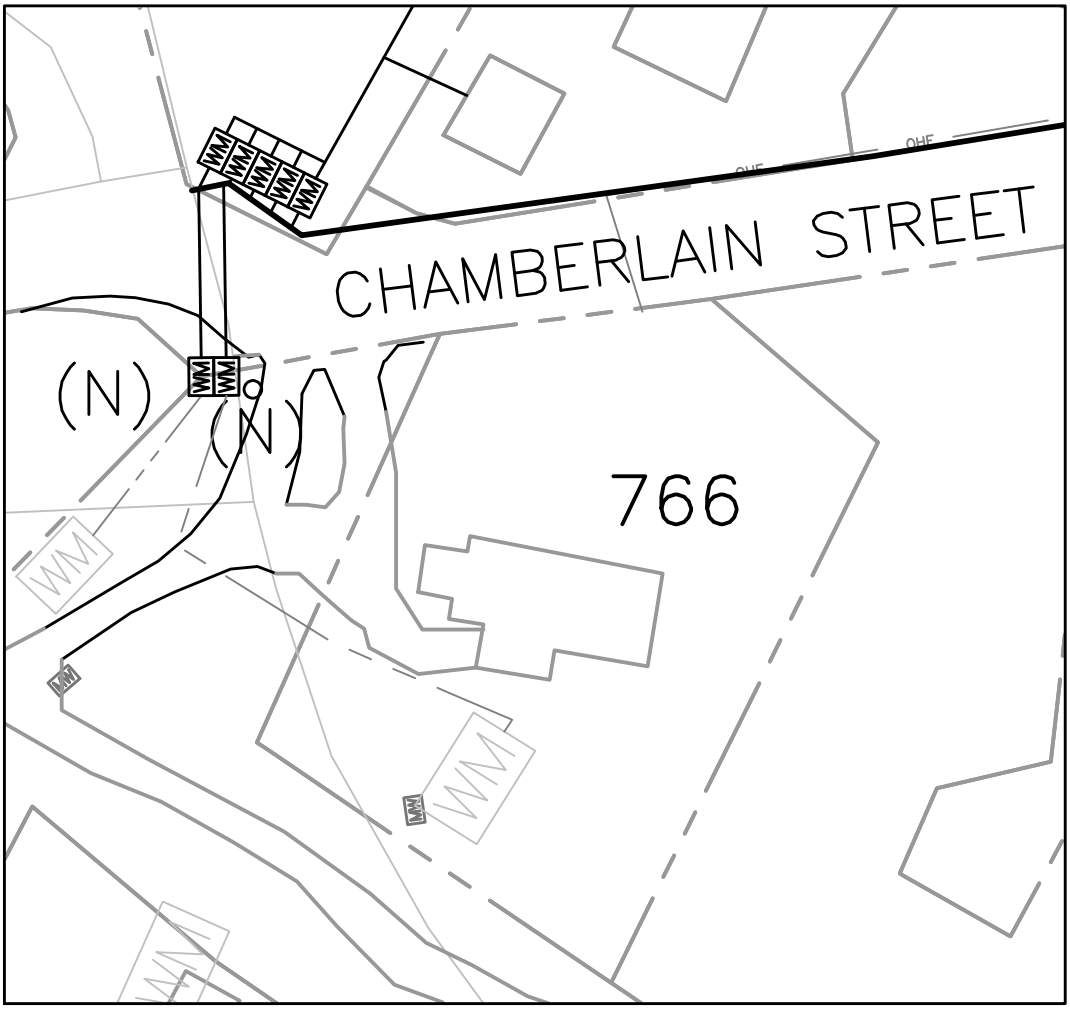
Landowner Signature:_____ Contact Number:_____ Date:_____

City of Placerville
3101 Center Street
Placerville, CA, 95667
PH: (530) 642-5250

DWG NAME: *764 Chamberlian St*
SCALE: *NTS*
DATE: *December 2015*
CF NAME: *Water Meter Relocation*

Domenichelli & Associates 06-03-15

CITY OF PLACERVILLE PARDI WY/BIG CUT RD/SACRAMENTO ST WATERLINE REPLACEMENT PROJECT
SERVICE LOCATION SHEET



THE PROPOSED METER LOCATION AND IN-TRACT LINE ARE APPROXIMATE LOCATIONS AND ARE SUBJECT TO CHANGE BASED ON FIELD CONDITIONS. CONTRACTOR TO FIELD VERIFY FINAL LOCATIONS PRIOR TO INSTALLATION.

O

[M] WATER METER ⊗ CORP STOP

[BF VAL] BACKFLOW DEVICE ★ POINT OF CONNECTION

—— SERVICE LINE

PROPERTY LINES SHOWN HERE ARE APPROXIMATE

SIZE OF WATER TAP
☐ 3/4" ☒ 1" ☐ OTHER:____
☐ UNKNOWN

BACKFLOW DEVICE
☐ YES SIZE:____ ☒ NO
☐ UNKNOWN

WATER SOFTENER?
☐ YES ☐ NO ☐ UNKNOWN

INSTANT WATER HEATER?
☐ YES ☐ NO ☐ UNKNOWN

☒ HYDRANT LOCATION ☐ DOG ON PROPERTY
☐ OWNER ☐ TENANT

FOR USE DURING CONSTRUCTION
PRESSURE @ HOSE BIB: _____
STATIC PRESSURE (p.s.i.): _____
RESIDUAL PRESSURE (p.s.i.):_____
DATED CHECKED: _____



KEY MAP

Notes (property type, obstructions such as structures, trees, or concrete walkways, any other important info):
SET METER IN PLANTER 5' WEST OF DRIVEWAY. INSTALL SERVICE LINE THROUGH PLANTER AS FAR AS POSSIBLE. CONNECT NEAR EXISTING METER.

Picture File: _____
Address: 766 Chamberlain St. Placerville, CA 95667
APN: 003-091-26-100
New Service Size:
Old Service Loc.:

1st Attempt: _____ Surveyor's Name/Date
2nd Attempt: _____ Surveyor's Name/Date
3rd Attempt: _____ Surveyor's Name/Date

Landowner Signature: _____ Contact Number: _____ Date: _____

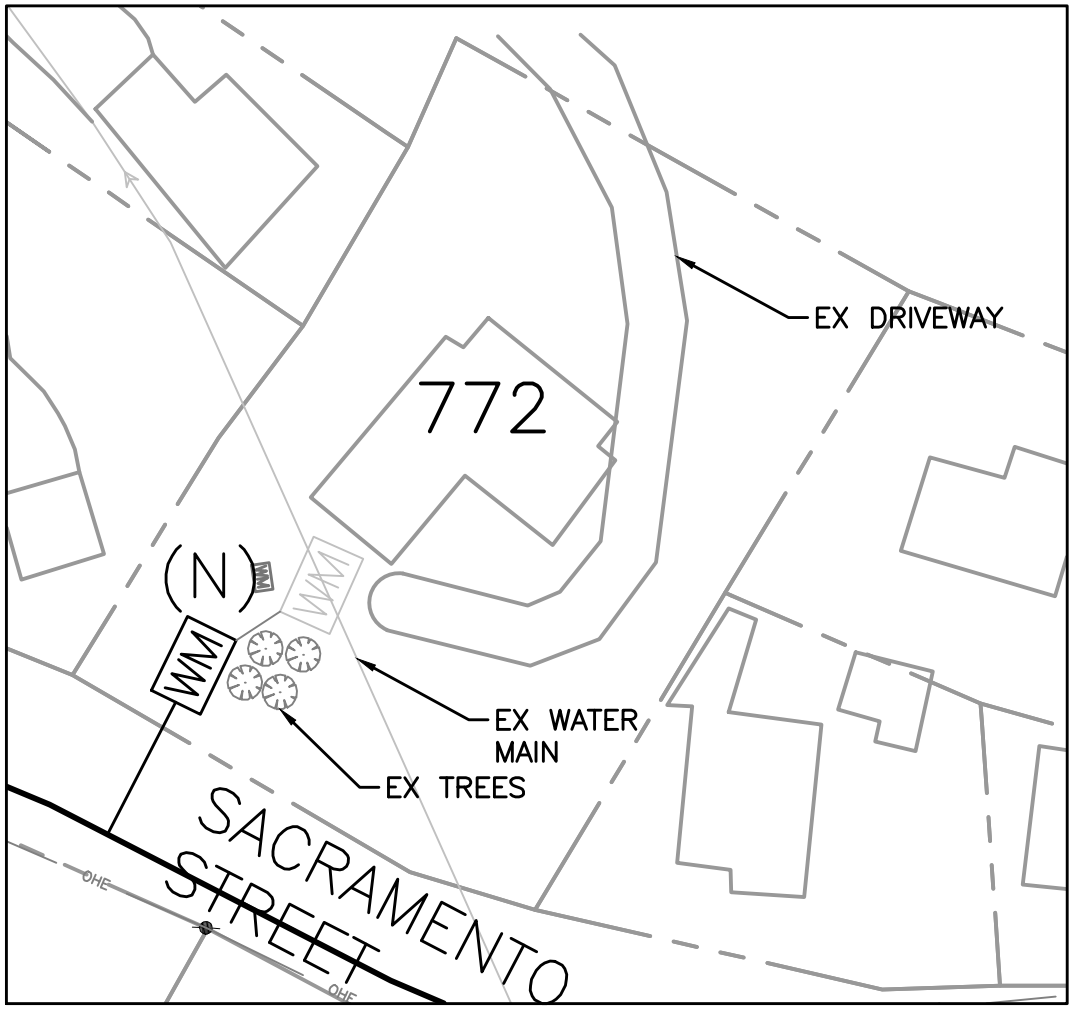
City of Placerville
3101 Center Street
Placerville, CA, 95667
PH: (530) 642-5250

DWG NAME: *766 Chamberlian St*
SCALE: *NTS*
DATE: *June 2015*
CF NAME: *Water Meter Relocation*

Domenichelli & Associates 06-03-15

CITY OF PLACERVILLE PARDI WY/BIG CUT RD/SACRAMENTO ST WATERLINE REPLACEMENT PROJECT
SERVICE LOCATION SHEET

O



THE PROPOSED METER LOCATION AND IN–TRACT LINE ARE APPROXIMATE LOCATIONS AND ARE SUBJECT TO CHANGE BASED ON FIELD CONDITIONS. CONTRACTOR TO FIELD VERIFY FINAL LOCATIONS PRIOR TO INSTALLATION.

[M] WATER METER ⊗ CORP STOP

[BF][VAL] BACKFLOW DEVICE ★ POINT OF CONNECTION

—— SERVICE LINE

PROPERTY LINES SHOWN HERE ARE APPROXIMATE

SIZE OF WATER TAP
☐ 3/4" ☒ 1" ☐ OTHER:____
☐ UNKNOWN

BACKFLOW DEVICE
☐ YES SIZE:____ ☒ NO
☐ UNKNOWN

WATER SOFTENER?
☐ YES ☐ NO ☐ UNKNOWN

INSTANT WATER HEATER?
☐ YES ☐ NO ☐ UNKNOWN

☐ HYDRANT LOCATION ☐ DOG ON PROPERTY
☒ OWNER ☐ TENANT

FOR USE DURING CONSTRUCTION
PRESSURE @ HOSE BIB: _____
STATIC PRESSURE (p.s.i.): _____
RESIDUAL PRESSURE (p.s.i.):_____
DATED CHECKED: _____



KEY MAP

Notes (property type, obstructions such as structures, trees, or concrete walkways, any other important info):
CONNECT OFF SACRAMENTO STR. SET METER 40' EAST OF DRIVEWAY TO 762 . CONNECT WHERE EXISTING METER IS LOCATED. TRY TO STAY 5' AWAY FROM TREES.

Picture File: _____
Address: 772 Chamberlain St, Placerville, CA 95667
APN: 003–0912–910
New Service Size:
Old Service Loc.:

1st Attempt: _____ Surveyor's Name/Date
2nd Attempt: _____ Surveyor's Name/Date
3rd Attempt: _____ Surveyor's Name/Date

Landowner Signature: _____ Contact Number: _____ Date: _____

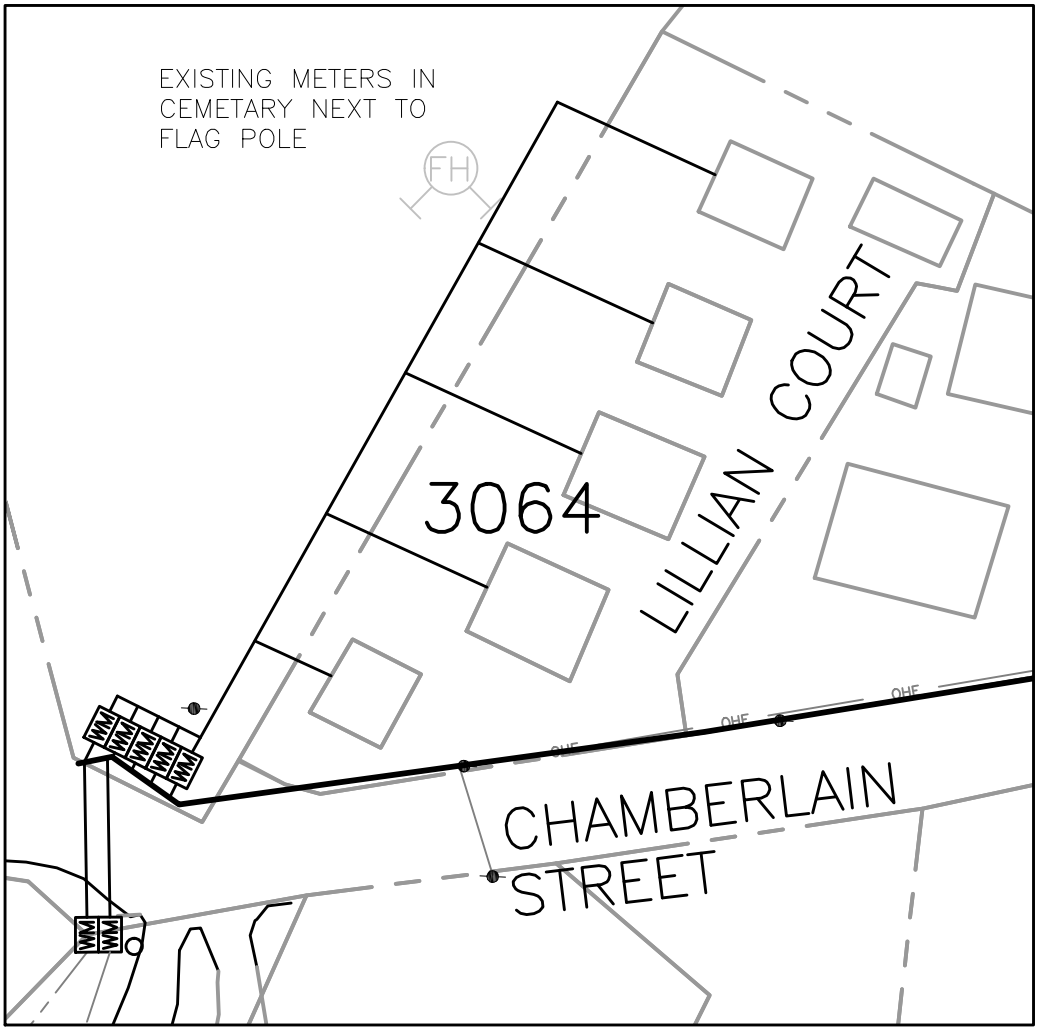
City of Placerville
3101 Center Street
Placerville, CA, 95667
PH: (530) 642–5250

DWG NAME: *772 Chamberlain St*
SCALE: *NTS*
DATE: *June 2015*
CF NAME: *Water Meter Relocation*

Domenichelli & Associates 06–03–15

CITY OF PLACERVILLE PARDI WY/BIG CUT RD/SACRAMENTO ST WATERLINE REPLACEMENT PROJECT
SERVICE LOCATION SHEET

O



THE PROPOSED METER LOCATION AND IN-TRACT LINE ARE APPROXIMATE LOCATIONS AND ARE SUBJECT TO CHANGE BASED ON FIELD CONDITIONS. CONTRACTOR TO FIELD VERIFY FINAL LOCATIONS PRIOR TO INSTALLATION.

[M] WATER METER ⊗ CORP STOP

[BF][VAL] BACKFLOW DEVICE ★ POINT OF CONNECTION

—— SERVICE LINE

PROPERTY LINES SHOWN HERE ARE APPROXIMATE

SIZE OF WATER TAP
☐ 3/4" ☒ 1" ☐ OTHER:____
☐ UNKNOWN

BACKFLOW DEVICE
☐ YES SIZE:____ ☒ NO
☐ UNKNOWN

WATER SOFTENER?
☐ YES ☐ NO ☐ UNKNOWN

INSTANT WATER HEATER?
☐ YES ☐ NO ☐ UNKNOWN

☐ HYDRANT LOCATION ☐ DOG ON PROPERTY
☒ OWNER ☐ TENANT

FOR USE DURING CONSTRUCTION
PRESSURE @ HOSE BIB: _____
STATIC PRESSURE (p.s.i.): _____
RESIDUAL PRESSURE (p.s.i.):_____
DATED CHECKED: _____



Notes (property type, obstructions such as structures, trees, or concrete walkways, any other important info):
SET ALL 4 METERS TO 761 CHAMBERLAIN AND 4 SERVICES ON LILLIAN IN PLANTER AND CONNECT IN CEMETARY. ALL OF THE HOUSES ARE CONNECT IN CEMETARY. THERE IS ALSO A METER IN CEMETARY BY THE FLAG POLE AND A 4" HYDRANT. RENTAL UNIT. ALL 4 ALONG LILLIAN OWNED BY SAME PERSON.

Picture File: _____
Address: 3064 Lillian Ct, Placerville, CA 95667
APN: ---
New Service Size:
Old Service Loc.:

1st Attempt:_____ Surveyor's Name/Date
2nd Attempt:_____ Surveyor's Name/Date
3rd Attempt:_____ Surveyor's Name/Date

Landowner Signature:_____ Contact Number:_____ Date:_____

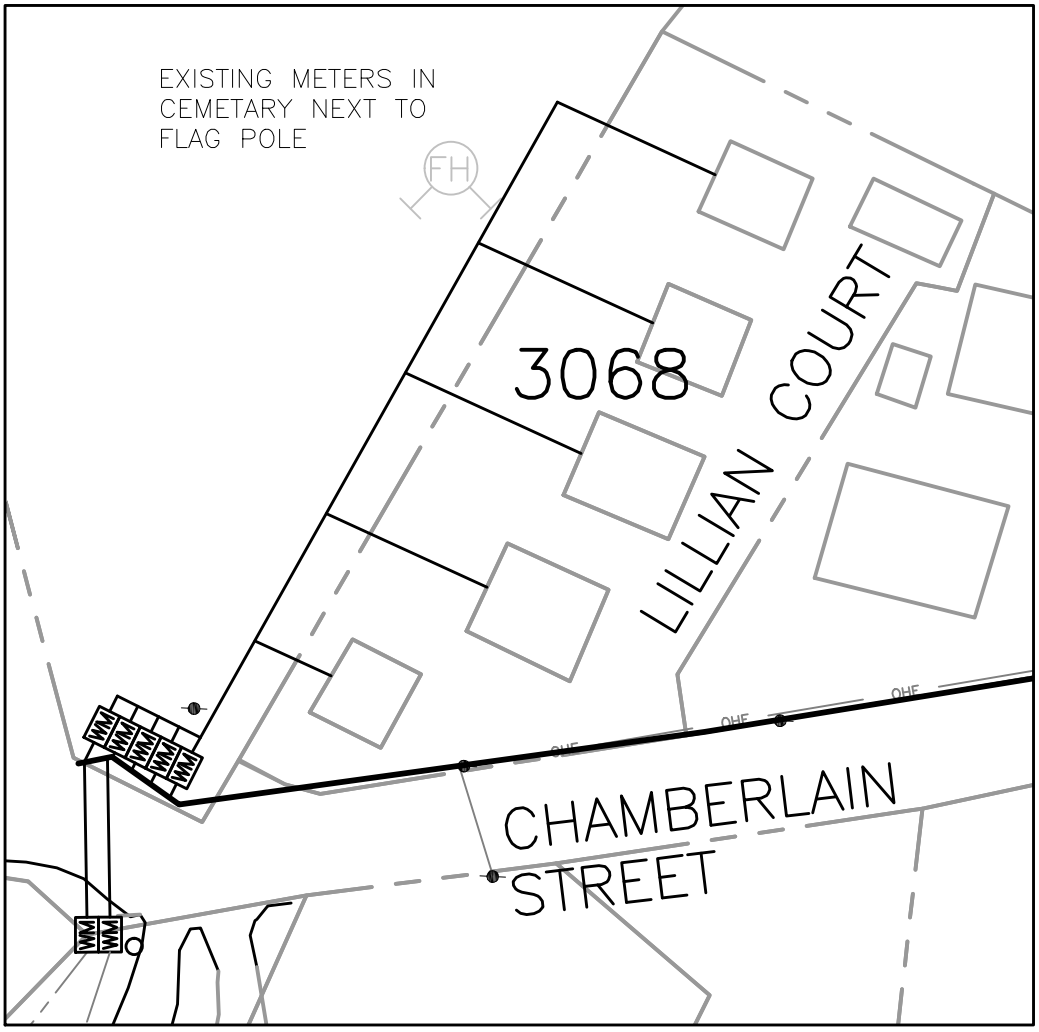
City of Placerville
3101 Center Street
Placerville, CA, 95667
PH: (530) 642-5250

DWG NAME: *3064 Lillian Ct*	
SCALE: *NTS*	
DATE: *June 2015*	CF NAME: *Water Meter Relocation*

Domenichelli & Associates 06-03-15

CITY OF PLACERVILLE PARDI WY/BIG CUT RD/SACRAMENTO ST WATERLINE REPLACEMENT PROJECT
SERVICE LOCATION SHEET

O



THE PROPOSED METER LOCATION AND IN-TRACT LINE ARE APPROXIMATE LOCATIONS AND ARE SUBJECT TO CHANGE BASED ON FIELD CONDITIONS. CONTRACTOR TO FIELD VERIFY FINAL LOCATIONS PRIOR TO INSTALLATION.

[M] WATER METER ⊗ CORP STOP

[BF][VAL] BACKFLOW DEVICE ★ POINT OF CONNECTION

—— SERVICE LINE

PROPERTY LINES SHOWN HERE ARE APPROXIMATE

SIZE OF WATER TAP
☐ 3/4" ☒ 1" ☐ OTHER:____
☐ UNKNOWN

BACKFLOW DEVICE
☐ YES SIZE:____ ☒ NO
☐ UNKNOWN

WATER SOFTENER?
☐ YES ☐ NO ☐ UNKNOWN

INSTANT WATER HEATER?
☐ YES ☐ NO ☐ UNKNOWN

☐ HYDRANT LOCATION ☐ DOG ON PROPERTY
☒ OWNER ☐ TENANT

FOR USE DURING CONSTRUCTION
PRESSURE @ HOSE BIB: _____
STATIC PRESSURE (p.s.i.): _____
RESIDUAL PRESSURE (p.s.i.):_____
DATED CHECKED: _____



Notes (property type, obstructions such as structures, trees, or concrete walkways, any other important info):
SET ALL 4 METERS TO 761 CHAMBERLAIN AND 4 SERVICES ON LILLIAN IN PLANTER AND CONNECT IN CEMETARY. ALL OF THE HOUSES ARE CONNECT IN CEMETARY. THERE IS ALSO A METER IN CEMETARY BY THE FLAG POLE AND A 4" HYDRANT. RENTAL UNIT. ALL 4 ALONG LILLIAN OWNED BY SAME PERSON.

Picture File: _____
Address: 3068 Lillian Ct, Placerville, CA 95667
APN: ---
New Service Size:
Old Service Loc.:

1st Attempt: _____ Surveyor's Name/Date
2nd Attempt: _____ Surveyor's Name/Date
3rd Attempt: _____ Surveyor's Name/Date

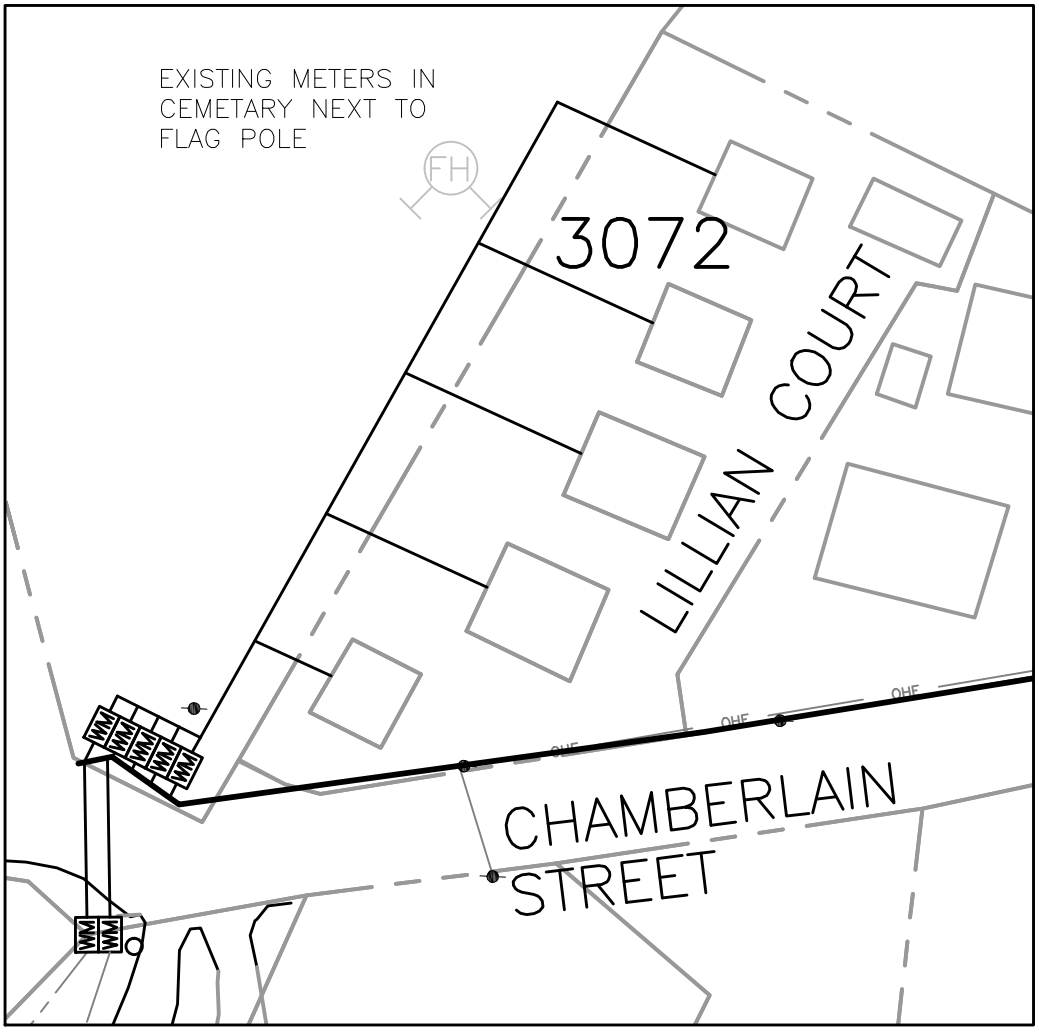
Landowner Signature: _____ Contact Number: _____ Date: _____

City of Placerville	DWG NAME: ***3068 Lillian Ct***	
3101 Center Street	SCALE: ***NTS***	
Placerville, CA, 95667	DATE: ***June 2015***	CF NAME: ***Water Meter Relocation***
PH: (530) 642-5250		

Domenichelli & Associates 06-03-15

CITY OF PLACERVILLE PARDI WY/BIG CUT RD/SACRAMENTO ST WATERLINE REPLACEMENT PROJECT
SERVICE LOCATION SHEET

O



THE PROPOSED METER LOCATION AND IN-TRACT LINE ARE APPROXIMATE LOCATIONS AND ARE SUBJECT TO CHANGE BASED ON FIELD CONDITIONS. CONTRACTOR TO FIELD VERIFY FINAL LOCATIONS PRIOR TO INSTALLATION.

[M] WATER METER ⊗ CORP STOP

[BF] [VAL] BACKFLOW DEVICE ★ POINT OF CONNECTION

—— SERVICE LINE

PROPERTY LINES SHOWN HERE ARE APPROXIMATE

SIZE OF WATER TAP
☐ 3/4" ☒ 1" ☐ OTHER:____
☐ UNKNOWN

BACKFLOW DEVICE
☐ YES SIZE:____ ☒ NO
☐ UNKNOWN

WATER SOFTENER?
☐ YES ☐ NO ☐ UNKNOWN

INSTANT WATER HEATER?
☐ YES ☐ NO ☐ UNKNOWN

☐ HYDRANT LOCATION ☐ DOG ON PROPERTY
☒ OWNER ☐ TENANT

FOR USE DURING CONSTRUCTION
PRESSURE @ HOSE BIB: _____
STATIC PRESSURE (p.s.i.): _____
RESIDUAL PRESSURE (p.s.i.):_____
DATED CHECKED: _____



Notes (property type, obstructions such as structures, trees, or concrete walkways, any other important info):
SET ALL 4 METERS TO 761 CHAMBERLAIN AND 4 SERVICES ON LILLIAN IN PLANTER AND CONNECT IN CEMETARY. ALL OF THE HOUSES ARE CONNECT IN CEMETARY. THERE IS ALSO A METER IN CEMETARY BY THE FLAG POLE AND A 4" HYDRANT. RENTAL UNIT. ALL 4 ALONG LILLIAN OWNED BY SAME PERSON.

Picture File: _____
Address: 3072 Lillian Ct, Placerville, CA 95667
APN: ---
New Service Size:
Old Service Loc.:

1st Attempt:_____ Surveyor's Name/Date
2nd Attempt:_____ Surveyor's Name/Date
3rd Attempt:_____ Surveyor's Name/Date

Landowner Signature:_____ Contact Number:_____ Date:_____

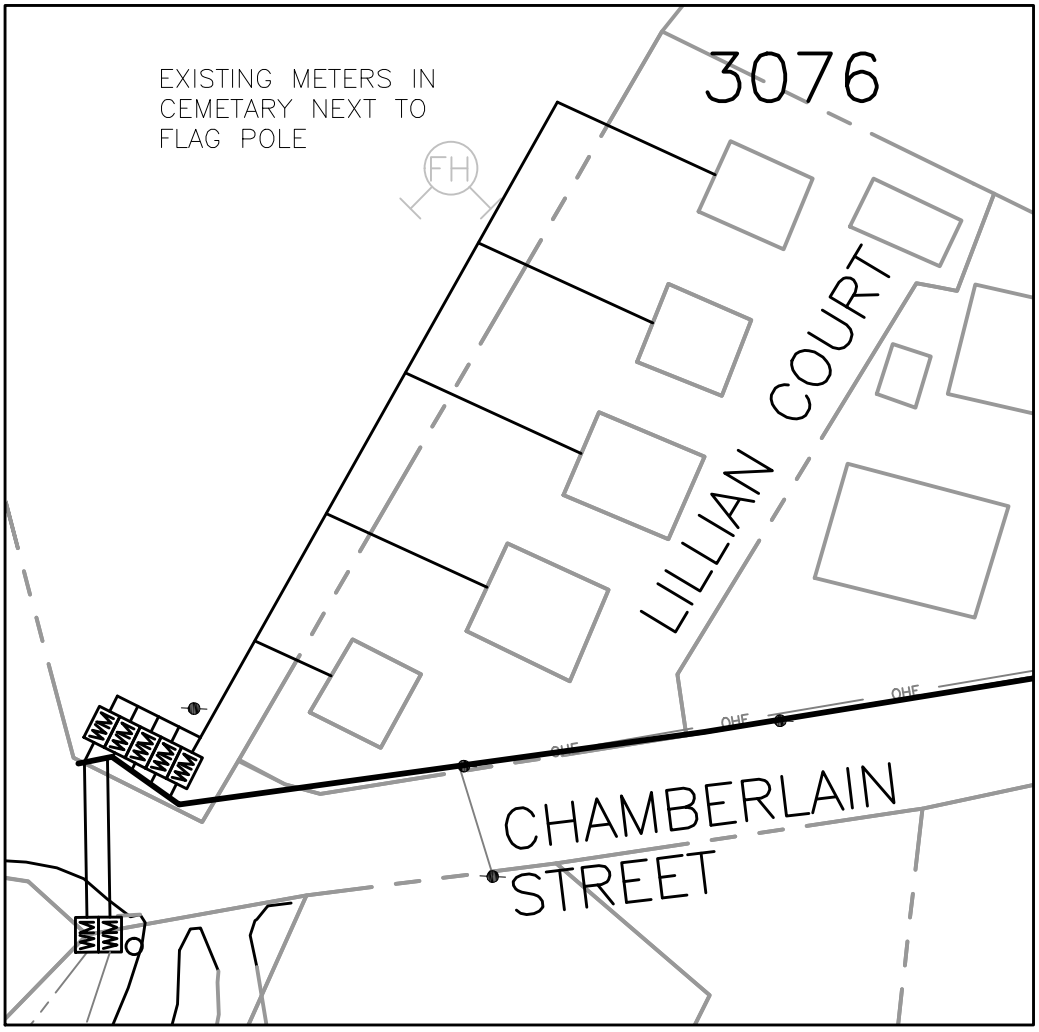
City of Placerville
3101 Center Street
Placerville, CA, 95667
PH: (530) 642-5250

DWG NAME: *3072 Lillian Ct*
SCALE: *NTS*
DATE: *June 2015*
CF NAME: *Water Meter Relocation*

Domenichelli & Associates 06-03-15

CITY OF PLACERVILLE PARDI WY/BIG CUT RD/SACRAMENTO ST WATERLINE REPLACEMENT PROJECT
SERVICE LOCATION SHEET

O



THE PROPOSED METER LOCATION AND IN-TRACT LINE ARE APPROXIMATE LOCATIONS AND ARE SUBJECT TO CHANGE BASED ON FIELD CONDITIONS. CONTRACTOR TO FIELD VERIFY FINAL LOCATIONS PRIOR TO INSTALLATION.

[M] WATER METER ⊗ CORP STOP

[BF] [VAL] BACKFLOW DEVICE ★ POINT OF CONNECTION

—— SERVICE LINE

PROPERTY LINES SHOWN HERE ARE APPROXIMATE

SIZE OF WATER TAP
☐ 3/4" ☒ 1" ☐ OTHER:____
☐ UNKNOWN

BACKFLOW DEVICE
☐ YES SIZE:____ ☒ NO
☐ UNKNOWN

WATER SOFTENER?
☐ YES ☐ NO ☐ UNKNOWN

INSTANT WATER HEATER?
☐ YES ☐ NO ☐ UNKNOWN

☐ HYDRANT LOCATION ☐ DOG ON PROPERTY
☒ OWNER ☐ TENANT

FOR USE DURING CONSTRUCTION
PRESSURE @ HOSE BIB: _____
STATIC PRESSURE (p.s.i.): _____
RESIDUAL PRESSURE (p.s.i.):_____
DATED CHECKED: _____



Notes (property type, obstructions such as structures, trees, or concrete walkways, any other important info):
SET ALL 4 METERS TO 761 CHAMBERLAIN AND 4 SERVICES ON LILLIAN IN PLANTER AND CONNECT IN CEMETARY. ALL OF THE HOUSES ARE CONNECT IN CEMETARY. THERE IS ALSO A METER IN CEMETARY BY THE FLAG POLE AND A 4" HYDRANT. RENTAL UNIT. ALL 4 ALONG LILLIAN OWNED BY SAME PERSON.

Picture File: _____
Address: 3076 Lillian Ct, Placerville, CA 95667
APN: ---
New Service Size:
Old Service Loc.:

1st Attempt:_____ Surveyor's Name/Date
2nd Attempt:_____ Surveyor's Name/Date
3rd Attempt:_____ Surveyor's Name/Date

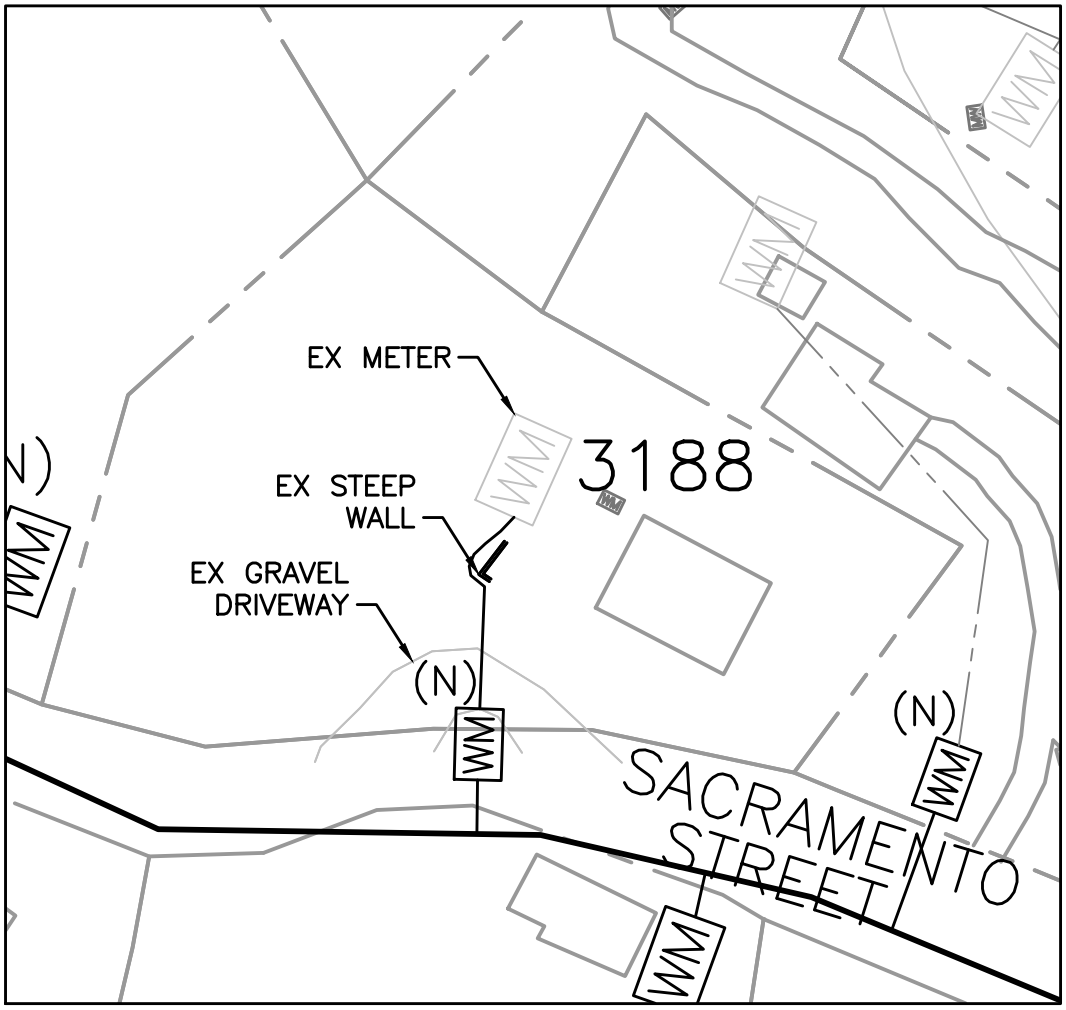
Landowner Signature:_____ Contact Number:_____ Date:_____

City of Placerville ***3101 Center Street*** ***Placerville, CA, 95667*** ***PH: (530) 642-5250***	DWG NAME: ***3076 Lillian Ct***	
	SCALE: ***NTS***	
	DATE: ***June 2015***	CF NAME: ***Water Meter Relocation***

Domenichelli & Associates 06-03-15

CITY OF PLACERVILLE PARDI WY/BIG CUT RD/SACRAMENTO ST WATERLINE REPLACEMENT PROJECT
SERVICE LOCATION SHEET

O



THE PROPOSED METER LOCATION AND IN-TRACT LINE ARE APPROXIMATE LOCATIONS AND ARE SUBJECT TO CHANGE BASED ON FIELD CONDITIONS. CONTRACTOR TO FIELD VERIFY FINAL LOCATIONS PRIOR TO INSTALLATION.

[M] WATER METER ⊗ CORP STOP

[BF] [VAL] BACKFLOW DEVICE ★ POINT OF CONNECTION

—— SERVICE LINE

PROPERTY LINES SHOWN HERE ARE APPROXIMATE

SIZE OF WATER TAP
☐ 3/4" ☒ 1" ☐ OTHER:____
☐ UNKNOWN

BACKFLOW DEVICE
☐ YES SIZE:____ ☐ NO
☐ UNKNOWN

WATER SOFTENER?
☐ YES ☐ NO ☐ UNKNOWN

INSTANT WATER HEATER?
☐ YES ☐ NO ☐ UNKNOWN

☐ HYDRANT LOCATION ☐ DOG ON PROPERTY
☒ OWNER ☐ TENANT

FOR USE DURING CONSTRUCTION
PRESSURE @ HOSE BIB: _____
STATIC PRESSURE (p.s.i.): _____
RESIDUAL PRESSURE (p.s.i.):_____
DATED CHECKED: _____



KEY MAP

Notes (property type, obstructions such as structures, trees, or concrete walkways, any other important info):
SET NEW METER IN PLANTER CONNECT NEAR EXISTING METER.

Picture File: _____
Address: 3188 Sacramento St, Placerville, CA 95667
APN: 0030910810
New Service Size:
Old Service Loc.:

1st Attempt: 1-26 _____ Surveyor's Name/Date
2nd Attempt: 2-5 _____ Surveyor's Name/Date
3rd Attempt: 2-8 _____ Surveyor's Name/Date

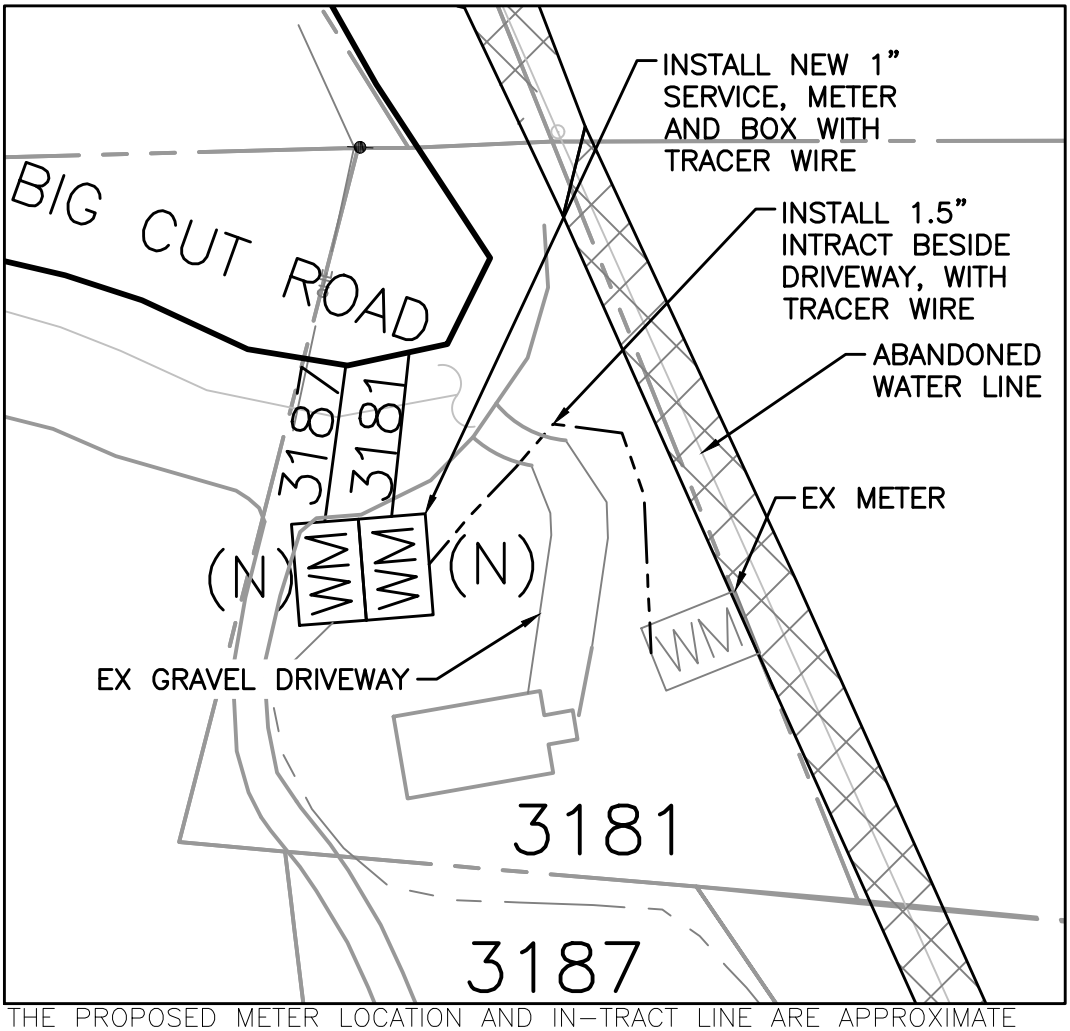
Landowner Signature: _____ Contact Number: _____ Date: _____

City of Placerville	DWG NAME: ***3188 Sacramento St***	
3101 Center Street	SCALE: ***NTS***	
Placerville, CA, 95667	DATE: ***June 2015***	CF NAME: ***Water Meter Relocation***
PH: (530) 642-5250		

Domenichelli & Associates 06-03-15

CITY OF PLACERVILLE PARDI WY/BIG CUT RD/SACRAMENTO ST WATERLINE REPLACEMENT PROJECT
SERVICE LOCATION SHEET

O



THE PROPOSED METER LOCATION AND IN-TRACT LINE ARE APPROXIMATE LOCATIONS AND ARE SUBJECT TO CHANGE BASED ON FIELD CONDITIONS. CONTRACTOR TO FIELD VERIFY FINAL LOCATIONS PRIOR TO INSTALLATION.

[M] WATER METER ⊗ CORP STOP

[BF][VAL] BACKFLOW DEVICE ★ POINT OF CONNECTION

—— SERVICE LINE

PROPERTY LINES SHOWN HERE ARE APPROXIMATE

SIZE OF WATER TAP
☐ 3/4" ☒ 1" ☐ OTHER:____
☐ UNKNOWN

BACKFLOW DEVICE
☐ YES SIZE:____ ☐ NO
☐ UNKNOWN

WATER SOFTENER?
☐ YES ☐ NO ☐ UNKNOWN

INSTANT WATER HEATER?
☐ YES ☐ NO ☐ UNKNOWN

☐ HYDRANT LOCATION ☐ DOG ON PROPERTY
☐ OWNER ☐ TENANT

FOR USE DURING CONSTRUCTION
PRESSURE @ HOSE BIB: _____
STATIC PRESSURE (p.s.i.): _____
RESIDUAL PRESSURE (p.s.i.):_____
DATED CHECKED: _____



KEY MAP

Notes (property type, obstructions such as structures, trees, or concrete walkways, any other important info):
SET METER 7' EAST OF DRIVEWAY TO 3187 BIG CUT RD AND CONNECT NEAR EXISTING IN-TRACT LINE.

Picture File: _____
Address: 3181 Big Cut Rd, Placerville, CA 95667
APN: 051-070-30-100
New Service Size:
Old Service Loc.:

1st Attempt: 1-26 Peter Kragom Surveyor's Name/Date
2nd Attempt: 2-8 Peter Kragom Surveyor's Name/Date
3rd Attempt: 2-13 Peter Kragom Surveyor's Name/Date

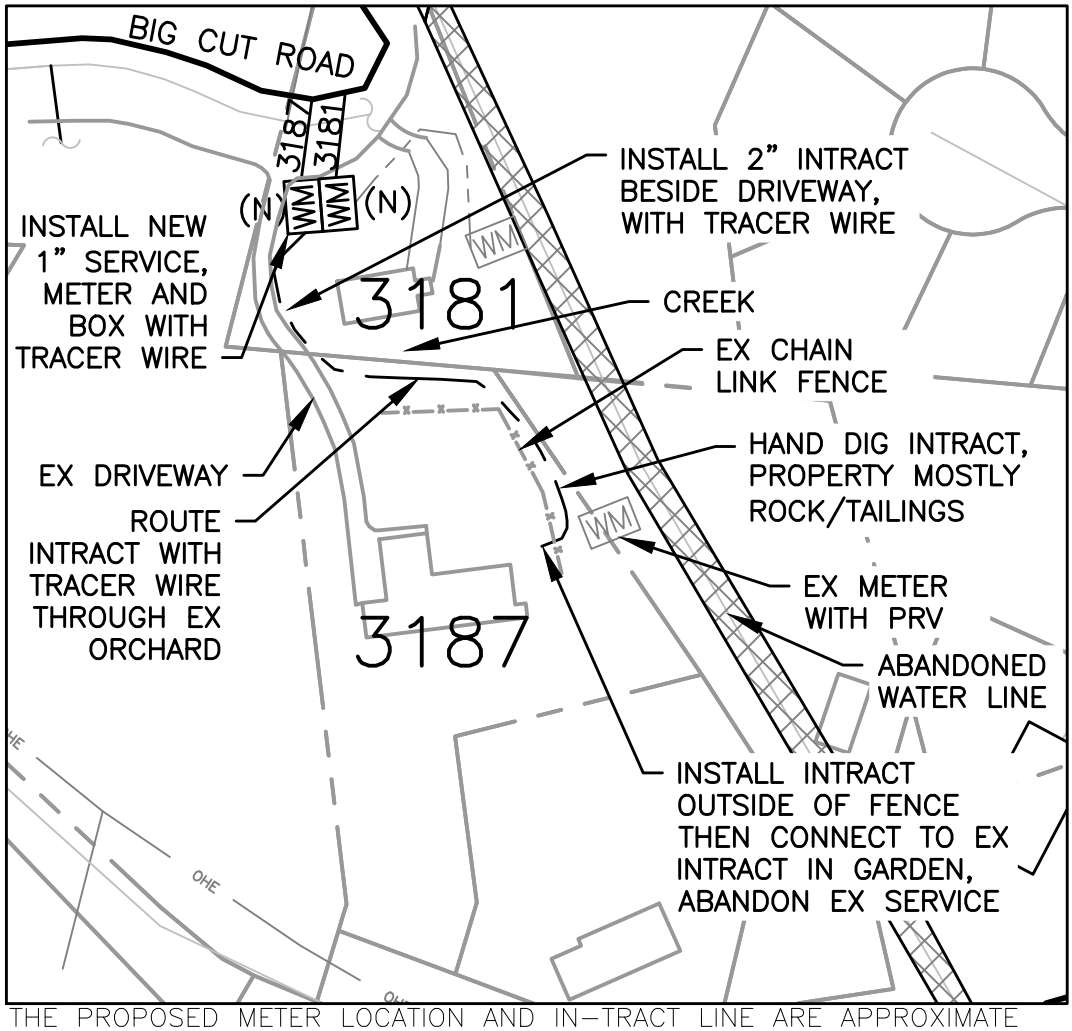
Landowner Signature: _____ Contact Number: _____ Date: _____

City of Placerville *3101 Center Street* *Placerville, CA, 95667* *PH: (530) 642-5250*	DWG NAME: *3181 Big Cut Rd*	
	SCALE: *NTS*	
	DATE: *June 2015*	CF NAME: *Water Meter Relocation*

Domenichelli & Associates 06-03-15

CITY OF PLACERVILLE PARDI WY/BIG CUT RD/SACRAMENTO ST WATERLINE REPLACEMENT PROJECT SERVICE LOCATION SHEET

O



THE PROPOSED METER LOCATION AND IN-TRACT LINE ARE APPROXIMATE LOCATIONS AND ARE SUBJECT TO CHANGE BASED ON FIELD CONDITIONS. CONTRACTOR TO FIELD VERIFY FINAL LOCATIONS PRIOR TO INSTALLATION.

[M] WATER METER ⊗ CORP STOP

[BF][VAL] BACKFLOW DEVICE ★ POINT OF CONNECTION

—— SERVICE LINE

PROPERTY LINES SHOWN HERE ARE APPROXIMATE

SIZE OF WATER TAP
☐ 3/4" ☐ 1" ☐ OTHER:____
☐ UNKNOWN

BACKFLOW DEVICE
☐ YES SIZE:____ ☒ NO
☐ UNKNOWN

WATER SOFTENER?
☐ YES ☐ NO ☐ UNKNOWN

INSTANT WATER HEATER?
☐ YES ☒ NO ☐ UNKNOWN

☐ HYDRANT LOCATION ☐ DOG ON PROPERTY
☒ OWNER ☐ TENANT

FOR USE DURING CONSTRUCTION
PRESSURE @ HOSE BIB: _____
STATIC PRESSURE (p.s.i.): _____
RESIDUAL PRESSURE (p.s.i.): _____
DATED CHECKED: _____



KEY MAP

Notes (property type, obstructions such as structures, trees, or concrete walkways, any other important info):

HOUSE ON A HILL. PROPERTY IS ON CITY SEWER.

Picture File: _____
Address: 3187 Big Cut Rd, Placerville, CA 95667
APN: 051-090-60-100
New Service Size:
Old Service Loc.:

1st Attempt: 1-20 Peter Ragone Surveyor's Name/Date
2nd Attempt: _____ Surveyor's Name/Date
3rd Attempt: _____ Surveyor's Name/Date

Landowner Signature: _____ Contact Number: _____ Date: _____

City of Placerville
3101 Center Street
Placerville, CA, 95667
PH: (530) 642-5250

DWG NAME: *3187 Big Cut Rd*	
SCALE: *NTS*	
DATE: *June 2015*	CF NAME: *Water Meter Relocation*

Domenichelli & Associates 06-03-15

CITY OF PLACERVILLE, CALIFORNIA\
DEVELOPMENT SERVICES DEPARTMENT
ENGINEERING DIVISION

Pardi/Big Cut/Sacramento Street Area Waterline Relocation Project

Project No. 41109

APPENDIX E – TRAFFIC CONTROL PLANS (FROM CALTRANS DESIGN ENCROACHMENT PERMIT)

April 25, 2016

STATEWIDE TRAFFIC SAFETY & SIGNS™

7920 CUCAMONGA AVE
SACRAMENTO CA 95826
jmurphy@stssi.com
916-452-4855

CONSTRUCTION ZONE TRAFFIC CONTROL
STATEWIDE TRAFFIC SAFETY & SIGNS
LICENSE # 975518
JOE MURPHY
916-452-4855
STATE OF CALIFORNIA

Statewide Traffic Safety and Signs(''Statewide") shall not be responsible for, and [DA ENGINEERING & CALTRANS] shall indemnify, defend and hold harmless Statewide and its agents, representatives and employees from and against, any claims, costs, damages, liabilities, expenses, demands and losses (including attorney's fees and costs and expenses) arising out of or relating to the failure of any Traffic Control Plan applicable to Statewide's work or services to comply with any local, state or federal rule, regulation, ordinance, or statute. [DA ENGINEERING & CALTRANS] agrees that the Statewide is entitled to and will rely on the written Traffic Control Plan(s) provided to Statewide by [DA ENGINEERING & CALTRANS] and its agents, representatives and employees in the performance of Statewide's work or services.

GENERAL NOTES

1. THIS PLAN SUPPLEMENTED WITH 2014 CA MUTCD.
2. THE LOCATION OF THE SIGNS SHOWN ON THE PLAN ARE GUIDELINES AND ACTUAL LOCATIONS WILL DEPEND UPON ALIGNMENT, GRADE, LOCATION OF THE STREET INTERSECTIONS, AND THE 85TH PERCENTILE.
3. ONLY ONE SIDEWALK WILL BE CLOSED AT A TIME. PEDESTRIAN AND DISABLED ACCESS TO BE MAINTAINED PER 2012 CA MUTCD STANDARD (CALTRANS USE STANDARD CONSTRUCTION SPEC)
4. NOTHING ALLOWED IN BUFFER/TRANISTION AREA AT ANY TIME.
5. NOTIFY LOCAL LAW ENFORCEMENT, FIRE, AMBULANCE COMPANIES WITHIN 24 HOURS BEFORE CONSTRUCTION BEGINS. KEEP OPEN ACCESS FOR EMERGENCY VEHICLES AT ALL TIMES.
6. SIGNS AND CHANNELIZING DEVICES MUST BE RETRO REFLECTIVE OR ILLUMINATE DURING THE NIGHT. MINIMUM VIABILITY 1000'
7. CONTINUOS MONITORING AND MAINTEAINCE OF THE TRAFFIC CONTROL ZONE WILL BE IMPLEMENTED FOR THE PURPOSE OF MAINTAINING EMERGENCY ACCESS, ACCOMMODATION FOR PEDESTRIANS, BICYCLE TRAFFIC AND THE DISABLED.
8. ALL CONFLICTING MARKINGS ARE TO BE REMOVED FOR PROJECTS THAT LAST A TERM OF 3 DAYS OR LONGER.
9. ALL SIGNS IMPLEMENTED WILL ONLY BE VIEWABLE WHEN IN USE, OTHERWISE ALL WARNING DEVICES WILL BE TAKEN DOWN OR COVERED.
10. PROPER TRAINING OF TRAFFIC CONTROLLERS, PROPER DEVICES & PROPER USE OF THE DEVICES ARE REQUIRED AT ALL TIMES.

DEVICE SPACING TABLE (CA MUTCD 2014 EDITION TABLE 6H-4/6H-4(CA))

POSTED SPEED	FORMULA	BUFFER SPACE	MINIMUM TAPER LENGTHS									MAXIMUM CONE SPACING		SIGN SPACING (1)	LIDG (FT) (1)
			10' OFFSET			11' OFFSET			12' OFFSET						
			L	1/2 L	1/3 L	L	1/2 L	1/3 L	L	1/2 L	1/3 L				
			MERGE	SHIFT	SHOULDER	MERGE	SHIFT	SHOULDER	MERGE	SHIFT	SHOULDER	LONG	TAPER & LIDG		
25		155'	104'	52'	35'	115'	57'	38'	125'	63'	42'	25'	13'	100' TO 200'	94'
30	L=WS2/60	200'	150'	75'	50'	165'	83'	55'	180'	90'	60'	30'	15'	120' TO 250'	113'
35		250'	204'	102'	68'	225'	112'	75'	245'	123'	82'	35'	18'	140' TO 280'	131'
40		305'	267'	133'	89'	293'	147'	98'	320'	160'	107'	40'	20'	160' TO 320'	150'
45	L=WS	360'	450'	225'	150'	495'	248'	165'	540'	270'	180'	45'	23'	360' TO 540'	169'
50		425'	500'	250'	167'	550'	275'	183'	600'	300'	200'	50'	25'	400' TO 600'	197'
55		495'	550'	275'	183'	605'	303'	202'	660'	330'	220'	50'	28'	440' TO 660'	210'
60		570'	600'	300'	200'	660'	330'	220'	720'	360'	240'	50'	30'	480' TO 720'	225'
65		645'	650'	325'	217'	715'	358'	238'	780'	390'	260'	50'	33'	520' TO 700'	244'
70		730'	700'	350'	233'	770'	385'	257'	840'	420'	280'	50'	35'	560' TO 820'	263'

LOW SPEED IS 40 MPH OR LESS
HIGH SPEED IS 45 MPH OR MORE
BOTH ARE BASED ON:
1. 85H % TILE OR IF NOT AVAILABLE, THEN USE
2. POSTED SPEED LIMIT (PSL)
3. ANTICIPATED SPEED

L = TAPER LENGTH
S = SPEED
W = WIDTH (OFFSET FROM PATH OF TRAVEL)

RECOMMENDED ADVANCED WARNING SIGN SPACING TABLE
(CA MUTCD 2014 EDITION TABLE 6-C1,
SEE TABLE FOR ADDITIONAL INFORMATION)

ROAD TYPE	A	B	C
URBAN (LOW SPEED) 25 MPH OR LESS	100'	100'	100'
URBAN (LOW SPEED) MORE THAN 25 MPH TO 40 MPH	250'	250'	250'
URBAN (HIGH SPEED) MORE THAN 40 MPH	350'	350'	350'
RURAL	500'	500'	500'
EXPRESSWAY/FREEWAY	1,000'	1,000'	1,000'

D&A CIVIL ENGINEERING

ADAM MOTIEJUNAS 916-933-1997

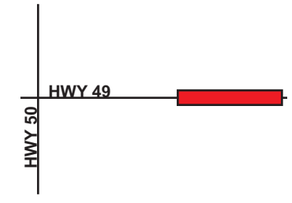
OWNER

CALTRANS

ADDRESS/JOB NUMBER

SACRAMENTO ST (HWY 49) PLACERVILLE CA

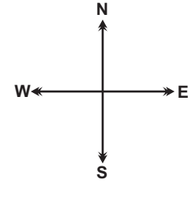
LOCATION MAP

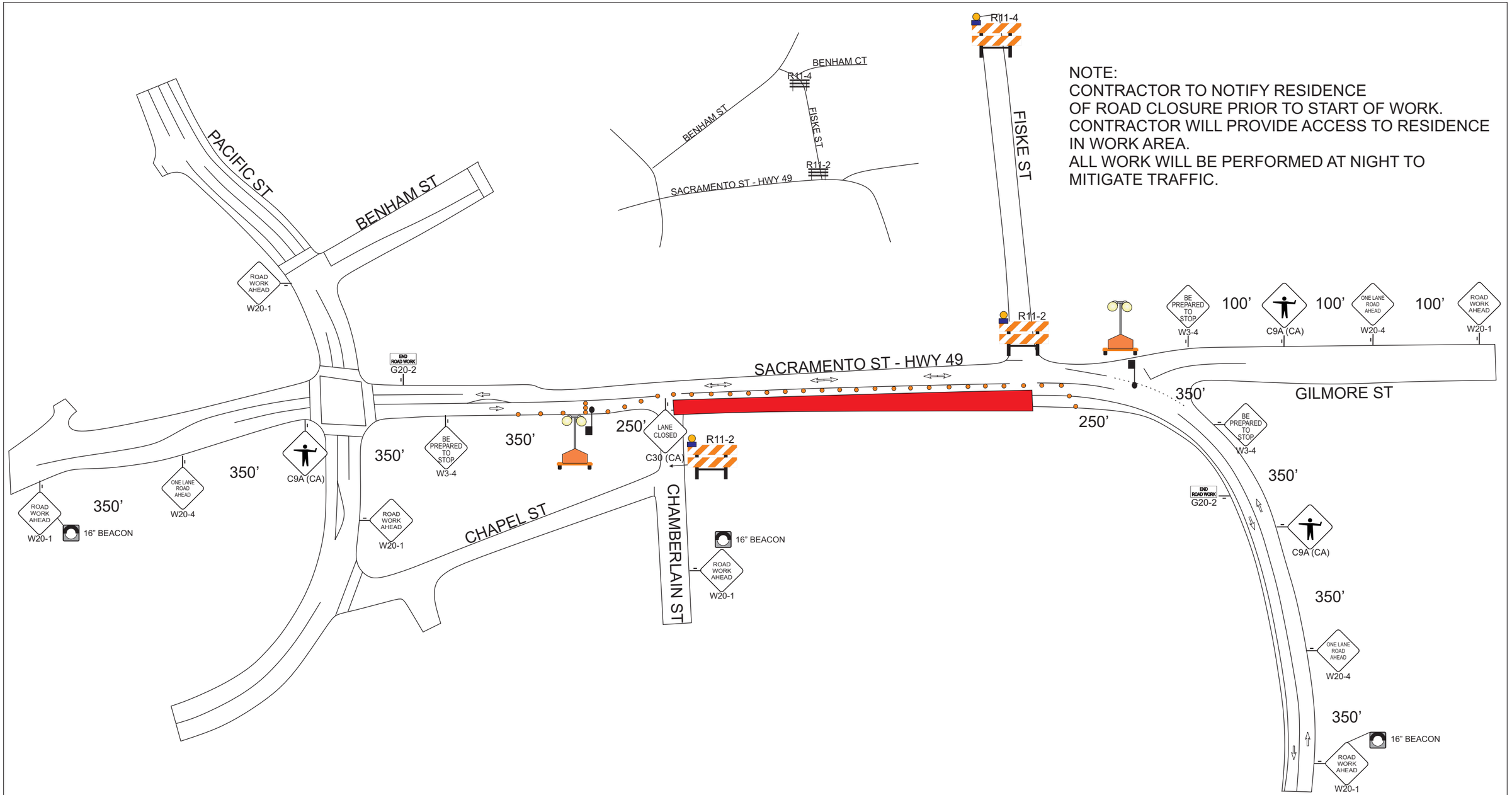


SPEED LIMIT

SPEED LIMIT
35

COMPASS





CONSTRUCTION ZONE TRAFFIC CONTROL
STATEWIDE TRAFFIC SAFETY & SIGNS
LICENSE # 975518
JOE MURPHY
(916) 452-4855
STATE OF CALIFORNIA

LOCATION: HWY 49 AKA SACRAMENTO ST PLACERVILLE
CONTRACTOR

D&A CIVIL ENGINEERING

CONTACT: ADAM MOTIEJUNAS

PHONE # 916-933-1997

CONSTRUCTION HOURS: NIGHT WORK ONLY (PER. CALTRANS)

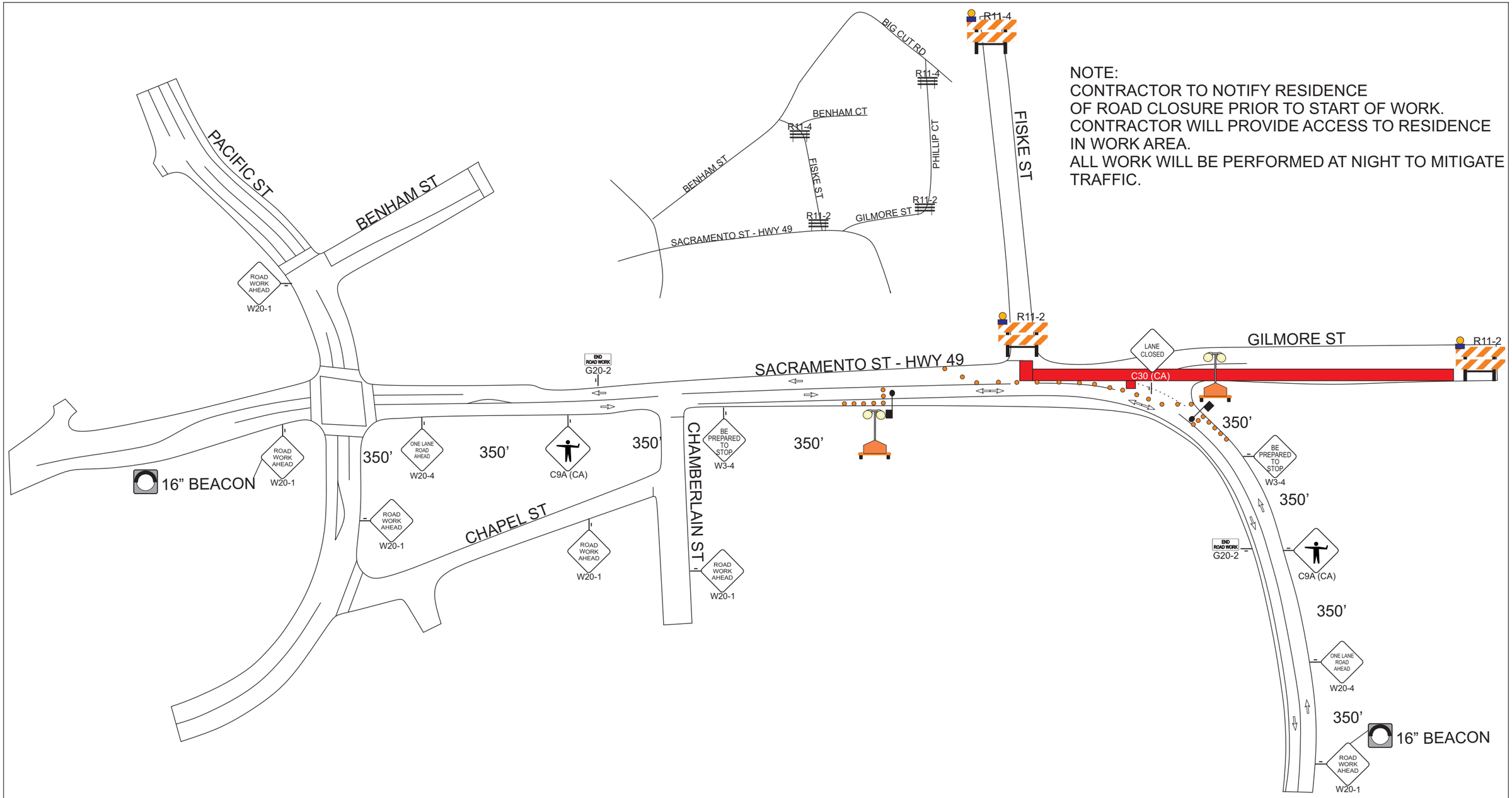
35 MPH
10’ OFFSET = 204’
11’ OFFSET = 225’
12’ OFFSET = 245’

PLAN # 597

DATE: 12/7/15

ROAD WORK AHEAD 48” — ROADS: > 50 MPH MINIMUM 48” SIGN PANEL

	WORK ZONE		FLAGMAN		16” FLASHING BEACON
			W3-4		
	REFLECTIVE CONE		C9A (CA)		
	TEMPORARY C.A.S.		W20-4		
	TRAFFIC FLOW		G20-2		
	W20-1		LIGHT PLANT		



NOTE:
CONTRACTOR TO NOTIFY RESIDENCE
OF ROAD CLOSURE PRIOR TO START OF WORK.
CONTRACTOR WILL PROVIDE ACCESS TO RESIDENCE
IN WORK AREA.
ALL WORK WILL BE PERFORMED AT NIGHT TO MITIGATE
TRAFFIC.

CONSTRUCTION ZONE TRAFFIC CONTROL
STATEWIDE TRAFFIC SAFETY & SIGNS
LICENSE # 975518
JOE MURPHY
(916) 452-4855
STATE OF CALIFORNIA

LOCATION: HWY 49 AKA SACRAMENTO ST PLACERVILLE
CONTRACTOR

D&A CIVIL ENGINEERING

CONTACT: ADAM MOTIEJUNAS

PHONE # 916-933-1997

CONSTRUCTION HOURS: NIGHT WORK ONLY (PER. CALTRANS)

35 MPH
10' OFFSET = 204'
11' OFFSET = 225'
12' OFFSET = 245'

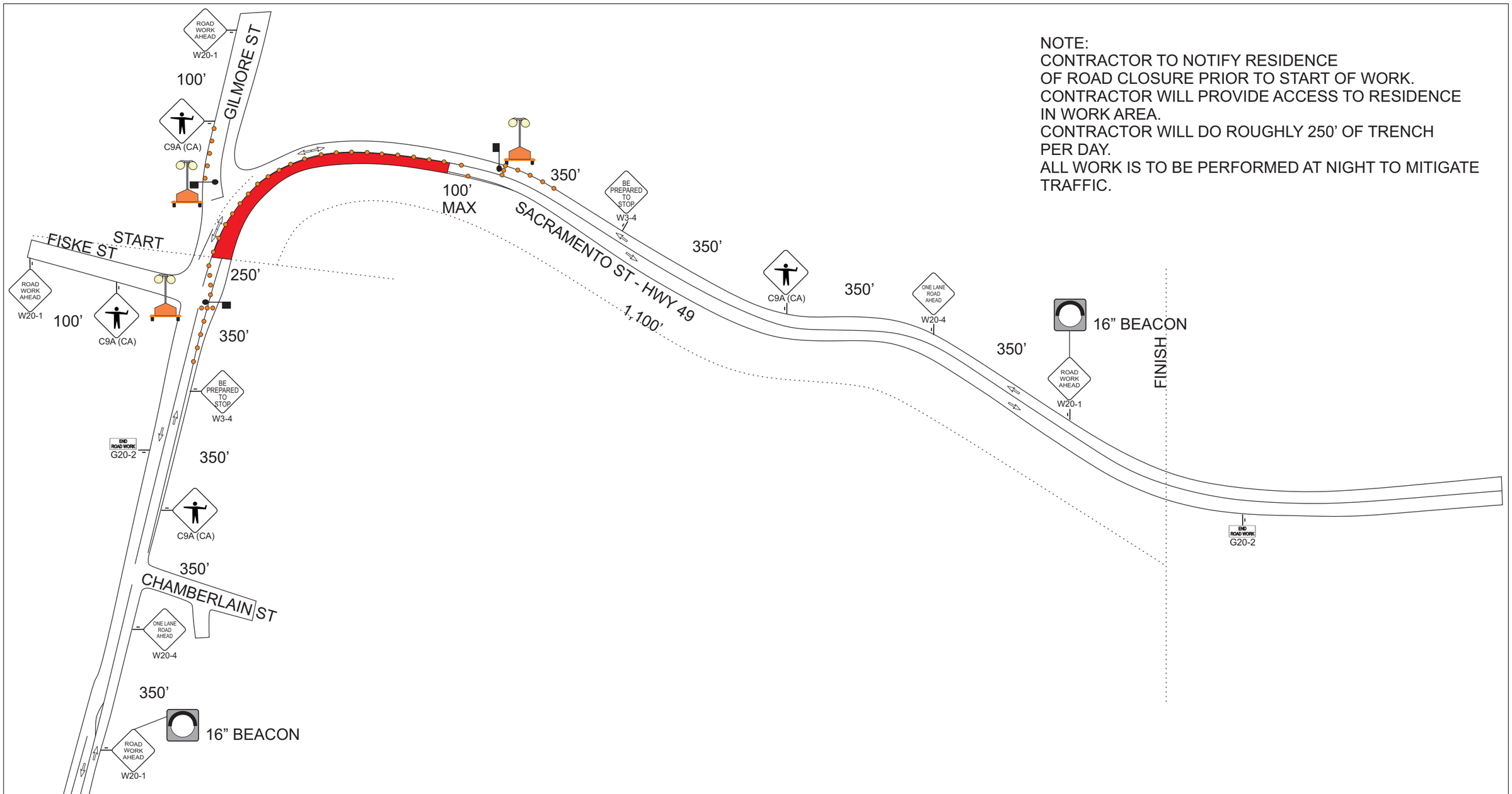
PLAN # 598

DATE: 12/7/15

ROAD WORK AHEAD 48"

ROADS:
> 50 MPH
MINIMUM 48"
SIGN PANEL

	WORK ZONE		FLAGMAN		16" FLASHING BEACON
	W20-5		W3-4		
	REFLECTIVE CONE		C9A (CA)		
	TEMPORARY C.A.S.		W20-4		
	TRAFFIC FLOW		G20-2		
	W20-1		LIGHT PLANT		



NOTE:
CONTRACTOR TO NOTIFY RESIDENCE
OF ROAD CLOSURE PRIOR TO START OF WORK.
CONTRACTOR WILL PROVIDE ACCESS TO RESIDENCE
IN WORK AREA.
CONTRACTOR WILL DO ROUGHLY 250’ OF TRENCH
PER DAY.
ALL WORK IS TO BE PERFORMED AT NIGHT TO MITIGATE
TRAFFIC.

CONSTRUCTION ZONE TRAFFIC CONTROL
STATEWIDE TRAFFIC SAFETY & SIGNS
LICENSE # 975518
JOE MURPHY
(916) 452-4855
STATE OF CALIFORNIA

LOCATION: HWY 49 AKA SACRAMENTO ST PLACERVILLE
CONTRACTOR

D&A CIVIL ENGINEERING

CONTACT: ADAM MOTIEJUNAS

PHONE # 916-933-1997

CONSTRUCTION HOURS: NIGHT WORK ONLY (PER. CALTRANS)

35 MPH
10’ OFFSET = 204’
11’ OFFSET = 225’
12’ OFFSET = 245’

PLAN # 599

DATE: 12/7/15

ROAD WORK AHEAD 48”

ROADS:
> 50 MPH
MINIMUM 48”
SIGN PANEL

	WORK ZONE		FLAGMAN		16” FLASHING BEACON
			W3-4		
•	REFLECTIVE CONE		C9A (CA)		
--	TEMPORARY C.A.S.		W20-4		
⇦	TRAFFIC FLOW		G20-2		
	W20-1		LIGHT PLANT		

STATEWIDE TRAFFIC SAFETY & SIGNS™

Statewide Traffic Safety and Signs(''Statewide") shall not be responsible for, and [DOMENICHELLI & ASSOCIATES & THE CITY OF PLACERVILLE] shall indemnify, defend and hold harmless Statewide and its agents, representatives and employees from and against, any claims, costs, damages, liabilities, expenses, demands and losses (including attorney's fees and costs and expenses) arising out of or relating to the failure of any Traffic Control Plan applicable to Statewide's work or services to comply with any local, state or federal rule, regulation, ordinance, or statute.
[DOMENICHELLI & ASSOCIATES & THE CITY OF PLACERVILLE]
agrees that the Statewide is entitled to and will rely on the written Traffic Control Plan(s) provided to Statewide by [DOMENICHELLI & ASSOCIATES & THE CITY OF PLACERVILLE] and its agents, representatives and employees in the performance of Statewide's work or services.

CONSTRUCTION ZONE TRAFFIC CONTROL
STATEWIDE TRAFFIC SAFETY & SIGNS
LICENSE # 975518
Tom Swanson
STATE OF CALIFORNIA

7920 CUCAMONGA AVE
SACRAMENTO, CA 95826
tswanson@stssi.com
916-452-4855

D&A CIVIL ENGINEERING

CONTACT:
ADAM MOTIEJUNAS (916)-933-1997

GENERAL NOTES

1. THIS PLAN SUPPLEMENTED WITH 2014 CA MUTCD.
2. THE LOCATION OF THE SIGNS SHOWN ON THE PLAN ARE GUIDELINES AND ACTUAL LOCATIONS WILL DEPEND UPON ALIGNMENT, GRADE, LOCATION OF THE STREET INTERSECTIONS, AND THE 85TH PERCENTILE.
3. ONLY ONE SIDEWALK WILL BE CLOSED AT A TIME. PEDESTRIAN AND DISABLED ACCESS TO BE MAINTAINED PER 2014 CA MUTCD STANDARD (SAC COUNTY 6-12.02 STANDARD CONSTRUCTION SPEC) SEE 2014 SAC DOT TEMPLATES TC-45 & TC-45.1
4. NOTHING ALLOWED IN BUFFER/TRANISTION AREA AT ANY TIME.
5. NOTIFY LOCAL LAW ENFORCEMENT, FIRE, AMBULANCE COMPANIES WITHIN 24 HOURS BEFORE CONSTRUCTION BEGINS. KEEP OPEN ACCESS FOR EMERGENCY VEHICLES AT ALL TIMES.
6. SIGNS AND CHANNELIZING DEVICES MUST BE RETRO REFLECTIVE OR ILLUMINATE DURING THE NIGHT. MINIMUM VIABILITY 1000'
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DEVICE SPACING TABLE (CA MUTCD 2014 EDITION TABLE 6H-4/6H-4(CA))

POSTED SPEED	FORMULA	BUFFER SPACE	MINIMUM TAPER LENGTHS									MAXIMUM CONE SPACING		SIGN SPACING (1)	LIDG (FT) (1)
			10' OFFSET			11' OFFSET			12' OFFSET						
			L	1/2 L	1/3 L	L	1/2 L	1/3 L	L	1/2 L	1/3 L		TAPER		
			MERGE	SHIFT	SHOULDER	MERGE	SHIFT	SHOULDER	MERGE	SHIFT	SHOULDER	LONG	& LIDG		
25		155'	104'	52'	35'	115'	57'	38'	125'	63'	42'	25'	13'	100' TO 200'	94'
30	L=WS2/60	200'	150'	75'	50'	165'	83'	55'	180'	90'	60'	30'	15'	120' TO 250'	113'
35		250'	204'	102'	68'	225'	112'	75'	245'	123'	82'	35'	18'	140' TO 280'	131'
40		305'	267'	133'	89'	293'	147'	98'	320'	160'	107'	40'	20'	160' TO 320'	150'
45	L=WS	360'	450'	225'	150'	495'	248'	165'	540'	270'	180'	45'	23'	360' TO 540'	169'
50		425'	500'	250'	167'	550'	275'	183'	600'	300'	200'	50'	25'	400' TO 600'	197'
55		495'	550'	275'	183'	605'	303'	202'	660'	330'	220'	50'	28'	440' TO 660'	210'
60		570'	600'	300'	200'	660'	330'	220'	720'	360'	240'	50'	30'	480' TO 720'	225'
65		645'	650'	325'	217'	715'	358'	238'	780'	390'	260'	50'	33'	520' TO 780'	244'
70		730'	700'	350'	233'	770'	385'	257'	840'	420'	280'	50'	35'	560' TO 840'	263'

LOW SPEED IS 40 MPH OR LESS
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3. ANTICIPATED SPEED

L = TAPER LENGTH
S = SPEED
W = WIDTH (OFFSET FROM PATH OF TRAVEL)

RECOMMENDED ADVANCED WARNING SIGN SPACING TABLE
(CA MUTCD 2014 EDITION TABLE 6-C1, SEE TABLE FOR ADDITIONAL INFORMATION)

ROAD TYPE	A	B	C
URBAN (LOW SPEED) 25 MPH OR LESS	100'	100'	100'
URBAN (LOW SPEED) MORE THAN 25 MPH TO 40 MPH	250'	250'	250'
URBAN (HIGH SPEED) MORE THAN 40 MPH	350'	350'	350'
RURAL	500'	500'	500'
EXPRESSWAY/FREEWAY USE 6C.04 OF 2014 MUTCD	1,000'	1,000'	1,000'

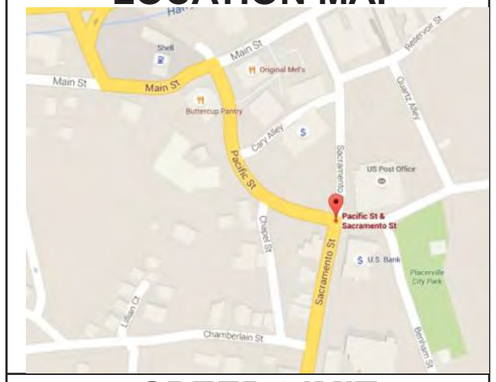
OWNER

CITY OF PLACERVILLE

ADDRESS/JOB NUMBER

SACRAMENTO ST @ PACIFIC ST, PLACERVILLE, CA
SACRAMENTO ST LINE CC EXTENSION WATERLINE REPLACEMENT.

LOCATION MAP

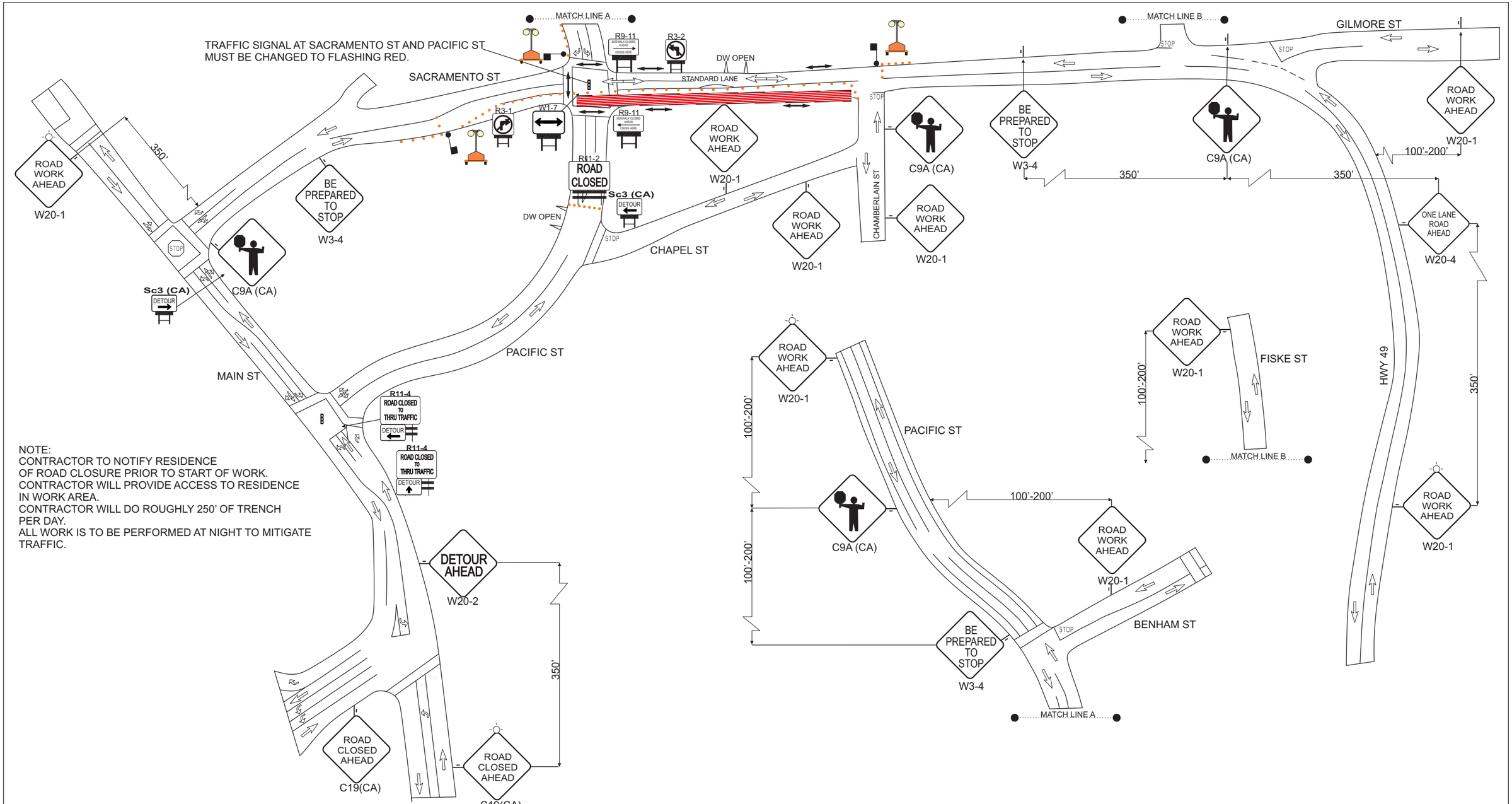


SPEED LIMIT

SPEED LIMIT
25

COMPASS





NOTE:
CONTRACTOR TO NOTIFY RESIDENCE
OF ROAD CLOSURE PRIOR TO START OF WORK.
CONTRACTOR WILL PROVIDE ACCESS TO RESIDENCE
IN WORK AREA.
CONTRACTOR WILL DO ROUGHLY 250' OF TRENCH
PER DAY.
ALL WORK IS TO BE PERFORMED AT NIGHT TO MITIGATE
TRAFFIC.

CONSTRUCTION ZONE TRAFFIC CONTROL
STATEWIDE TRAFFIC SAFETY & SIGNS
LICENSE # 975518
Tom Swanson
STATE OF CALIFORNIA

LOCATION: SACRAMENTO ST @ PACIFIC ST, PLACERVILLE, CA

CONTRACTOR

D&A CIVIL ENGINEERING

CONTACT ADAM MOTIEJUNAS

PHONE # (916)-933-1997

CONSTRUCTION HOURS: ALL WORK WILL BE DONE AT NIGHT (PER CALTRANS)

25 MPH

N E S W

PLAN # 1006

DATE: 3/21/2016

LOCATION #1

SHEET 1 OF 1

ROAD WORK AHEAD — ROADS: > 50 MPH MINIMUM 48" SIGN PANEL

	WORK ZONE	SIDEWALK CLOSED AHEAD CROSS HERE	R9-11		TYPE III BAR.	ROAD WORK AHEAD	W20-4
	LIGHT PLANT		R3-2		TYPE 1 BAR.		C9A (CA)
	REFLECTIVE CONE	DETOUR	Sc3 (CA)		FLAGMAN	BE PREPARED TO STOP	W3-4
	TEMPORARY C.A.S.	ROAD CLOSED	R11-2	ROAD WORK AHEAD	W20-1		16" FLASHING BEACON
	TRAFFIC FLOW	ROAD CLOSED TO THRU TRAFFIC	R11-4	ROAD CLOSED AHEAD	C19(CA)		R3-1
	PED/ADA		W1-7	DETOUR AHEAD	W20-2		

CITY OF PLACERVILLE, CALIFORNIA\
DEVELOPMENT SERVICES DEPARTMENT
ENGINEERING DIVISION

Pardi/Big Cut/Sacramento Street Area Waterline Relocation Project

Project No. 41109

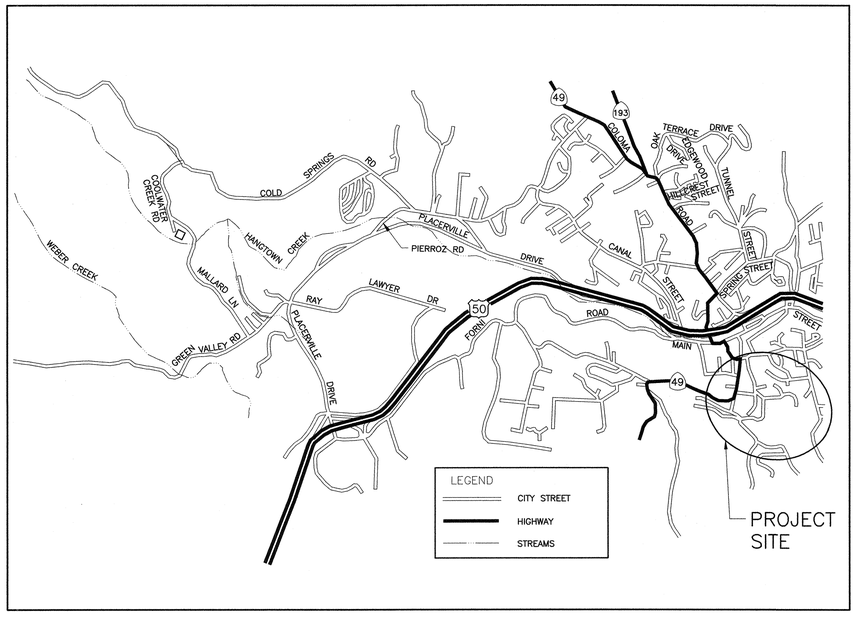
PLANS

April 25, 2016

CITY OF PLACERVILLE
PARDI WAY/BIG CUT RD./ SACRAMENTO ST.
WATERLINE REPLACEMENT PROJECT

ISSUED FOR BID

PROJECT NO. 41109
APRIL 25, 2016



LOCATION MAP
NO SCALE

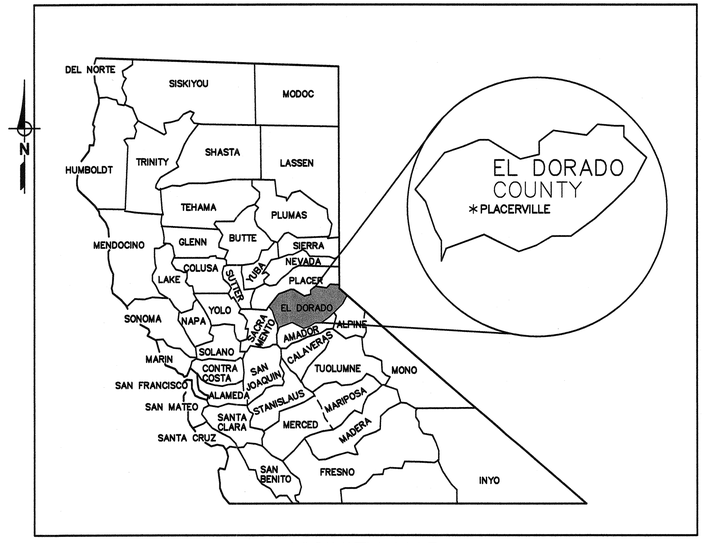
MAYOR
Trisha Wilkins

VICE-MAYOR
John Clerici

CITY COUNCIL
Mark Acuna
Patricia Borelli
Wendy Thomas

CITY MANAGER
Cleve Morris

CITY ENGINEER
Rebecca Neves, P.E.



VICINITY MAP
NO SCALE

CALL BEFORE YOU DIG

THE CONTRACTOR SHALL CALL
"UNDERGROUND SERVICE ALERT" (USA)
AT 800-227-2600 AT LEAST 2 WORKING DAYS
PRIOR TO PERFORMING ANY EXCAVATION

UTILITY REPRESENTATIVES

UTILITY	REPRESENTATIVES		PHONE
U.S.A.			1-800-612-2444
SEWER/STORM	CITY OF PLACERVILLE	PUBLIC WORKS	(530) 642-5232
WATER	CITY OF PLACERVILLE	PUBLIC WORKS	(530) 642-5232
TELEPHONE	AT&T	DARREN MORTENSEN	(530) 621-6926
GAS	PG&E	JENNIFER DONOVAN	(530) 621-7246
CABLE TV	COMCAST	JUSTIN WALLACE	(530) 292-8108

APPROVED FOR CONSTRUCTION

REBECCA NEVES
CITY ENGINEER
CITY OF PLACERVILLE

4/20/16
DATE

DRAWING INDEX

1. TITLE SHEET
2. ABBREVIATIONS & SYMBOLS
3. GENERAL NOTES
4. METER SERVICE TABLE
5. DEMOLITION & ABANDONMENT PLAN
6. OVERALL SITE PLAN
7. PLAN & PROFILE - LINE A & AA
8. PLAN & PROFILE - LINE B
9. PLAN & PROFILE - LINE C & CC
10. PLAN & PROFILE - LINE D
11. PLAN & PROFILE - LINE E
12. PLAN & PROFILE - OPTIONAL LINE CC EXTENSION
13. 4-INCH PRV DRAIN PIPE
14. DETAILS 1
15. DETAILS 2
16. DETAILS 3
17. DETAILS 4

REV	DATE	BY	DESCRIPTION

SCALE: N/A

WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

DESIGNED A.J.M
DRAWN J.A.C.
CHECKED S.M. ROGERS

DOMENICHELLI & ASSOCIATES
1101 Investment Blvd. Suite 115
El Dorado Hills, CA 95762
Ph: (916) 933-1997
Fax: (916) 933-4778

CITY OF PLACERVILLE
3101 CENTER STREET
PLACERVILLE, CA 95667
PHONE: (530) 642-5250

REGISTERED PROFESSIONAL ENGINEER
SARA M. SCHMIDT
No. C64226
Exp. 6/30/17
CIVIL
STATE OF CALIFORNIA

PARDI WAY/ BIG CUT ROAD/ SACRAMENTO STREET
WATERLINE REPLACEMENT PROJECT

TITLE SHEET

SHEET 1
1 OF 17

\\DASERVER\PROJECTS\PROJECT FILES\PLA-002 - PARDI WATER LINE\DRAWINGS\PLA-002 PARDI-01 TITLE SHEET.DWG
20160420.082020
PARDI WAY/ BIG CUT ROAD/ SACRAMENTO STREET WATERLINE REPLACEMENT PROJECT

LEGEND & SYMBOLS

- EXISTING SEWER (6"SS)
- EXISTING STORM DRAIN (10"SD)
- EXISTING POTABLE WATER (12"PW)
- NEW POTABLE WATER (12"PW)
- NEW POTABLE WATER (OVERALL SITE PLAN)
- OPTIONAL LINE CC EXTENSION
- PIPE CONTINUATION
- PIPE CONTINUATION, END VIEW
- CLEAN OUT (CO)
- POWER/TELEPHONE
- SIGN (S)
- PROPERTY LINE
- OVERHEAD ELECTRIC (OHE)
- COMMUNICATION (T)
- SEWER MANHOLE (SS)
- STORM DRAIN MANHOLE (SD)
- DRAIN INLET
- FENCE
- POINT ELEVATION (1789.6)
- SLOPE
- TREES OR SHRUBBERY
- USGS BENCHMARK
- TEST BORING LOCATION AND NO. (TB-4)
- CULVERT ENDS (IN & OUT)
- NEW FIRE HYDRANT (FH)
- EXISTING FIRE HYDRANT (FH)
- NEW WATER METER (WM)
- EXISTING WATER METER (WM)
- EXISTING EMPTY METER BOX
- MAILBOX (MB)
- LIGHT
- NEW VALVE
- PACIFIC BELL VAULT (T)
- CUT AND CAP

- DEMOLITION
- ABANDONED
- EXISTING STRUCTURE
- DRAINAGE COURSE OR FLOW LINE
- EXISTING GROUND CONTOUR (1320)
- FINISH GRADE CONTOUR (1320)
- STRUCTURAL CONTINUATION
- CONCRETE
- GROUT
- SAND
- ROAD BASE
- DRAIN GRAVEL OR GRANULAR MATERIAL
- COARSE BASE ROCK
- EARTH OR GRADE
- EARTH FILL
- RESTRAINED MECHANICAL JOINT
- FLANGED JOINT
- FLANGED COUPLING ADAPTOR
- ELECTRICAL VAULT (E)
- EXISTING VALVE
- AIR VACUUM/ AIR RELEASE VALVE
- WATER SAMPLING STATION (WSS)
- NEW BLOWOFF

SECTION & DETAIL SYMBOLS

SECTION NOTATION — X / X — SECTION CUT

DRAWING WHERE SECTION IS DRAWN

SECTION NOTATION — SECTION / SCALE: XX = XX — X / X — SECTION TITLE

DRAWING WHERE SECTION IS DRAWN

ABBREVIATIONS

AB	AGGREGATE BASE
ABAN	ABANDON
AC	ASPHALTIC CONCRETE
ADJ	ADJACENT
AGG	AGGREGATE
ANCH	ANCHOR
&	AND
ARV	AIR/VACUUM RELEASE VALVE
ASSEM	ASSEMBLY
ASTM	AMERICAN SOCIETY FOR TESTING & MATERIALS
@	AT
AVE	AVENUE
BC	BEGIN CURVE
BLDG	BUILDING
BOT	BOTTOM
BTWN	BETWEEN
BVC	BEGIN VERTICAL CURVE
CALC	CALCULATED
CFM	CUBIC FEET PER MINUTE
CFS	CUBIC FEET PER SECOND
CL	CENTERLINE
CLR	CLEAR
CJ	CONTROL JOINT
CMP	CORRUGATED METAL PIPE
CITY	CITY OF PLACERVILLE
CO	CLEANOUT
COMP	COMPACT
CONC	CONCRETE
CONT	CONTINUOUS
CPLG	COUPLING
CSP	CORRUGATED STEEL PIPE
CU YD	CUBIC YARD
CW	COLD WATER
CY	CUBIC YARDS
D	DRAIN
DB	DUCT BANK
DBL	DOUBLE
DEG	DEGREE
DEMO	DEMOLISH
DI	DROP INLET
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DISCH	DISCHARGE
DN	DOWN
DR	DIMENSION RATIO
DWG	DRAWING
DWL	DOWEL
EA	EACH
EC	END CURVE
ECC	ECCENTRIC
EF	EACH FACE
EFL	EFFLUENT
EJ	EXPANSION JOINT
ELL	ELBOW
ELEC	ELECTRICAL
ELEV	ELEVATION
EOP	EDGE OF PAVEMENT
EQUIV	EQUIVALENT
EVC	END VERTICAL CURVE
EW	EACH WAY
EX	EXISTING
EXP	EXPANSION
FCA	FLANGED COUPLING ADAPTER
FED	FEDERAL
FH	FIRE HYDRANT
FIG	FIGURE
FLEX C	FLEXIBLE CONNECTION
FLG	FLANGE/FLANGED
FNPT	FEMALE NATIONAL PIPE THREAD
FT	FOOT/FEET
FTG	FITTING
GA	NATURAL GAS
GAL	GAGE/GAUGE
GALV	GALLON
GC	GALVANIZED
GIP	GROOVED COUPLING
GPM	GALVANIZED IRON PIPE
GV	GALLONS PER MINUTE
	GATE VALVE
HGL	HYDRAULIC GRADE LINE
HP	HIGH PRESSURE
HPT	HIGH POINT
HM	HOLLOW METAL
HMA	HOT MIX ASPHALT
HORIZ	HORIZONTAL
HW	HOT WATER
HWY	HIGHWAY
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IMMED	IMMEDIATE
INIT	INITIAL
INSTR	INSTRUCTION(S)
INT	INTERIOR
L	LENGTH OR LOUVER
LBS	POUNDS
LF	LINEAL FEET
LPT	LOW POINT
LR	LONG RADIUS
LS	LUMP SUM
LT	LEFT
MATL	MATERIAL
MAX	MAXIMUM
MECH	MECHANICAL
MFG	MANUFACTURING
MG	MILLION GALLON(S)
MH	MANHOLE
MIN	MINIMUM
MJ	MECHANICAL JOINT
N/A	NOT APPLICABLE
NIC	NOT IN CONTRACT
NO	NUMBER OR NORMALLY OPEN
NPT	NATIONAL PIPE THREAD
NPW	NON-POTABLE WATER
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OF	OVERFLOW
OHE	OVERHEAD ELECTRIC
OPNG	OPENING
PE	PLAIN END
PI	POINT OF INTERSECTION
P/L	PROPERTY LINE
PNT	PAINT
POLY	POLYETHYLENE
POC	POINT ON CURVE
PP	POWER POLE
PRV	PRESSURE REDUCING VALVE
PS	PIPE SUPPORT
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PUE	PUBLIC UTILITY EASEMENT
PVC	POLYVINYL CHLORIDE
PW	POTABLE WATER
RAD	RADIUS
REPL	REPLACE
REQ'D	REQUIRED
RESIL	RESILIENT
ROW	RIGHT OF WAY
RT	RIGHT
RW	RECYCLED WATER
SCH	SCHEDULE
SD	STORM DRAIN
SEC	SECTION
SF	SQAURE FOOT
SHT	SHEET
SIM	SIMILAR
SJ	SAWED JOINT
SLP	SLOPE
SOC	SOCKET
SPEC	SPECIFICATION
SQ	SQUARE
SS	SANITARY SEWER
SSMH	SANITARY SEWER MANHOLE
STA	STATION
STD	STANDARD
STL	STEEL
SUSP	SUSPENDED
SW	SEAL WATER OR SWITCH
TEL	TELEPHONE
T&B	TOP & BOTTOM
TBM	TEMPORARY BENCH MARK
TCP	TRAFFIC CONTROL PLAN
THD	THREADED
TOC	TOP OF CONCRETE
TRANS	TRANSITION
TYP	TYPICAL
UNK	UNKNOWN
VC	VERTICAL CURVE
VERT	VERTICAL
VPI	VERTICAL POINT OF INTERSECTION
W/	WITH
WM	WATER METER
WSS	WATER SAMPLING STATION
WT	WEIGHT

DOMENICHELLI & ASSOCIATES
1101 Investment Blvd. Suite 115
El Dorado Hills, CA 95762
Ph: (916) 933-1997
Fax: (916) 933-4778

CITY OF PLACERVILLE
3101 CENTER STREET
PLACERVILLE, CA 95667
PHONE: (530) 642-5250

REGISTERED PROFESSIONAL ENGINEER — SARA M. ROGERS — 64226 — Exp. 6/30/17 — CIVIL — STATE OF CALIFORNIA

GENERAL NOTES:

1. ALL WORK SHALL BE ACCOMPLISHED TO THE SATISFACTION OF THE CITY ENGINEER OF PLACERVILLE OR THEIR AUTHORIZED REPRESENTATIVE.

2. ALL REFERENCE TO CITY SHALL MEAN THE CITY ENGINEER OF PLACERVILLE OR THEIR AUTHORIZED REPRESENTATIVE.

3. ROADWAY MATERIALS, CONSTRUCTION QUALITY AND METHODS FOR THIS PROJECT ARE SUBJECT TO THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD PLANS AND STANDARD SPECIFICATIONS. ALL WORK WILL BE SUBJECT TO INSPECTION AND APPROVAL BY THE CITY OF PLACERVILLE AND CALTRANS WHERE APPLICABLE. ALL WATER LINE CONSTRUCTION SHALL CONFORM TO THESE PLANS AND SPECIFICATIONS.

4. THE TYPES, SIZES, LOCATIONS, AND/OR DEPTHS OF EXISTING UNDERGROUND UTILITIES, AS SHOWN ON THESE IMPROVEMENT PLANS, WERE OBTAINED FROM SOURCES OF VARYING RELIABILITY. LATERALS SUCH AS GAS, STORM DRAIN AND SEWER ETC ARE NOT SHOWN ON THE PLANS, THE CONTRACTOR SHALL POTHOLE AND VERIFY FOR ACTUAL LOCATIONS AND DEPTHS. THE CONTRACTOR IS CAUTIONED THAT ONLY ACTUAL EXCAVATION WILL REVEAL THE TYPES, SIZES, LOCATIONS, AND DEPTHS OF SUCH UNDERGROUND UTILITIES. THE CITY OF PLACERVILLE AND DOMENICHELLI & ASSOCIATES CAN ASSUME NO RESPONSIBILITY FOR THE COMPLETENESS OR ACCURACY OF THE DELINEATION OF SUCH UNDERGROUND UTILITIES OR THE EXISTENCE OF ADDITIONAL BURIED OBJECTS OR UTILITIES NOT SHOWN ON THESE DRAWINGS WHICH MAY BE ENCOUNTERED. THE CONTRACTOR SHALL VERIFY TO HIS SATISFACTION THE TYPES, LOCATIONS, SIZES AND/OR DEPTH OF EXISTING UTILITIES WITHIN THE WORK AREA. ANY DISCREPANCIES BETWEEN THE PLANS AND ACTUAL EXISTING CONDITIONS DISCOVERED BY THE CONTRACTOR SHOULD BE REPORTED TO THE ENGINEER IMMEDIATELY. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL EXISTING UTILITIES AND FOR THE PROTECTION OR DAMAGE TO THEM.

5. THE CONTRACTOR SHALL HAVE A RESPONSIBLE PARTY, WHO SHALL HAVE THE AUTHORITY TO REPRESENT AND ACT FOR THE CONTRACTOR, ON THE JOB SITE DURING ALL WORKING HOURS.

6. THE CONTRACTORS ATTENTION IS DIRECTED TO THE SECTION, "LEGAL RELATIONS AND RESPONSIBILITY" OF THE STANDARD SPECIFICATIONS.

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF ALL EXISTING SURVEY MONUMENTS AND OTHER SURVEY MARKERS DURING CONSTRUCTION. ALL SUCH MONUMENTS OR MARKERS DESTROYED DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

8. ALL PHASES OF CONSTRUCTION SHALL BE INSPECTED AND APPROVED BY THE CITY OF PLACERVILLE OR ITS AUTHORIZED REPRESENTATIVE PRIOR TO PROCEEDING WITH SUBSEQUENT PHASES. ANY IMPROVEMENTS CONSTRUCTED WITHOUT INSPECTION OR CONTRARY TO INSTRUCTIONS OF THE CITY OF PLACERVILLE WILL NOT BE ACCEPTED AND WILL BE REPAIRED OR REPLACED AT THE CITY'S DISCRETION.

9. CONTRACTOR SHALL CONDUCT HIS WORK IN SUCH A MANNER AS TO NOT INTERFERE WITH OR BLOCK EXISTING DRAINAGE. MANNER OF MAINTAINING DRAINAGE SHALL BE SUBJECT TO APPROVAL OF THE CITY OF PLACERVILLE.

10. 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 ENGINEER AND THE CITY OF PLACERVILLE 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 ENGINEER OR THE CITY OF PLACERVILLE.

11. CONTRACTOR SHALL PLAN HIS WORK AND PROVIDE AND MAINTAIN AT HIS EXPENSE A MEANS OF INGRESS AND EGRESS FOR ALL PROPERTY OWNERS ALONG ANY SECTION OF THE PROJECT. HE SHALL PROVIDE ALL ADJACENT PROPERTY OWNERS A SATISFACTORY MEANS OF ACCESS TO A PUBLIC STREET AND ALLOW TRAFFIC TO AND FROM ALL PROPERTY WITHIN OR NEAR LIMITS OF PROJECT.

12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DUST CONTROL DURING CONSTRUCTION. AT LEAST ONE WATER TRUCK SHALL BE ON SITE AT ALL TIMES. ADDITIONAL EQUIPMENT MAY BE REQUIRED AS DETERMINED BY THE CITY OF PLACERVILLE.

13. THE CONTRACTOR SHALL OBTAIN AN APPROVED FUGITIVE DUST CONTROL PLAN FROM THE COUNTY OF EL DORADO ENVIRONMENTAL MANAGEMENT DEPARTMENT PRIOR TO BEGINNING OF WORK. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING A RELIABLE WATER SOURCE AND FEES FOR ITS USE. CONTRACTOR SHALL PROVIDE AND IMPLEMENT ALL NECESSARY BMPS.

14. IF THE PRESENCE OF SERPENTINE ROCK (SoF) IS DISCOVERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER, THE CITY OF PLACERVILLE, AND THE EL DORADO COUNTY DEPARTMENT OF ENVIRONMENTAL MANAGEMENT THAT SERPENTINE ROCK IS PRESENT ON THE SITE. ADDITIONALLY, THE CONTRACTOR SHALL OBTAIN AN APPROVED "ASBESTOS HAZARD MITIGATION PLAN" FROM THE DEPARTMENT OF ENVIRONMENTAL MANAGEMENT AND IMPLEMENT THE MITIGATION MEASURES IDENTIFIED THEREIN PRIOR TO CONTINUATION OF EARTHWORK IN AREAS WHERE SERPENTINE ROCK IS PRESENT.

15. THE CONTRACTOR SHALL OBTAIN AND COMPLY WITH THE PERMIT TO ENCROACH ON THE CITY ROADWAY ISSUED BY THE CITY OF PLACERVILLE ENGINEERING DIVISION.

16. ALL EXISTING MANHOLES, WATER VALVES AND METER BOXES, IN AREAS OF NEW CONSTRUCTION SHALL BE RESET TO FINISHED GRADE BY THE CONTRACTOR.

17. CLEARING AND GRUBBING SHALL CONFORM TO THE PROVISIONS OF "CLEARING AND GRUBBING" OF THE STANDARD SPECIFICATIONS. ROOTS, STUMPS, TREES, ROCKS, OR OTHER DELETERIOUS SUBSTANCES SHALL BE DISPOSED OF OFF-SITE AND IN A LAWFUL MANNER.

18. EARTHWORK SHALL CONFORM TO THE PROVISIONS OF SECTION 19 OF THE STANDARD SPECIFICATIONS. WIDENING OF EMBANKMENTS AND FLATTENING OF SLOPES WHICH RESULTS IN AN INCREASED AREA OF GRADING WILL NOT BE PERMITTED WITHOUT EXPRESSED WRITTEN APPROVAL OF THE CITY OF PLACERVILLE.

19. WHERE ANY PORTION OF THE STRUCTURE EXCAVATION FOR VERTICAL CONCRETE STRUCTURES (MANHOLES, INLETS, VAULTS, ETC.) IS WITHIN THE STREET, MATERIAL USED TO BACKFILL SUCH STRUCTURES SHALL CONFORM TO SECTION 19-3.03, "STRUCTURE BACKFILL" OF THE STANDARD SPECIFICATIONS. COMPACTION TESTS WILL BE TAKEN EVERY 2-3 FEET VERTICALLY. WHERE CAST-IN-PLACE STRUCTURES ARE PLACED AGAINST UNDISTURBED NATIVE MATERIAL, THIS REQUIREMENT SHALL NOT APPLY.

20. ALL PAVEMENT MARKINGS SHALL CONFORM TO SECTION 84-2, "THERMOPLASTIC TRAFFIC STRIPES AND PAVEMENT MARKINGS" OF THE STANDARD SPECIFICATIONS.

21. SUBGRADE- WHEN HOT MIX ASPHALT CONCRETE OR ASPHALT CONCRETE BASE IS TO BE PLACED ON THE GRADING PLANE, THE GRADING PLANE AT ANY POINT SHALL NOT VARY MORE THAN 0.05 FOOT ABOVE OR BELOW THE GRADE ESTABLISHED BY THE ENGINEER. WHEN SUBBASE OR BASE MATERIAL (OTHER THAN ASPHALT CONCRETE BASE) IS TO BE PLACE ON THE GRADING PLANE, THE GRADING PLANE AT ANY POINT SHALL NOT VARY MORE THAN 0.05 FOOT ABOVE THE GRADE ESTABLISHED BY THE ENGINEER.

22. AGGREGATE BASE SHALL CONFORM TO THE PROVISIONS OF SECTION 26, "AGGREGATE BASE" OF THE STANDARD SPECIFICATIONS FOR CLASS 2 AGGREGATE BASE, 3/4" MAXIMUM GRADATION. AGGREGATE BASE SHALL NOT BE PLACED UNTIL THE PRIOR GRADING PLANE HAS BEEN APPROVED BY THE CITY OF PLACERVILLE OR CALTRANS.

23. ASPHALT CONCRETE SHALL CONFORM TO THE PROVISIONS OF SECTION 39, "ASPHALT CONCRETE" OF THE STANDARD SPECIFICATIONS FOR TYPE B ASPHALT CONCRETE. PAVING ASPHALT SHALL BE GRADE AR-4000. AGGREGATE FOR THE TOP LIFT SHALL BE 1/2" MAXIMUM, MEDIUM GRADATION. AGGREGATE FOR LOWER LIFTS SHALL BE 3/4" MAXIMUM, MEDIUM GRADATION. LIFT THICKNESS SHALL CONFORM TO THE PROVISIONS OF SECTION 39-6, "SPREADING AND COMPACTION" OF THE STANDARD SPECIFICATIONS. ASPHALT CONCRETE SHALL NOT BE PLACED UNTIL THE PRIOR GRADING PLANE HAS BEEN APPROVED BY THE CITY OF PLACERVILLE, AND ALL UTILITIES WITHIN THE PAVED AREA HAVE BEEN PLACED, TESTED, AND APPROVED.

24. CONSTRUCTION HOURS OUTSIDE OF CALTRANS RIGHT OF WAY SHALL BE LIMITED TO MONDAY THROUGH SATURDAY, 8:00 A.M. TO 5:00 P.M., UNLESS OTHERWISE SPECIFIED. FOR HOURS OF OPERATION WITHIN CALTRANS RIGHT OF WAY SEE CALTRANS ROW NOTES THIS SHEET. ALL HEAVY EQUIPMENT AND ANY INTERNAL COMBUSTION ENGINES SHALL BE FITTED WITH ADEQUATE MUFFLERS.

25. IF UNUSUAL AMOUNTS OF STONE, BONE, OR ARTIFACTS ARE UNCOVERED DURING CONSTRUCTION, ALL WORK SHALL BE STOPPED WITHIN ONE HUNDRED FEET (100') OF THE FIND, AND A QUALIFIED ARCHAEOLOGIST CONSULTED FOR AN ON-SITE EVALUATION. IF THE BONE APPEARS TO BE HUMAN, THE EL DORADO COUNTY CORONER AND THE NATIVE AMERICAN HERITAGE COMMISSION (PHONE 916-322-7791) MUST BE CONTACTED.

26. ALL FACILITIES SHALL BE BUILT TO THE DIMENSIONS AND ELEVATIONS SHOWN ON THESE PLANS.

27. THE CONTRACTOR SHALL NOTIFY THE FOLLOWING PARTIES BY THE TIME SPECIFIED PRIOR TO BEGINNING WORK:

THE CITY OF PLACERVILLE (INSPECTION)	48 HOURS
EL DORADO COUNTY FIRE DISTRICT	48 HOURS
CALTRANS	48 HOURS

28. UPON JOB COMPLETION, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE INFORMATION TO THE CITY OF PLACERVILLE. REGARDING ANY MATERIAL CHANGES MADE DURING CONSTRUCTION AS WELL AS ANY OTHER INFORMATION WHICH IS REQUIRED TO BE SHOWN ON THE RECORD DRAWINGS BY DOT, THE CITY OF PLACERVILLE, OTHER UTILITY COMPANIES, OR OTHER RESPONSIBLE AGENCIES.

29. CONTRACTOR SHALL SCHEDULE A PRECONSTRUCTION CONFERENCE WITH INSPECTION 48 HOURS IN ADVANCE OF DOING WORK WITHIN THEIR JURISDICTION. CONSTRUCTION SHALL BE STARTED NO LATER THAN FIVE (5) DAYS AFTER THE PRECONSTRUCTION CONFERENCE.

30. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL UNDERGROUND FACILITIES AFFECTED BY THE WORK AND SHALL CONTACT UNDERGROUND SERVICES ALERT (USA) 48 HOURS PRIOR TO ANY EXCAVATION WORK FOR DETERMINATION AND LOCATION OF UNDERGROUND UTILITIES (PHONE 1-800-642-2444)

31. WHERE EXCAVATIONS FOR ANY FACILITY CONSTRUCTION EXCEED 5 FEET IN DEPTH, CONTRACTOR SHALL OBTAIN AN EXCAVATION PERMIT FORM CAL/OSHA IN SACRAMENTO (PHONE 1-916-920-6123)

PROJECT NOTES:

1. THE CONTRACTOR SHALL REPAIR OR REPLACE ALL PAVEMENT, SIDEWALK, CURB & GUTTER, UTILITIES, VEGETATION, ROADS, FENCES ETC. DAMAGED BY THE CONTRACTOR'S EQUIPMENT AND ACTIVITIES TO LIKE OR BETTER CONDITION AT NO ADDED COST TO THE CITY OF PLACERVILLE.

2. ALL WATER SERVICES SHALL RECEIVE A NEW METER (SRII) AND METER BOX UNLESS NOTED OTHERWISE. EXISTING METER SHALL BE RETURNED TO THE CITY AT A DESIGNATED LOCATION.

3. ALL VALVE BOX COVERS SHALL BE MARKED "WATER" OR AS DIRECTED BY THE CITY ENGINEER.

4. ALL REVISIONS TO THESE DRAWINGS MUST BE APPROVED IN WRITING BY THE CITY.

5. ALL EXISTING FACILITIES SHALL REMAIN IN SERVICE DURING CONSTRUCTION. ABANDONED OR REMOVED FACILITIES ONLY AFTER NEW FACILITIES HAVE BEEN INSTALLED AND ACCEPTED. CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY PIPING, PUMPS AND MATERIAL TO MAINTAIN SERVICE.

6. UNLESS OTHERWISE AUTHORIZED BY THE CITY OF PLACERVILLE, THE MAXIMUM LENGTH OF OPEN TRENCH SHALL BE THE DISTANCE NECESSARY TO ACCOMMODATE THE AMOUNT OF PIPE INSTALLED IN A SINGLE DAY.

7. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING MEANS AND DEVICES TO REMOVE AND PROPERLY DISPOSE OF ALL CONSTRUCTION, FLUSHING, AND TESTING WATER. THIS INCLUDES OBTAINING ALL NECESSARY LOW THREAT DISCHARGE PERMITS.

8. USE MEGALUG RESTRAINTS FOR ALL MJ FITTINGS IN ADDITION TO THRUST BLOCKS. THRUST BLOCKS SHALL BE DESIGNED BASED ON EID W1 WITH COMPRESSIVE STRENGTH 200PSI MINIMUM. ALL OTHER JOINTS SHALL BE RESTRAINT EAGLE LOK 900 OR APPROVED EQUAL.

9. FINAL FIRE HYDRANT LOCATIONS SHALL BE APPROVED BY THE CITY PRIOR TO INSTALLATION. FIRE HYDRANTS MAY BE RELOCATED FROM EXISTING TO PROVIDE SEPARATION FROM SEWER FACILITIES. CONTRACTOR SHALL REVIEW ALL FH LOCATIONS WITH CITY FOLLOWING POTHOLING EFFORTS.

10. CONTRACTOR SHALL POTHOLE UTILITY LINES TO VERIFY LOCATION AND DEPTH. NEW WATER MAIN SHALL BE INSTALLED OVER THE TOP OF EXISTING SEWERS AND STORM DRAIN IF POSSIBLE. WATER MAIN CROSSING SHALL COMPLY WITH SWRCB TITLE 22 STORM DRAIN AND SEWER SEPARATION REQUIREMENTS, ANY DEVIATION MUST BE APPROVED BY SWRCB.

11. SAMPLING STATION(S) SHALL BE INSTALLED AS NECESSARY TO MEET STATE DEPARTMENT OF HEALTH SERVICES REQUIREMENTS FOR COLIFORM TESTING. FINAL LOCATION OF WATER QUALITY SAMPLING STATION TO BE DETERMINED IN FIELD BY CITY ENGINEER.

12. NO NEW WATER PIPELINES SHALL BE LOCATED CLOSER THAN 1 FOOT, HORIZONTALLY OR VERTICALLY FROM ANY EXISTING UTILITIES, UNLESS SHOWN OTHERWISE ON THE PLANS.

13. CONTRACTOR TO INSTALL BLOWOFFS AT ALL DEAD ENDS.

14. THE MAXIMUM DEFLECTION AT ANY JOINT SHALL NOT EXCEED 0.5 TIMES THE MANUFACTURER'S ALLOWED DEFLECTION. FOR A FIVE DEGREE MAXIMUM MANUFACTURER'S ALLOWED DEFLECTION, TWO AND ONE HALF DEGREE MAXIMUM DEFLECTION WILL BE ALLOWED.

15. ABANDON EXISTING PIPELINE BY CUTTING AND CAPPING ENDS AS NEEDED. CONTRACTOR TO SUBMIT ABANDONMENT PLAN FOR APPROVAL. VALVES SHALL BE ABANDONED BY REMOVING OPERATING NUT, RISER, BOX, AND FILLING WITH COMPACTED TOP SOIL WHEN IN YARD AND CONCRETE WHEN IN STREET.

16. PROJECT DISTURBANCE HAS BEEN CALCULATED TO BE LESS THAN 1 ACRE AND THEREFORE DOES NOT REQUIRE COVERAGE UNDER THE GENERAL PERMIT FOR DISCHARGES OF STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITY (CONSTRUCTION GENERAL PERMIT 2009-009-DWQ). IN THE EVENT A STAGING/STOCKPILE AREA EXCEEDS THIS REQUIREMENT THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH THE CONSTRUCTION GENERAL PERMIT INCLUDING SWPPP PREPARATION, COMPLIANCE REPORTING AND ALL ASSOCIATED PERMITTING FEES INCLUDING ALL CITY STAFF TIME REQUIRED. CONTRACTOR SHALL PROVIDE PCWA WITH A DETAILED CALCULATION SHOWING COMPLIANCE WITH THE 1 ACRE PRIOR TO FINAL STAGING AREA SELECTION.

17. THE CONTRACTOR SHALL OBTAIN EXPRESSED WRITTEN CONSENT OF THE CITY OF PLACERVILLE, AND CALTRANS PRIOR TO IMPLEMENTING ANY LANE CLOSURE OR DETOUR. ALL LANE CLOSURES OR DETOURS SHALL CONFORM TO CHAPTER 5, "TRAFFIC CONTROLS FOR CONSTRUCTION AND MAINTENANCE WORK ZONES" OF THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION TRAFFIC MANUAL (LATEST EDITION).

18. IT IS THE CONTRACTORS RESPONSIBILITY TO INVESTIGATE ALL PAVEMENT CONDITIONS DURING THE BIDDING PERIOD. THE CONTRACTOR IS RESPONSIBLE TO PROTECT ROAD SURFACES TO THE FULLEST EXTENT POSSIBLE TO MINIMIZE REPAVING REQUIRED BY THE CITY AND CALTRANS.

19. CONTRACTOR SHALL NOTIFY THE CITY OF PLACERVILLE 48 HOURS IN ADVANCE WHERE AND WHEN EXISTING VALVE ADJUSTMENTS ARE NEEDED. CITY STAFF SHALL ONLY OPERATE WATER SYSTEM VALVES UNLESS DELEGATED TO THE CONTRACTOR PROVIDED THEY HAVE A D1 OPERATOR WHO HAS DEMONSTRATED TO THE CITY THEIR COMPETENCY AND UNDERSTANDING OF THE CITYS WATER SYSTEM.

20. THE CITY SHALL PERFORM THE INITIAL CONSTRUCTION STAKING ASSOCIATED WITH THE PROJECT, WHICH WILL INCLUDE THE 1) CLEARING LIMITS, 2) SLOPE STAKES, 3) WATER LINE STAKES, 4) SEWER LINE STAKES, 5) STORM DRAIN STAKES, 6) FINISHED GRADE STAKES; FIRE HYDRANT, WATER SAMPLING STATION, AND WATER METER LOCATIONS. ADDITIONAL STAKING MAY BE REQUIRED BY DOT DUE TO THE NATURE AND/OR COMPLEXITY OF THE WORK. UPON THE CONTRACTORS REVIEW OF THE CONSTRUCTION STAKING THE CITY WILL PERFORM ONE (1) ADDITIONAL CONSTRUCTION STAKING EFFECT BASED ON CONTRACTORS REQUEST AND AS AGREED TO BY THE CITY. CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING THE CONSTRUCTION STAKING AND ALL OTHER STAKING REQUIRED OR NECESSARY TO PERFORM THE CONTRACT WORK.

21. ALL GATE VALVES SHALL BE INSTALLED IN ACCORDANCE WITH DETAIL 2 AND 5 OF SHEET 16.

22. ALL REFERENCES TO THE TERM "GRADE" REFER TO FINISHED GRADE.

23. ANY ADJUSTMENTS AT GRADE FOR VALVES, MANHOLES, FACILITIES ETC WITHIN A PAVED AREA SHALL HAVE A 6" CONCRETE COLLAR WITH A 2" HMA OVERLAY.

TRAFFIC CONTROL NOTES:

1. TRAFFIC CONTROL PLAN PROVIDED IN SPECIFICATION IS SPECIFIC TO SACRAMENTO STREET (CALTRANS ROW). CONTRACTOR IS RESPONSIBLE TO PREPARE AND IMPLEMENT A TCP FOR ALL AREAS OF THE PROJECT. TCP IN CALTRANS ROW SHALL CONFORM TO APPROVED CALTRANS ENCROACHMENT PERMIT.

CALTRANS ROW NOTES:

1. THE CONTRACTOR SHALL OBTAIN AND COMPLY WITH THE CALTRANS ENCROACHMENT PERMIT FOR WORK WITHIN CALTRANS RIGHT OF WAY. CONTRACTOR SHALL APPLY FOR AN ENCROACHMENT PERMIT UTILIZING THE "PARENT" DESIGN ENCROACHMENT PERMIT REQUIRED FOR DESIGN. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FEES INCLUDING INSPECTION FEES ASSOCIATED WITH THIS PERMIT.

2. PERMITEE SHALL CONTACT DEPARTMENT REPRESENTATIVE AT LEAST SEVEN (7) WORKING DAYS PRIOR TO INITIATING WORK TO SCHEDULE A PREJOB MEETING. AT A MINIMUM THE DEPARTMENT REPRESENTATIVE MUST ATTEND THE PREJOB MEETING.

3. ALL PROPOSED LANE CLOSURES MUST BE CALLED IN TO THE TMC, (916) 859-7900 IMMEDIATELY UPON BEING PLACED, REMOVED, AND/OR CANCELED.

4. ALL TRAFFIC CONTROL SHALL BE PERFORMED BY A CONTRACTOR CURRENTLY LICENSED IN THE STATE OF CALIFORNIA AS A C31 CONTRACTOR OR EQUIVALENT.

5. ALL WORK IN CALTRANS RIGHT OF WAY SHALL BE NIGHT WORK PER CALTRANS ENCROACHMENT PERMIT.

6. ALL REFLECTIVE MARKERS (BOTTS DOTS) IN CALTRANS RIGHT OF WAY SHALL BE INSTALLED RECESSED PER CALTRANS STANDARDS.

7. PAVEMENT RESTORATION IN CALTRANS RIGHT OF WAY SHALL INCLUDE A 2" MAT GRIND AND HMA OVERLAY OVER ENTIRE LANE WIDTH FROM EDGE OF PAVEMENT TO CENTERLINE INCLUDING THE CENTERLINE STRIPING. ROAD STRIPING SHALL BE RESTORED TO CALTRANS STANDARDS.

8. PIPELINE WITHIN CALTRANS RIGHT OF WAY SHALL BE INSTALLED WITH 36" MINIMUM DEPTH OF COVER PER CALTRANS STANDARDS.

9. CALTRAINS RIGHT OF WAY INCLUDES ALL OF SACRAMENTO STREET (HWY 49).

SURVEY NOTES:

1. PROJECT SURVEY FOR LINES A, AA, B, C, CC, D & E PROVIDED BY PSOMAS ENGINEERING, MAY 18, 2011 WITH THE FOLLOWING INFORMATION:

   1.1. THE HORIZONTAL DATUM OF THIS MAPPING IS BASED ON THE NORTH AMERICAN DATUM OF 1983 (NAD83) (CORS96)(EPOCH: 2002.0000 PER THE NATIONAL GEODETIC SURVEY (NGS) ONLINE POSITIONING USER SERVICE (OPUS) BEING ON THE CALIFORNIA COORDINATE SYSTEM OF 1983 (CCS83), ZONE 2.

   1.2. THE VERTICAL DATUM IS BASED UPON U.S.G.S. BENCHMARK DESIGNATED "PLACERVILLE" WITH A N.G.V.D. 1929 ELEVATION OF 1866.18'.

   1.3. THE PURPOSE OF THIS SURVEY IS TO MERGE CLIENT-SUPPLIED AERIAL MAPPING WITH ON-GROUND FIELD SURVEY METHODS IN ORDER TO PROVIDE EXISTING TOPOGRAPHIC DATA FOR THE PURPOSE OF DESIGN WORK.

   1.4. THE GROUND SURVEYED TOPOGRAPHY SHOWN HEREON IS BASED UPON A FIELD SURVEY COMPLETED MAY 18TH, 2011 AND COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS. THE TOPOGRAPHY SHOWN HEREON OUTSIDE OF THE SCOPE OF D&A'S CURRENT PROJECT AREA IS CLIENT-SUPPLIED AERIAL MAPPING AND ALL CONTOURS OUTSIDE OF THE ON-GROUND FIELD SURVEY DATA ARE APPROXIMATE CONTOURS. D&A DOES NOT GUARANTEE THE ACCURACY OF THE DATA.

2. PROJECT SURVEY FOR LINE " CC EXTENSION" WAS PREPARED BY ALAN DIVERS, PLS PLACERVILLE, CA 2016 AND BASED ON THE FOLLOWING INFORMATION:

REV	DATE	BY	DESCRIPTION

SCALE: N/A

WARNING 0 1/2 1 — IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

DESIGNED A.J.M
DRAWN J.A.C.
CHECKED S.M. ROGERS

DOMENICHELLI & ASSOCIATES
1101 Investment Blvd. Suite 115
El Dorado Hills, CA 95762
Ph: (916) 933-1997
Fax: (916) 933-4778

CITY OF PLACERVILLE
3101 CENTER STREET
PLACERVILLE, CA 95667
PHONE: (530) 642-5250

REGISTERED PROFESSIONAL ENGINEER — MARK M. MORKNER — 64226 — Exp. 6/30/17 — CIVIL — STATE OF CALIFORNIA

PARDI WAY/ BIG CUT ROAD/ SACRAMENTO STREET WATERLINE REPLACEMENT PROJECT

GENERAL NOTES

SHEET 3

20160328.171114 \\DASERVER\PROJECTS\PROJECT FILES\PLA-002 - PARDI WATER LINE\DRAWINGS\PLA-002 PARDI-03 GENERAL NOTES.DWG

PARDI WAY/ BIG CUT ROAD/ SACRAMENTO STREET WATERLINE REPLACEMENT PROJECT

PROPERTIES IN CONTRACT

APN	STREET NUMBER	STREET NAME	CITY	STATE	ZIP	NOTES	BID ITEM	EX SERVICE TYPE	EX SERVICE SIZE	NEW SADDLE SIZE	NEW METER SIZE (IN)	METER [2]	METER REPLACEMENT [3]	PRV [4]	BFP [5]	ABAND. TYPE [6]	SERVICE TYPE [7]	CONN LOC [8]	PROPOSED IN-TRACT LINE (IN)	PROPOSED IN-TRACT LENGTH (FT)
0510703010	3181	Big Cut Road	Placerville	Ca	95667		27,29	M	NA	1"	1"	E	N	N	U	2	H	SY	1.5"	175
0510906010	3187	Big Cut Road	Placerville	Ca	95667		27,30	M	NA	1"	1"	E	N	E	U	2	H	SY	2"	350
	3231	Big Cut Road	Placerville	Ca	95667		27	NA	NA	1"	1"	D	N	N	U	NA	C	FY	NA	NA
0030712210	761	Chamberlain	Placerville	Ca	95667	5 Meters in City Cemetary. 761 is one lot with 4 homes/4 meters (See Lillian Ct properties)	27,28	M	NA	1"	1"	E	N	U	U	1	H	BY	1"	50
0030912310	762	Chamberlain	Placerville	Ca	95667		27,29	M	NA	1"	1"	E	N	U	U	1	H	BY	1.5"	160
0030912510	764	Chamberlain	Placerville	Ca	95667	Seal coat asphalt upon completing water service installation	27,29	M	NA	1"	1"	E	N	U	U	1	H	FY	1.5"	110
0030912610	766	Chamberlain	Placerville	Ca	95667	Meter located on hillside behind pine tree	27,29	M	NA	1"	1"	E	N	U	U	1	H	SY	1.5"	190
0030912910	772	Chamberlain	Placerville	Ca	95667	Served off existing 12"PW. To be relocated off Sacramento Street.	27	M	NA	1"	1"	E	N	U	U	1	H	BY	1"	70
0030912810	776	Chamberlain	Placerville	Ca	95667	2nd box silted in; possible prv	25	M	NA	1"	1"	A	N	U	U	2	H	FY	NA	NA
0030712110	779	Chamberlain	Placerville	Ca	95667		26	M	NA	1"	1"	A	N	U	U	2	H	FY	NA	NA
0030712910	791	Chamberlain	Placerville	Ca	95667	Ex meter 10' E of SW corner of house	25	M	NA	1"	1"	B	N	U	U	2	H	FY	NA	NA
0030713010	795	Chamberlain	Placerville	Ca	95667	Ex meter approx 8" E of W PL	25	M	NA	1"	1"	B	N	U	U	2	H	FY	NA	NA
0030711410	799	Chamberlain	Placerville	Ca	95667	3 existing meter boxes serving 799 Chamberlain, 803 Chamberlain and 3058 Chapel properties	27,28	M	NA	1"	1"	B	N	U	U	2	H	FY	NA	NA
0030710910	803	Chamberlain	Placerville	Ca	95667	Existing meter box located in front of 799 Chamberlian	27,28	M	NA	1"	1"	B	N	E	U	2	H	FY	NA	NA
0030911810	788-794	Chamberlain	Placerville	Ca	95667	3/4" meter with 2nd box	26	M	3/4"	1"	1"	B	N	U	U	2	H	FY	NA	NA
0030711310	3058	Chapel Street	Placerville	Ca	95667	Existing meter box location off Chamberlain St. in front of 799 Chamberlain.	25	M	NA	1"	1"	B	N	U	U	2	H	FY	NA	NA
0031822710	3133	Gilmore St	Placerville	Ca	95667	B'etween 3133 & 3137 there is a meter box with 1" wheel valve	25	M	NA	1"	1"	B	N	U	U	2	H	FY	NA	NA
0031822910	3137	Gilmore St	Placerville	Ca	95667		25	M	NA	1"	1"	B	N	U	U	2	H	FY	NA	NA
0031823010	3139	Gilmore St	Placerville	Ca	95667		25	M	NA	1"	1"	A	N	U	U	2	H	FY	NA	NA
0031822410	3143	Gilmore St	Placerville	Ca	95667		25	M	NA	1"	1"	A	N	U	U	2	H	FY	NA	NA
0031821610	3149	Gilmore St	Placerville	Ca	95667		25	M	NA	1"	1"	B	N	U	U	2	H	FY	NA	NA
0031010810	3150	Gilmore St	Placerville	Ca	95667		25	M	1-1/2"	1-1/2"	1-1/2"	F	N	U	E	2	C	SY	NA	NA
0031820710	3157	Gilmore St	Placerville	Ca	95667		25	M	NA	1"	1"	F	N	U	U	2	H	FY	NA	NA
0031824510	3161	Gilmore St	Placerville	Ca	95667		25	M	NA	1"	1"	F	N	U	U	2	H	FY	NA	NA
0030712210	3064	Lillian Ct	Placerville	Ca	95667	Served from cemetary	27,28	M	NA	1"	1"	E	N	U	U	1	H	BY	1"	100
0030712210	3068	Lillian Ct	Placerville	Ca	95667	Served from cemetary	27,29	M	NA	1"	1"	E	N	U	U	1	H	BY	1.5	150
0030712210	3072	Lillian Ct	Placerville	Ca	95667	Served from cemetary	27,29	M	NA	1"	1"	E	N	U	U	1	H	BY	1.5	200
0030712210	3076	Lillian Ct	Placerville	Ca	95667	Served from cemetary	27,30	M	NA	1"	1"	E	N	U	U	1	H	BY	2"	250
0510906210	1018	Pardi Way	Placerville	Ca	95667		26	M	NA	1"	1"	B	N	U	U	2	H	BY	NA	NA
05109068	1021	Pardi Way	Placerville	Ca	95667	Existing Booster Pump	26	M	NA	1"	1"	B	N	N	U	2	H	FY	NA	NA
0510906710	1027	Pardi Way	Placerville	Ca	95667	Property has existing booster pump, and meter box located approximately 5-ft behind stone wall.	26	M	NA	1"	1"	B	N	N	U	2	H	FY	NA	NA
0510904110	1011-1009	Pardi Way	Placerville	Ca	95667		26	M	NA	1"	1"	B	N	U	U	2	H	FY	NA	NA
0030910310	3100	Sacramento St	Placerville	Ca	95667		25	M	NA	1"	1"	C	N	U	U	2	H	FY	NA	NA
0260752210	3109	Sacramento St	Placerville	Ca	95667	2 services: 3/4" Crosses Fiske to serve 3109 Sacramento (NIC), Existing 1" meter and box on Sacramento Street to be replaced and reconnected to main.	25	M	NA	1"	1"	B		U	U	2	C	SY	NA	NA
0030911410	3110	Sacramento St	Placerville	Ca	95667		25	M	NA	1"	1"	C	N	U	U	2	H	FY	NA	NA
0030912110	3122	Sacramento St	Placerville	Ca	95667		25	M	NA	1"	1"	C	N	U	U	2	H	FY	NA	NA
00309110	3128	Sacramento St	Placerville	Ca	95667		25	M	NA	1"	1"	B	N	U	U	2	H	FY	NA	NA
00309110	3130	Sacramento St	Placerville	Ca	95667		25	M	NA	1"	1"	B	N	U	U	2	H	FY	NA	NA
0030911310	3136	Sacramento St	Placerville	Ca	95667		25	M	NA	1"	1"	B	N	U	U	2	H	FY	NA	NA
0030911310	3142	Sacramento St	Placerville	Ca	95667	Remove blank box and restore site; remove and replace existing service to 3136 Sacramento Street.	25	M	NA	1"	1"	B	N	U	U	2	H	FY	NA	NA
0030911210	3148	Sacramento St	Placerville	Ca	95667	In sidewalk 10' west of driveway	25	M	NA	1"	1"	C	N	U	U	2	H	FY	NA	NA
0030911110	3156	Sacramento St	Placerville	Ca	95667		25	M	NA	1"	1"	B	N	U	U	2	H	FY	NA	NA
0031010410	3171	Sacramento St	Placerville	Ca	95667		26	M	NA	1"	1"	A	N	U	U	2	H	FY	NA	NA
0030910810	3188	Sacramento St	Placerville	Ca	95667		27,28	M	NA	1"	1"	E	N	U	U	1	H	SY	1"	80
0031010210	3197	Sacramento St	Placerville	Ca	95667		26	M	NA	1"	1"	B	N	U	U	2	H	FY	NA	NA
0031013210, 0031013310	3211	Sacramento St	Placerville	Ca	95667	Low pressure. They have a pressure tank supplied by the City. Ex meter is 5' E of stairs, above Sacramento Street	26	M	NA	1"	1"	A	N	U	U	2	H	FY	NA	NA

OPTIONAL LINE CC EXTENSION

	800	Pacific St	Placerville	Ca	95667	Optional Service: line CC Extension. Has two meter boxes, one in sidewalk, one back of walk with PRV	38	M	3/4"	1"	1"	C	N	E	E	2	C	FY	NA	NA
	3075	Sacramento St	Placerville	Ca	95667	Optional Service: line CC Extension	38	M	1"	1"	1"	F	N	U	E	2	C	FY	NA	NA
	3080	Sacramento St	Placerville	Ca	95667	Optional Service: line CC Extension - Meter in concrete sidewalk	38	M	NA	1"	1"	C	N	U	U	2	H	FY	NA	NA
	3082	Sacramento St	Placerville	Ca	95667	Optional Service: line CC Extension. Two boxes, one empty. Don't re-install empty box.	38	M	NA	1"	1"	C	N	U	U	2	H	FY	NA	NA
0030720710	3084	Sacramento St	Placerville	Ca	95667	Optional Service: line CC Extension	38	M	NA	1"	1"	C	N	U	U	2	H	FY	NA	NA

NOT IN CONTRACT

0031010310	781	Phillips Court	Placerville	Ca	95667	Served from Phillips Ct.	NIC													
0031010310	783	Phillips Court	Placerville	Ca	95667	Served from Phillips Ct.	NIC													
0031010510	3165	Sacramento St	Placerville	Ca	95667		NIC													

LEGEND

2. Meter Location
A = Install new service line, meter box and appurtenance in existing location within hardscape area. Connect to existing intract line.
B = Install new service line, new meter and, meter box and appurtenance in existing location within unpaved area. Connect to existing intract line.
C = Existing service to be relocated from sidewalk to landscape behind back of walk. Install new service line, meter and meter box. Connect to existing intract line.
D = Install new service line, meter box, meter setter.
E = Existing service to be relocated. Install new service line, meter and meter box, in-tract line and appurtenances
F = Existing meter to remain in place, connect to new main line

3. Meter Replacement
N = Contractor to install a new Sensus SRII meter (all bronze sealed-register, positive displacement type with magnetic drive with strainer)

4. Pressure Regulating Valve (PRV)
N = Contractor to install new PRV and appurtenance to match in-tract line size
E= Contractor to reuse existing PRV and re-establish connectlon
U= No PRV required

5. Backflow Prevention Devise (BFP)
E = Existing BFP to remain
U = No BFP required

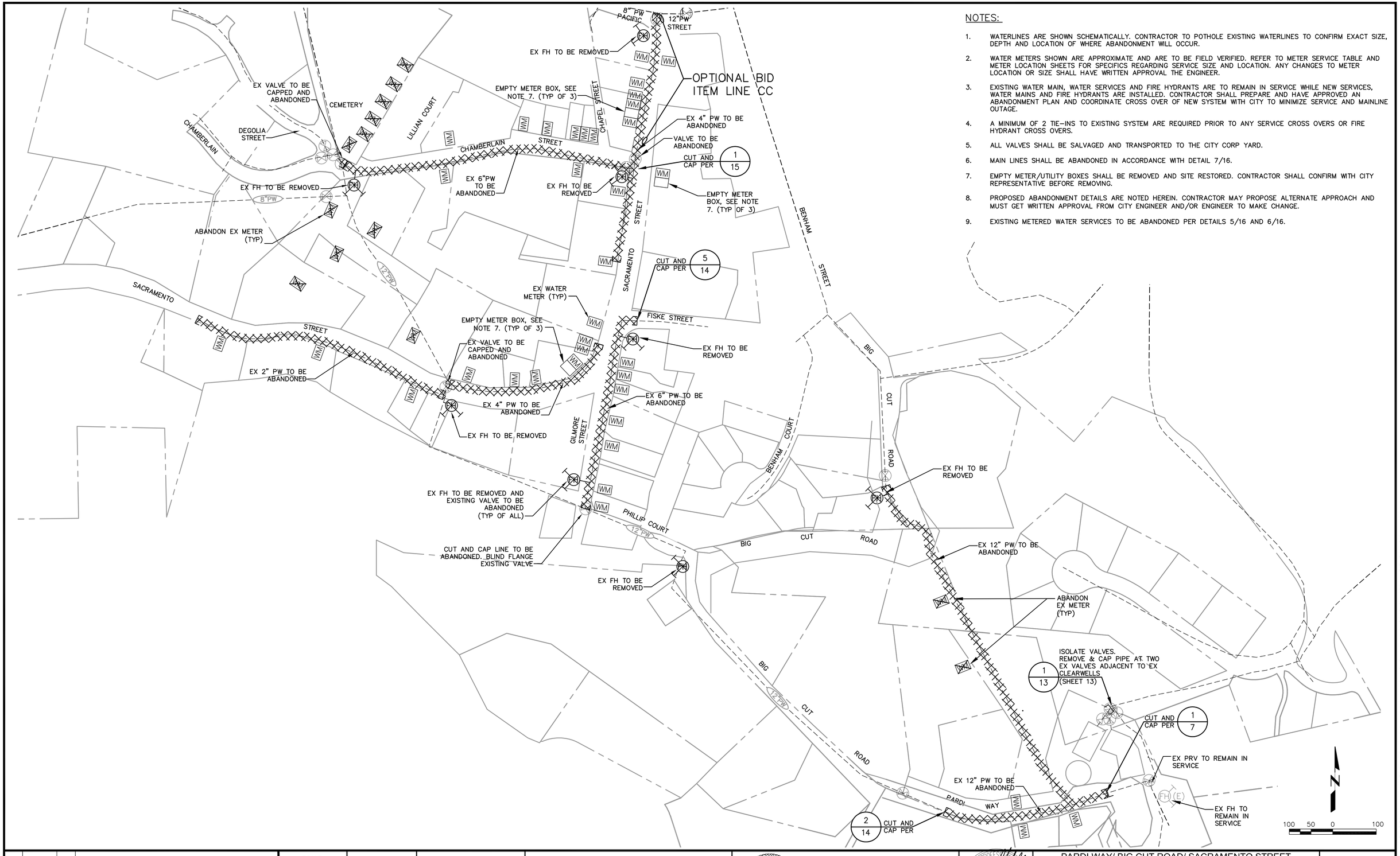
6. Service Abandonment Type
Type 1 = Existing main to remain in service, see Detail 5/16
Type 2 = Existing main to be abandoned, see Detail 6/16

7. Type of Service Connections
C = Commercial Property, Connection from new or existing watermain to meter
H = Residential property connection from new or existing watermain to meter

8. Connection to Existing Service Location
FY = Front Yard
SY = Side Yard

DOMENICHELLI & ASSOCIATES
1101 Investment Blvd. Suite 115
El Dorado Hills, CA 95762
Ph: (916) 933-1997
Fax: (916) 933-4778

CITY OF PLACERVILLE
3101 CENTER STREET
PLACERVILLE, CA 95667
PHONE: (530) 642-5250



NOTES:

1. WATERLINES ARE SHOWN SCHEMATICALLY. CONTRACTOR TO POTHOLE EXISTING WATERLINES TO CONFIRM EXACT SIZE, DEPTH AND LOCATION OF WHERE ABANDONMENT WILL OCCUR.
2. WATER METERS SHOWN ARE APPROXIMATE AND ARE TO BE FIELD VERIFIED. REFER TO METER SERVICE TABLE AND METER LOCATION SHEETS FOR SPECIFICS REGARDING SERVICE SIZE AND LOCATION. ANY CHANGES TO METER LOCATION OR SIZE SHALL HAVE WRITTEN APPROVAL THE ENGINEER.
3. EXISTING WATER MAIN, WATER SERVICES AND FIRE HYDRANTS ARE TO REMAIN IN SERVICE WHILE NEW SERVICES, WATER MAINS AND FIRE HYDRANTS ARE INSTALLED. CONTRACTOR SHALL PREPARE AND HAVE APPROVED AN ABANDONMENT PLAN AND COORDINATE CROSS OVER OF NEW SYSTEM WITH CITY TO MINIMIZE SERVICE AND MAINLINE OUTAGE.
4. A MINIMUM OF 2 TIE–INS TO EXISTING SYSTEM ARE REQUIRED PRIOR TO ANY SERVICE CROSS OVERS OR FIRE HYDRANT CROSS OVERS.
5. ALL VALVES SHALL BE SALVAGED AND TRANSPORTED TO THE CITY CORP YARD.
6. MAIN LINES SHALL BE ABANDONED IN ACCORDANCE WITH DETAIL 7/16.
7. EMPTY METER/UTILITY BOXES SHALL BE REMOVED AND SITE RESTORED. CONTRACTOR SHALL CONFIRM WITH CITY REPRESENTATIVE BEFORE REMOVING.
8. PROPOSED ABANDONMENT DETAILS ARE NOTED HEREIN. CONTRACTOR MAY PROPOSE ALTERNATE APPROACH AND MUST GET WRITTEN APPROVAL FROM CITY ENGINEER AND/OR ENGINEER TO MAKE CHANGE.
9. EXISTING METERED WATER SERVICES TO BE ABANDONED PER DETAILS 5/16 AND 6/16.

REV	DATE	BY	DESCRIPTION

SCALE: 1" = 100'

WARNING 0 1/2 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

DESIGNED A.J.M
DRAWN J.A.C.
CHECKED S.M. ROGERS

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1101 Investment Blvd. Suite 115
El Dorado Hills, CA 95762
Ph: (916) 933-1997
Fax: (916) 933-4778

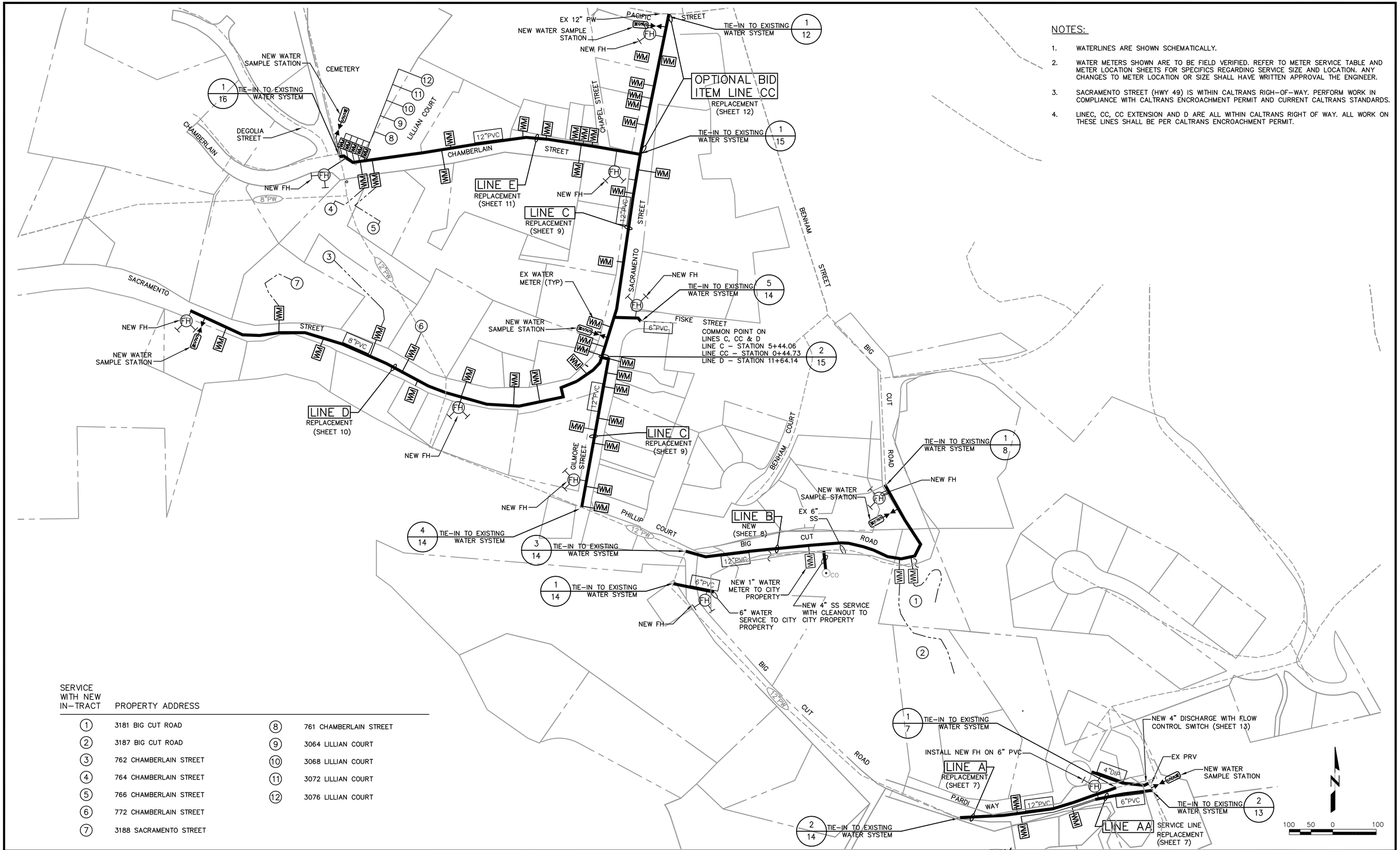
CITY OF PLACERVILLE
3101 CENTER STREET
PLACERVILLE, CA 95667
PHONE: (530) 642-5250

PARDI WAY/ BIG CUT ROAD/ SACRAMENTO STREET WATERLINE REPLACEMENT PROJECT

DEMOLITION AND ABANDONMENT PLAN

SHEET 5

\\DASERVER\PROJECTS\PROJECT FILES\PLA-002 - PARDI WATER LINE\DRAWINGS\PLA-002 PARDI-05 DEMOLITION AND ABANDONMENT PLAN.DWG
20160328.171113
PARDI WAY/ BIG CUT ROAD/ SACRAMENTO STREET WATERLINE REPLACEMENT PROJECT



NOTES:

1. WATERLINES ARE SHOWN SCHEMATICALLY.
2. WATER METERS SHOWN ARE TO BE FIELD VERIFIED. REFER TO METER SERVICE TABLE AND METER LOCATION SHEETS FOR SPECIFICS REGARDING SERVICE SIZE AND LOCATION. ANY CHANGES TO METER LOCATION OR SIZE SHALL HAVE WRITTEN APPROVAL THE ENGINEER.
3. SACRAMENTO STREET (HWY 49) IS WITHIN CALTRANS RIGH-OF-WAY. PERFORM WORK IN COMPLIANCE WITH CALTRANS ENCROACHMENT PERMIT AND CURRENT CALTRANS STANDARDS.
4. LINEC, CC, CC EXTENSION AND D ARE ALL WITHIN CALTRANS RIGHT OF WAY. ALL WORK ON THESE LINES SHALL BE PER CALTRANS ENCROACHMENT PERMIT.

SERVICE WITH NEW IN-TRACT | PROPERTY ADDRESS

1	3181 BIG CUT ROAD	8	761 CHAMBERLAIN STREET
2	3187 BIG CUT ROAD	9	3064 LILLIAN COURT
3	762 CHAMBERLAIN STREET	10	3068 LILLIAN COURT
4	764 CHAMBERLAIN STREET	11	3072 LILLIAN COURT
5	766 CHAMBERLAIN STREET	12	3076 LILLIAN COURT
6	772 CHAMBERLAIN STREET		
7	3188 SACRAMENTO STREET		

REV	DATE	BY	DESCRIPTION

SCALE: 1" = 100'

WARNING 0 1/2 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

DESIGNED A.J.M
DRAWN J.A.C.
CHECKED S.M. ROGERS

DOMENICHELLI & ASSOCIATES
1101 Investment Blvd. Suite 115
El Dorado Hills, CA 95762
Ph: (916) 933-1997
Fax: (916) 933-4778

CITY OF PLACERVILLE
3101 CENTER STREET
PLACERVILLE, CA 95667
PHONE: (530) 642-5250

SHERRI M. ROGERS No. 64226 Exp. 6/30/17 CIVIL STATE OF CALIFORNIA

PARDI WAY/ BIG CUT ROAD/ SACRAMENTO STREET WATERLINE REPLACEMENT PROJECT

OVERALL SITE PLAN

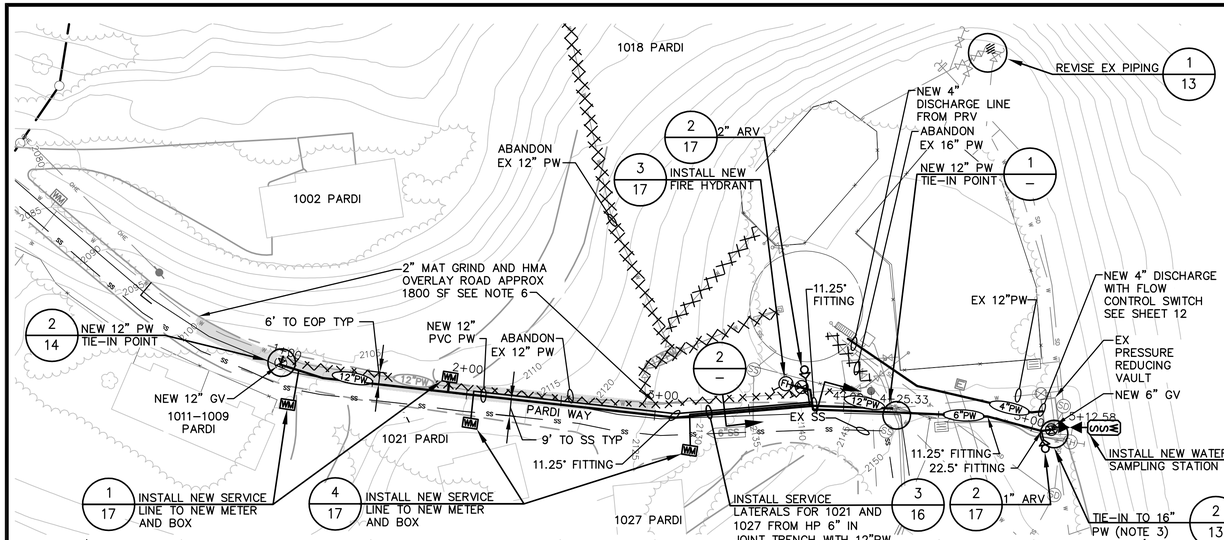
SHEET 6

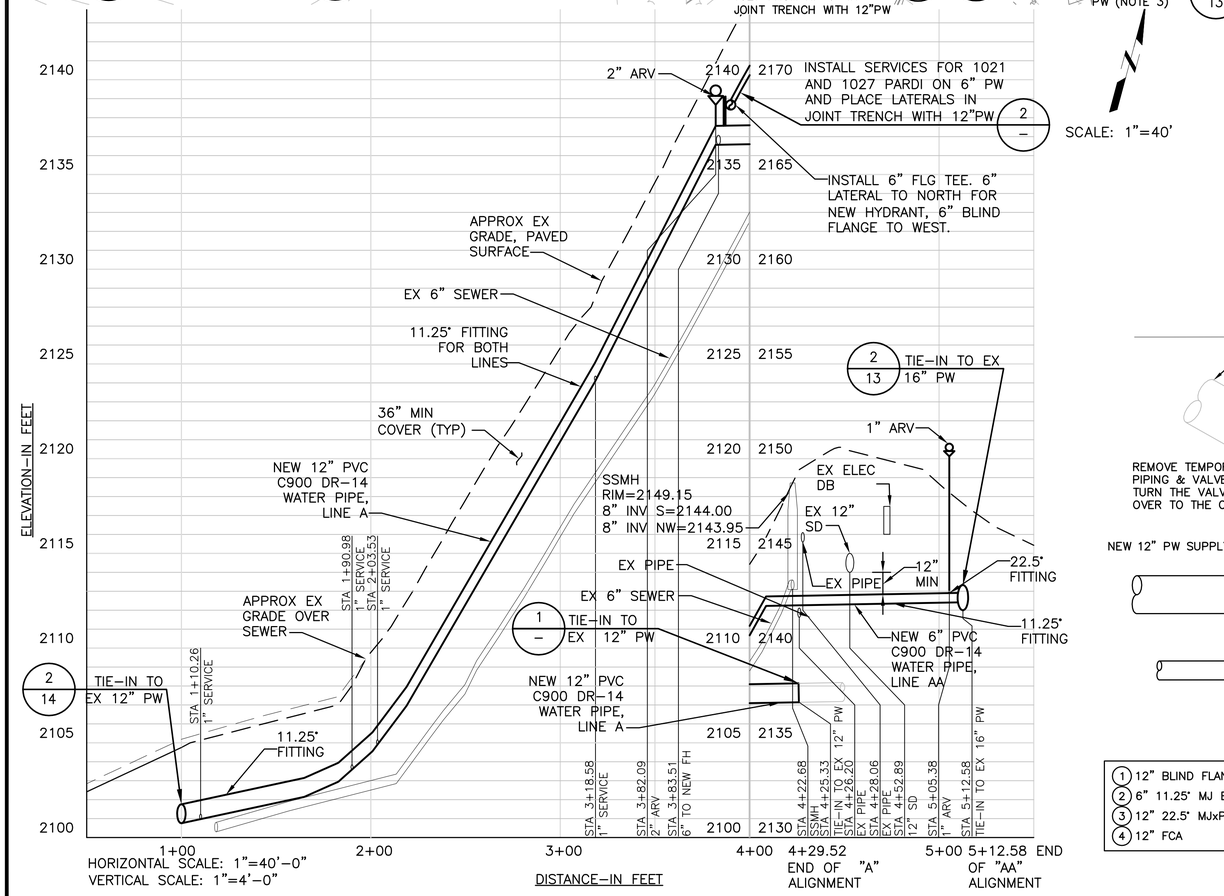
6 OF 17

\\DASERVER\PROJECTS\PROJECT FILES\PLA-002 - PARDI WATER LINE\DRAWINGS\PLA-002 PARDI-06 OVERALL SITE PLAN.DWG

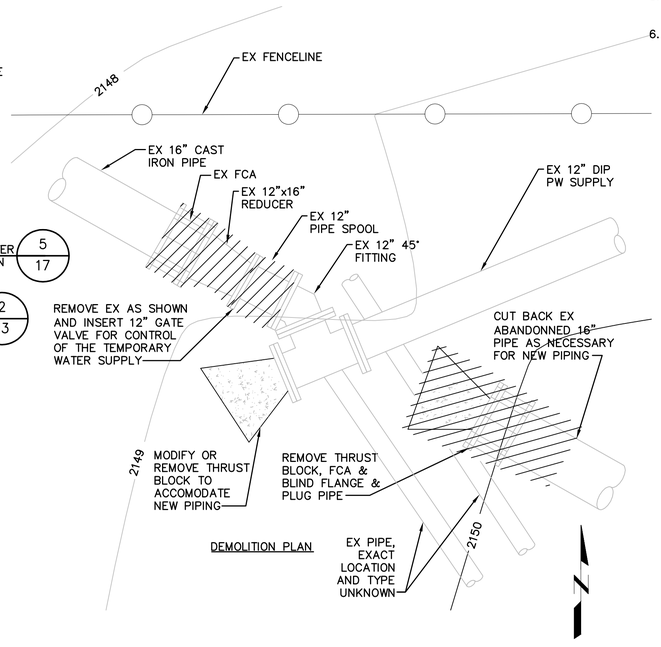
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PARDI WAY/ BIG CUT ROAD/ SACRAMENTO STREET WATERLINE REPLACEMENT PROJECT

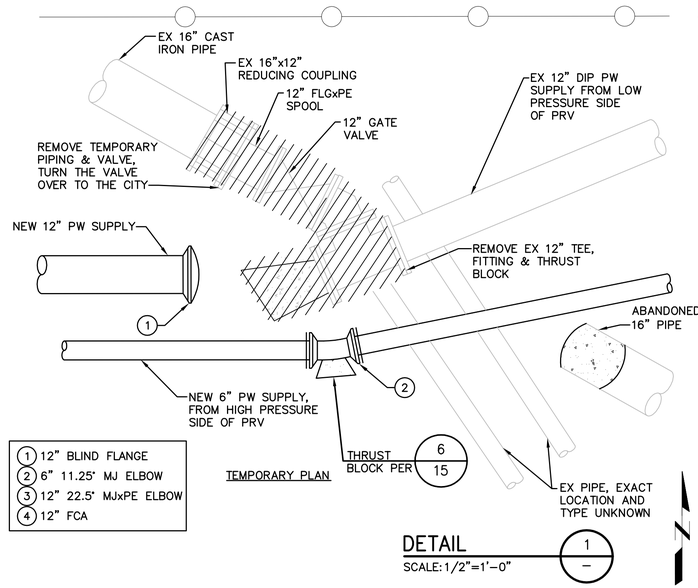




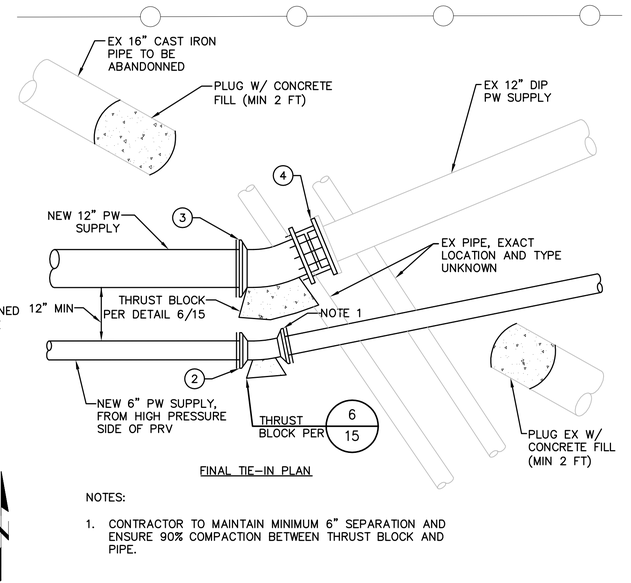
SCALE: 1"=40'



DEMOLITION PLAN



TEMPORARY PLAN



FINAL TIE–IN PLAN

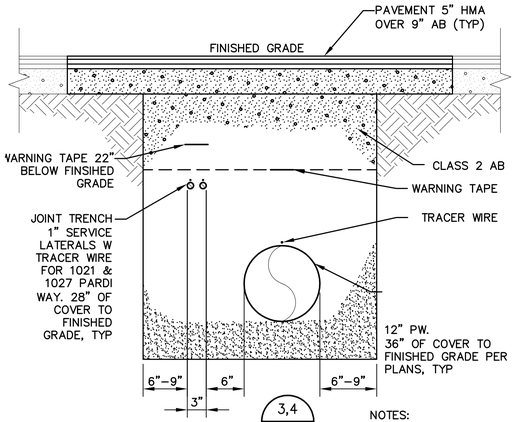
NOTES:

1. CONTRACTOR TO MAINTAIN MINIMUM 6" SEPARATION AND ENSURE 90% COMPACTION BETWEEN THRUST BLOCK AND PIPE.

DETAIL 1/– SCALE: 1/2"=1'–0"

NOTES:

1. SEE SHEET 13 FOR 1:20 SCALE VIEW OF WORK TO BE COMPLETED AT TREATMENT PLANT.
2. INSTALL NEW PIPING, METER AND METER BOX AT SAME LOCATION AS EX WATER METERS PER DETAIL AT ALL LOCATIONS ON THE NEW WATER SERVICE ALIGNMENT.
3. NEW 6" PW SHALL CONNECT TO THE EXISTING 16" PIPE ON THE HIGH PRESSURE SIDE OF THE PRV, ADD A GATE VALVE AND VALVE BOX ON THE 6" PIPE NEAR THE CONNECTION.
4. 1021 AND 1027 PARDI ARE TO BE SERVED FROM THE NEW 6" LINE. CONTRACTOR TO INSTALL A PRESSURE REGULATING VALVE AT EACH SERVICE, REFER TO DETAIL 4/17, REFER TO TRENCH DETAIL 2/–
5. THE 6" AND 12" POTABLE WATERLINES WILL BE IN THE SAME TRENCH BETWEEN STATIONS INDICATED IN PROFILE, REFER TO DETAIL 3/16
6. CONTRACTOR SHALL 2" MAT GRIND EXISTING PAVEMENT OVER TRENCH FROM STA 3+00 TO 0+50 ROAD CENTERLINE TO NORTH EDGE OF PAVEMENT. PLACE 2" HMA PAVEMENT OVER MAT GRIND AREA IN ACCORDANCE WITH SPECIFICATIONS. AREA SHOWN IS APPROXIMATE. CONTRACTOR SHALL COORDINATE WITH THE CITY ON THE EXACT LIMITS OF PAVEMENT AND STRIPING.



NOTES:

1. SEE DETAIL 3,4/16 FOR ALL OTHER DIMENSIONING, MATERIALS AND CLEARANCES.

DETAIL 2/– SCALE: NTS

PARDI WAY/ BIG CUT ROAD/ SACRAMENTO STREET WATERLINE REPLACEMENT PROJECT

\\DASERVER\PROJECTS\PROJECT FILES\PLA-002 - PARDI WATER LINE\DRAWINGS\PLA-002 PARDI-07 P&P LINE A.DWG

20160419.152649

REV	DATE	BY	DESCRIPTION

SCALE: N/A

WARNING 0 1/2 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

DESIGNED A.J.M
DRAWN J.A.C.
CHECKED S.M. ROGERS

DOMENICHELLI & ASSOCIATES
1101 Investment Blvd. Suite 115
El Dorado Hills, CA 95762
Ph: (916) 933–1997
Fax: (916) 933–4778

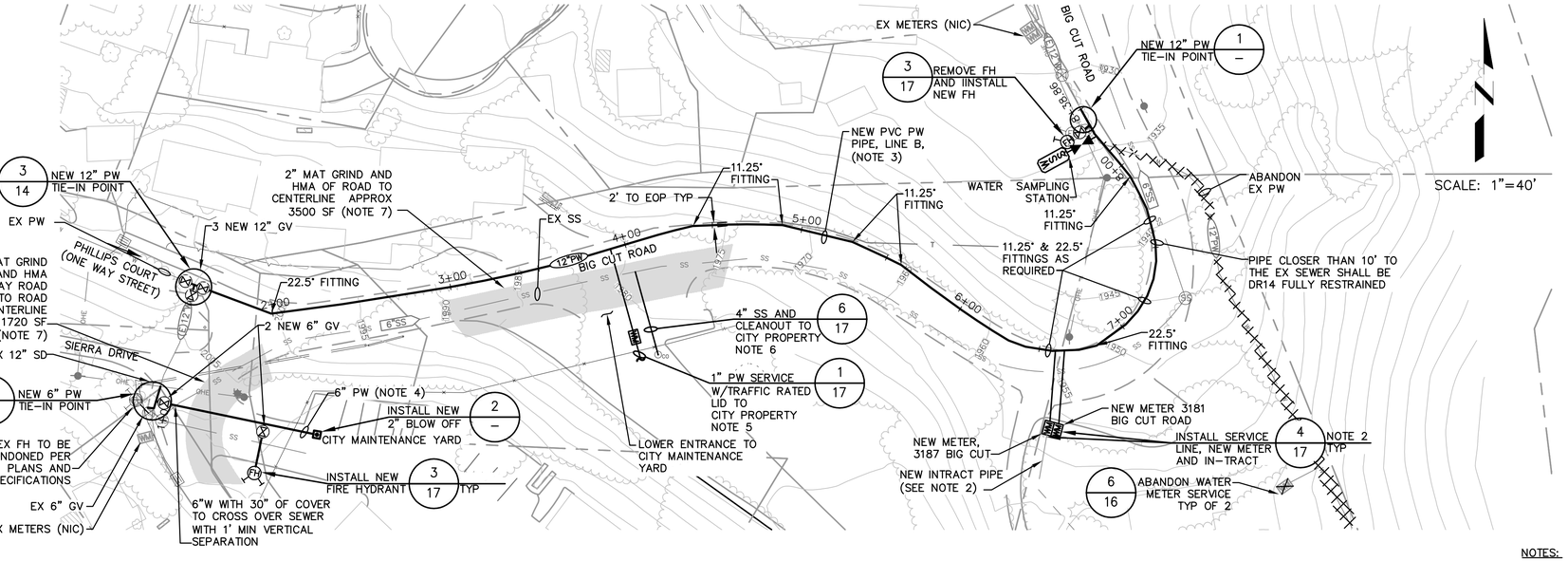
CITY OF PLACERVILLE
3101 CENTER STREET
PLACERVILLE, CA 95667
PHONE: (530) 642-5250

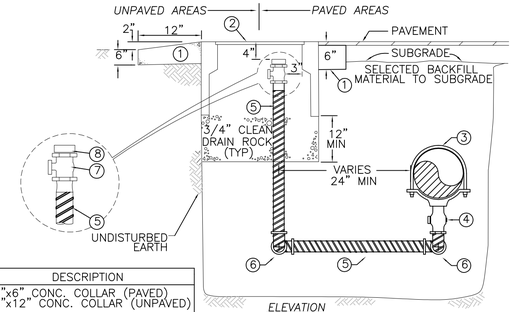
REGISTERED PROFESSIONAL ENGINEER SARA M. ROGERS 64226 Exp. 6/30/17 CIVIL STATE OF CALIFORNIA

PARDI WAY/ BIG CUT ROAD/ SACRAMENTO STREET WATERLINE REPLACEMENT PROJECT

PLAN & PROFILE - LINE A & AA
STA 1+00 - 5+12.58

SHEET 7
7 OF 17





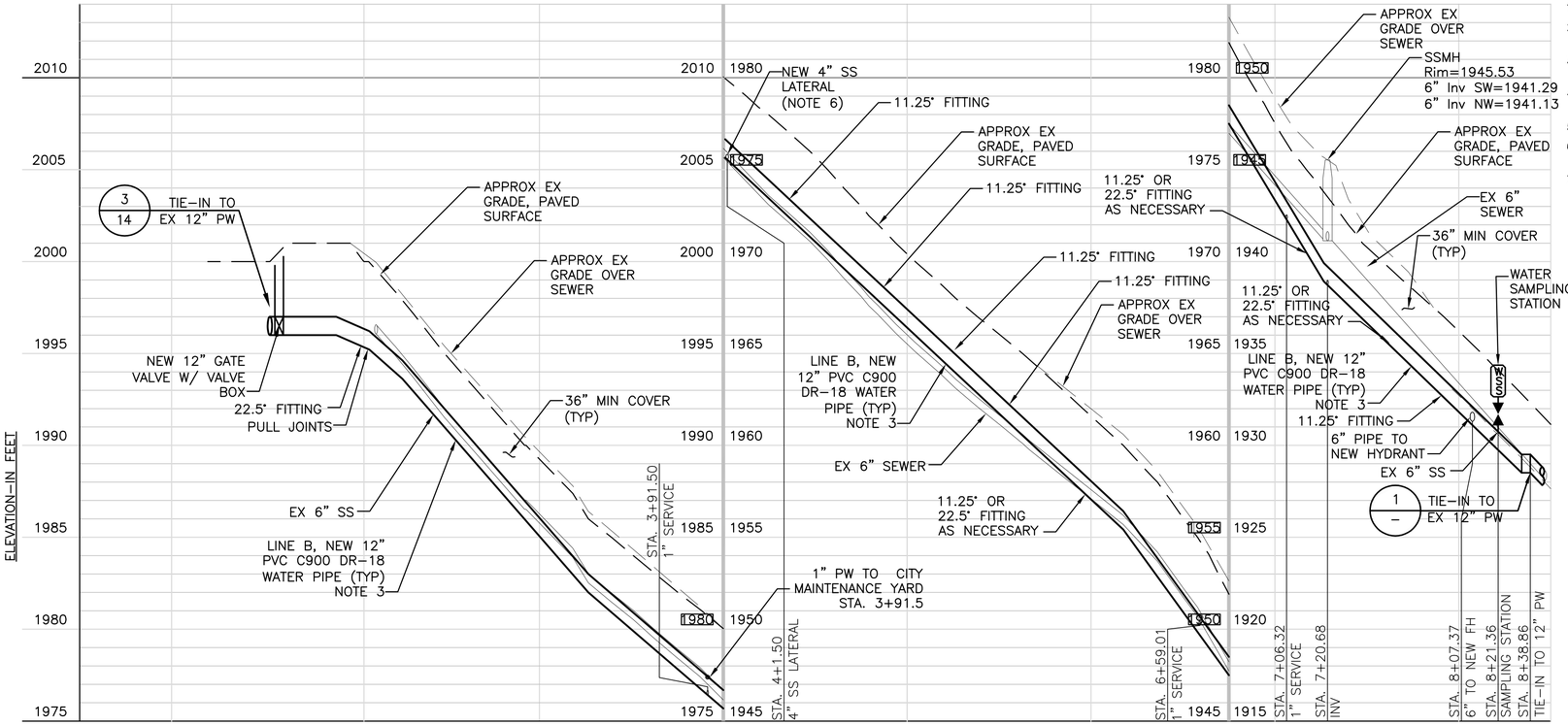
ITEM	DESCRIPTION
1	6"x6" CONC. COLLAR (PAVED) 6"x12" CONC. COLLAR (UNPAVED)
2	PRECAST CONCRETE METER BOX WITH STEEL COVER
3	2" SERVICE SADDLE, AWWA I.P.T.
4	2" CORPORATION STOP, AWWA I.P. INLET x FIP OUTLET
5	2" SCHEDULE 40 BRASS OR COPPER TUBING TYPE K, DOUBLE WRAPPED WITH 10 MIL. PVC TAPE
6	"SWING JOINT" 2" 90° ELL & 2" STREET 90°, AS REQUIRED
7	CURB STOP W/ LOCKWING-FIP x FIP
8	2" BRASS PLUG

CONSTRUCTION NOTES

1. 2" BLOW-OFFS TO BE INSTALLED ON 8" MAINS AND SMALLER. FOR MAINS LARGER THAN 8", BLOW-OFF SIZE SHALL BE NOTED ON PLAN AND PROFILE.
2. BOXES FOR BLOW-OFF ASSEMBLY SHALL BE INSTALLED BEHIND CURB OR BACK OF WALK. BOXES CANNOT BE INSTALLED IN ROADWAY.
3. SERVICE SADDLE SHALL NOT BE INSTALLED WITHIN 36" OF VALVE, JOINT OR FITTING.

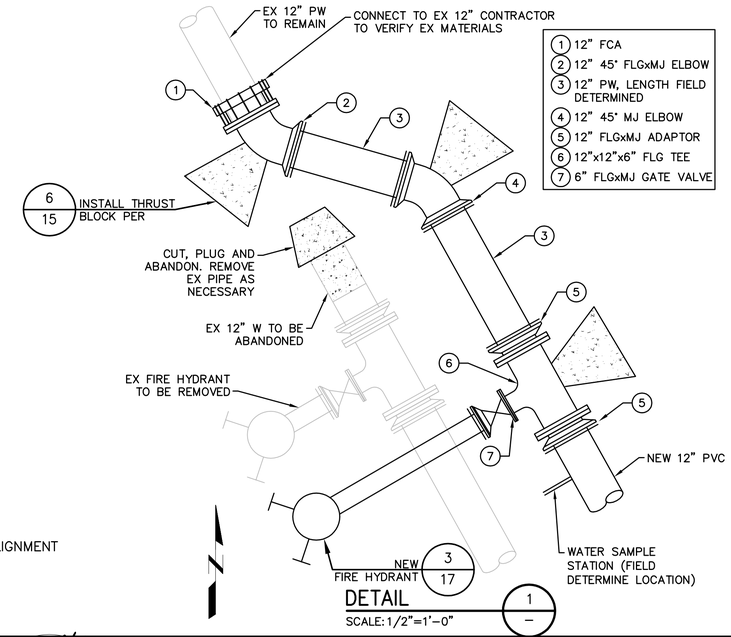
2" BLOWOFF DETAIL 2/-

NOT TO SCALE



NOTES:

1. INSTALL NEW PIPING AND NEW WATER METER PER PLANS AND SPECIFICATIONS.
2. AT 3181 AND 3187 BIG CUT ROAD. FINAL METER LOCATION TO BE DETERMINED IN THE FIELD BY THE ENGINEER. REFER TO METER LOCATION SHEETS. RESTORE SITE IN KIND OR BETTER.
3. MAINTAIN 10' CLEAR BETWEEN WATER AND SEWER PIPES. PIPE CLOSER THAN 10' TO THE EX SEWER SHALL BE DR14 FULLY RESTRAINED.
4. INSTALL NEW 6" POTABLE WATER INTO CITY MAINTENANCE YARD, PAST THE ENTRANCE GATE. PROVIDE 2" BLOWOFF WITH BOX AT END OF LINE PER DETAIL 2/8.
5. CONTRACTOR TO COORDINATE WITH CITY ON FINAL LOCATION OF WATER SERVICE BOX PLACEMENT.
6. SEWER LATERAL ASSUMED TO BE 150-FEET. CONTRACTOR TO COORDINATE WITH CITY ON FINAL LOCATION OF SEWER CONNECTION AND TERMINATION BEFORE BEGINNING WORK.
7. CONTRACTOR SHALL 2" MAT GRIND THE PAVED AREAS SHOWN AND PLACE 2" HMA PAVEMENT IN ACCORDANCE WITH THE SPECIFICATIONS. SQUARE FOOT AREAS CALLED OUT ARE APPROXIMATE. CONTRACTOR SHALL COORDINATE WITH THE CITY ON THE EXACT LIMITS OF PAVEMENT AND STRIPING.



DETAIL 1/-

SCALE: 1/2"=1'-0"

REV	DATE	BY	DESCRIPTION

SCALE: N/A

WARNING 0 1/2 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

DESIGNED A.J.M
DRAWN J.A.C.
CHECKED S.M. ROGERS

DOMENICHELLI & ASSOCIATES
1101 Investment Blvd. Suite 115
El Dorado Hills, CA 95762
Ph: (916) 933-1997
Fax: (916) 933-4778

CITY OF PLACERVILLE
3101 CENTER STREET
PLACERVILLE, CA 95667
PHONE: (530) 642-5250

PARDI WAY/ BIG CUT ROAD/ SACRAMENTO STREET WATERLINE REPLACEMENT PROJECT

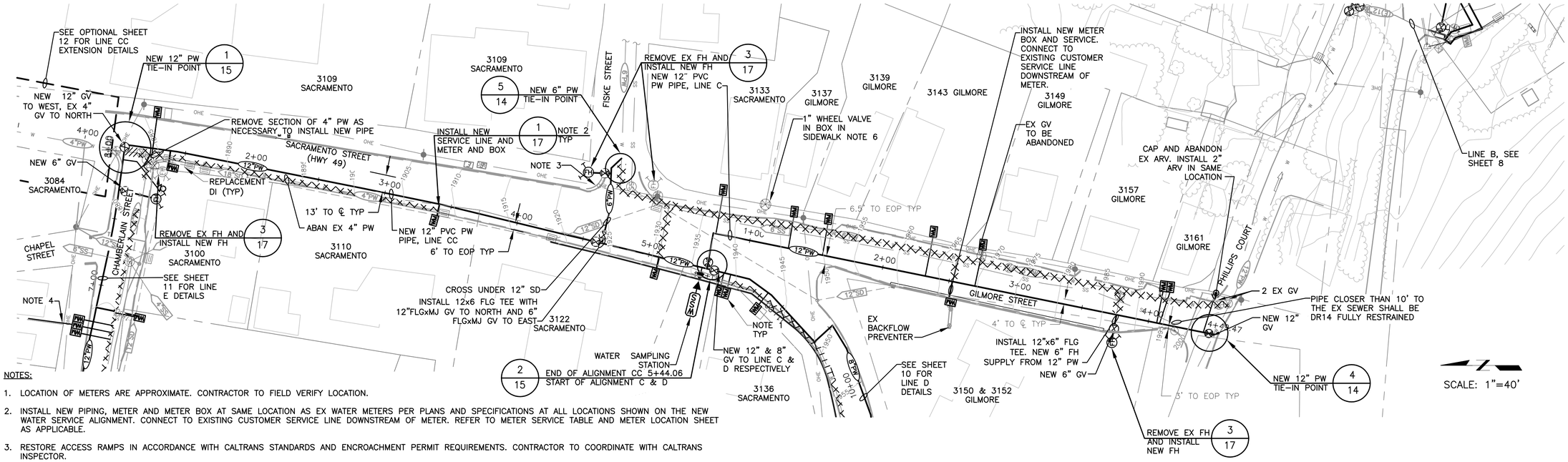
PLAN & PROFILE - LINE B
STA 1+00 - 8+38.86

SHEET 8
8 OF 17

\\DASERVER\PROJECTS\PROJECT FILES\PLA-002 - PARDI WATER LINE\DRAWINGS\PLA-002 PARDI-08 P&P LINE B.DWG

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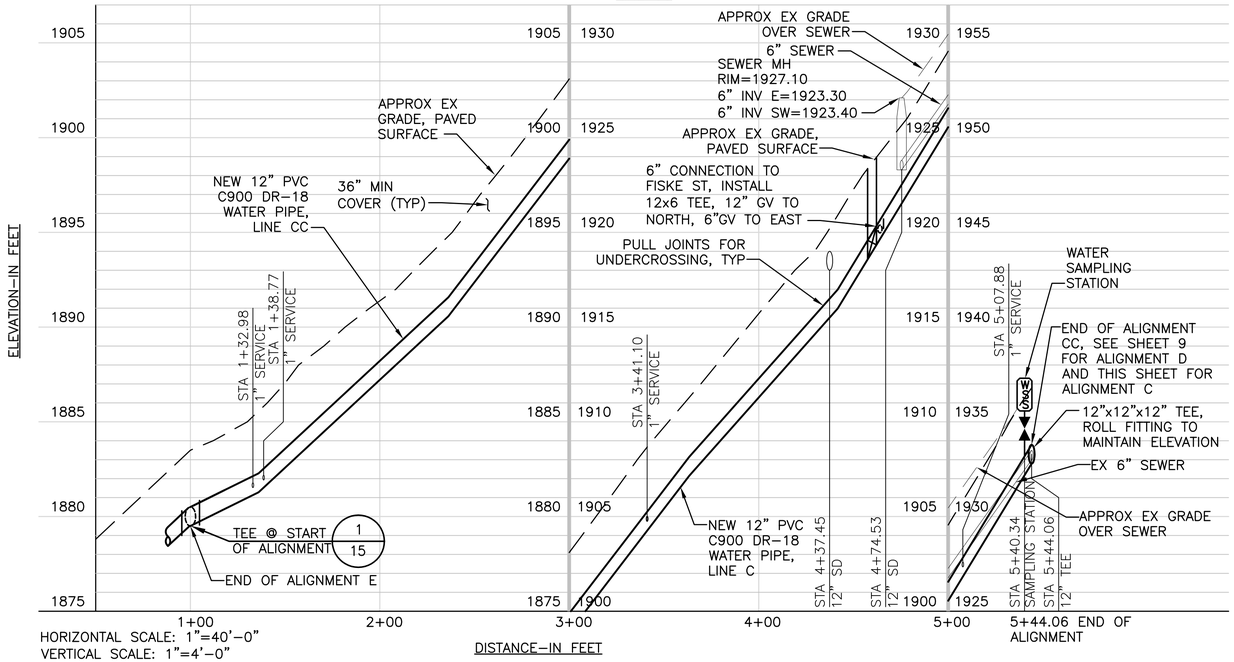
PARDI WAY/ BIG CUT ROAD/ SACRAMENTO STREET WATERLINE REPLACEMENT PROJECT



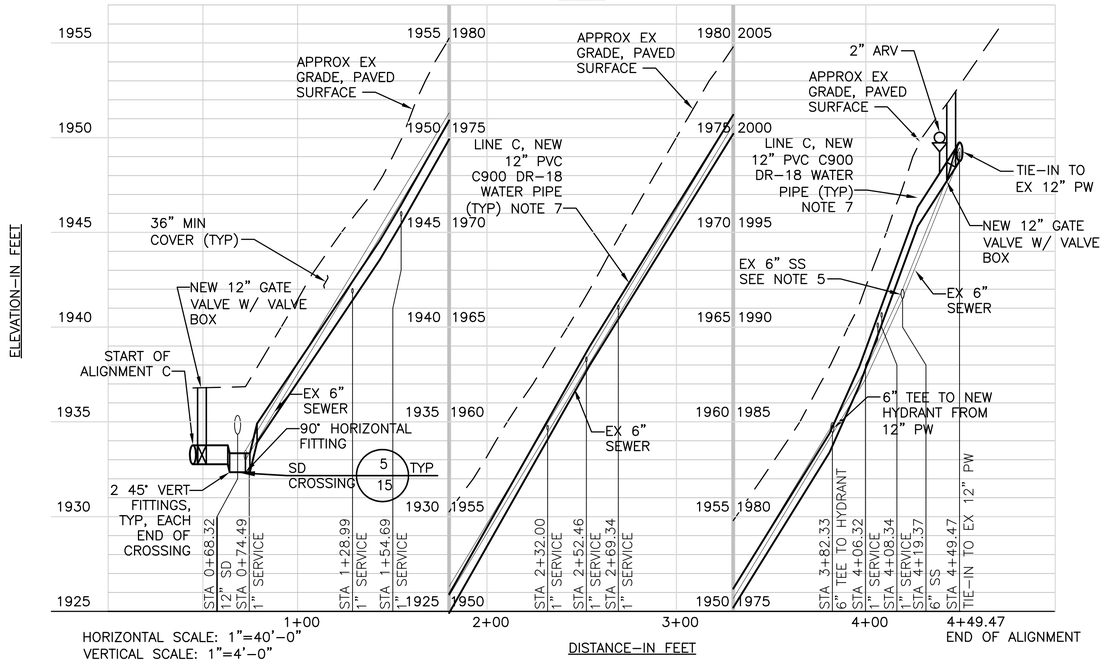
NOTES:

1. LOCATION OF METERS ARE APPROXIMATE. CONTRACTOR TO FIELD VERIFY LOCATION.
2. INSTALL NEW PIPING, METER AND METER BOX AT SAME LOCATION AS EX WATER METERS PER PLANS AND SPECIFICATIONS AT ALL LOCATIONS SHOWN ON THE NEW WATER SERVICE ALIGNMENT. CONNECT TO EXISTING CUSTOMER SERVICE LINE DOWNSTREAM OF METER. REFER TO METER SERVICE TABLE AND METER LOCATION SHEET AS APPLICABLE.
3. RESTORE ACCESS RAMPS IN ACCORDANCE WITH CALTRANS STANDARDS AND ENCROACHMENT PERMIT REQUIREMENTS. CONTRACTOR TO COORDINATE WITH CALTRANS INSPECTOR.
4. EX METER BANK SERVES 803, 799 CHAMBERLAIN AND 3085 CHAPEL STREET. CONNECT TO EX IN-TRACT LINE. SEE LINE "E" SHEET 11.
5. MAINTAIN 1-FT VERTICAL SEPARATION ABOVE SEWER LINE.
6. CONTRACTOR TO VERIFY WITH CITY IF LINE NEEDS TO BE RECONNECTED TO NEW MAIN.
7. MAINTAIN 10' CLEAR BETWEEN WATER AND SEWER PIPES. PIPE CLOSER THAN 10' TO THE EX SEWER SHALL BE DR14 FULLY RESTRAINED.
8. CONTRACTOR SHALL 2" MAT GRIND AND PLACE 2" HMA PAVEMENT OVER THE TRENCH TO ROAD CENTERLINE (INCLUDING CENTERLINE STRIP) WORK SHALL BE IN ACCORDANCE WITH THE CALTRANS ENCROACHMENT PERMIT AND STANDARD SPECIFICATIONS.

LINE CC



LINE C



\\DASERVER\PROJECTS\PROJECT FILES\PLA-002 - PARDI WATER LINE\DRAWINGS\PLA-002 PARDI-09 P&P LINE C.DWG

20160420.095802

REV	DATE	BY	DESCRIPTION

SCALE: N/A

WARNING 0 1/2 1 — IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

DESIGNED A.J.M
DRAWN J.A.C.
CHECKED S.M. ROGERS

DOMENICHELLI & ASSOCIATES
1101 Investment Blvd. Suite 115
El Dorado Hills, CA 95762
Ph: (916) 933-1997
Fax: (916) 933-4778

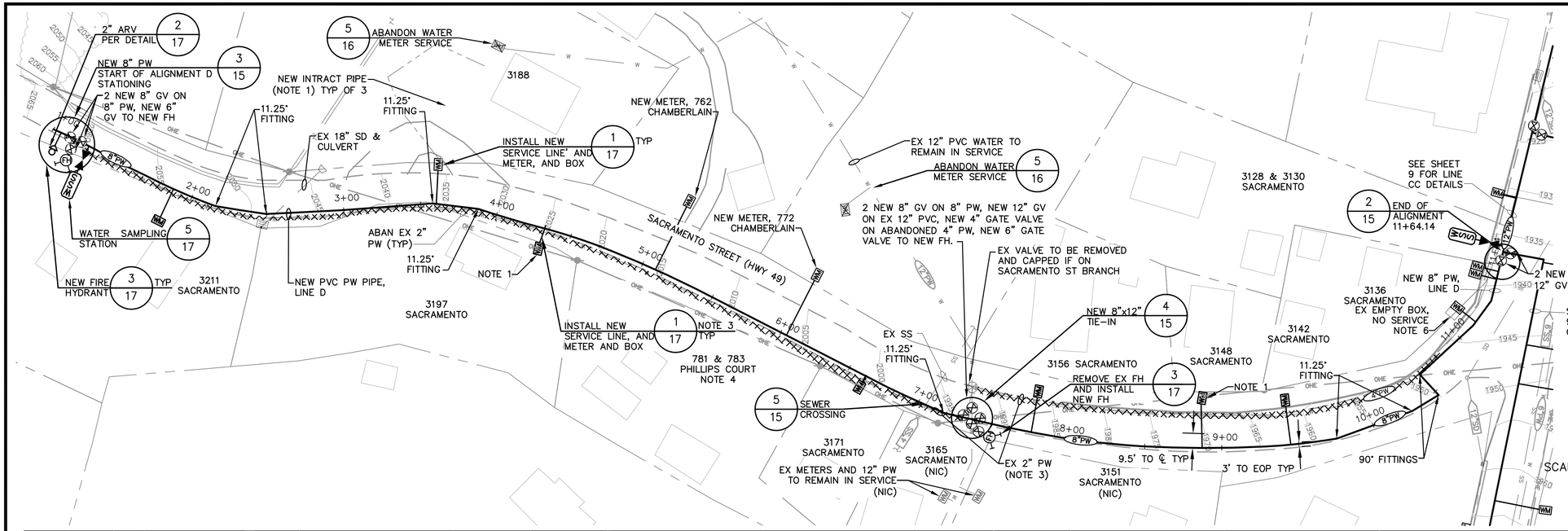
CITY OF PLACERVILLE
3101 CENTER STREET
PLACERVILLE, CA 95667
PHONE: (530) 642-5250

PROFESSIONAL ENGINEER — SARA M. MCDONNELL — No. C 74226 — Exp. 6/30/17 — CIVIL — STATE OF CALIFORNIA

PARDI WAY/ BIG CUT ROAD/ SACRAMENTO STREET WATERLINE REPLACEMENT PROJECT

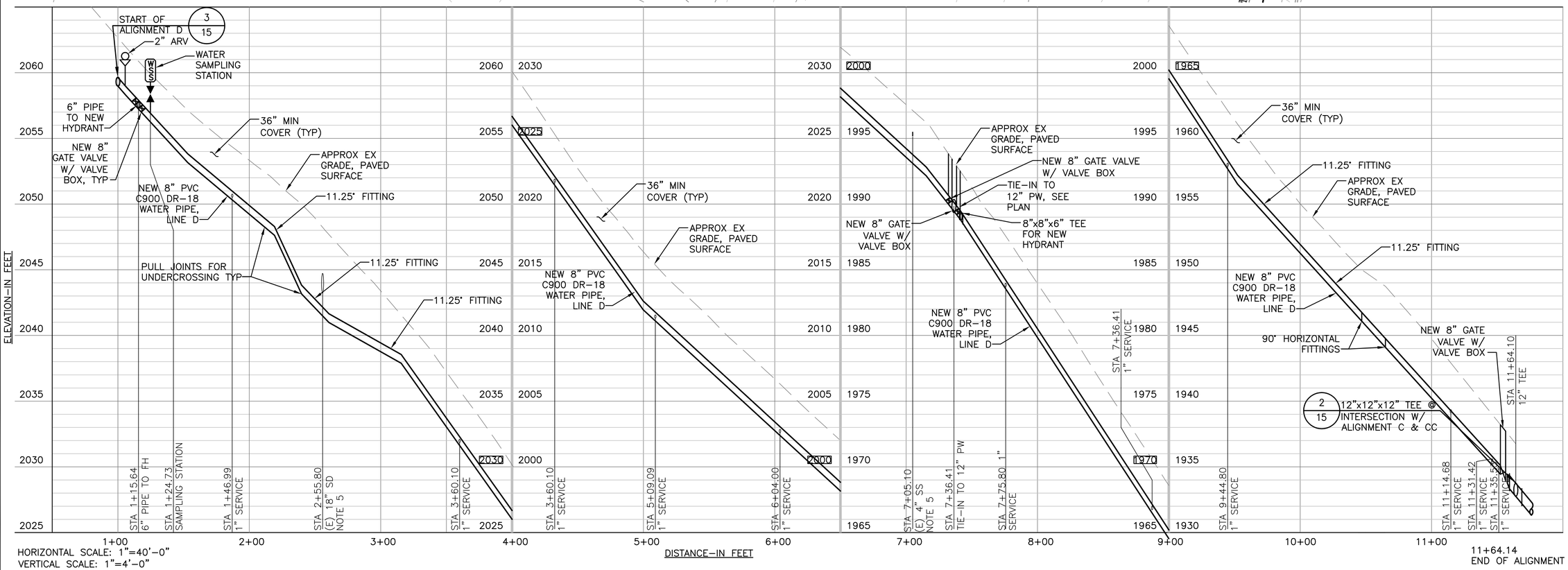
PLAN & PROFILE - LINE C & CC
STA 1+00 - 5+44.06
STA 0+44.73 - 4+49.47

SHEET 9



NOTES:

1. LOCATION OF THIS METER IS UNKNOWN. VERIFY LOCATION IN THE FIELD. ALL OTHER LOCATIONS OF METERS ARE APPROXIMATE, CONTRACTOR TO FIELD VERIFY. REFER TO METER SERVICE TABLE AND METER LOCATION SHEETS.
2. INSTALL NEW PIPING, METER AND METER BOX AT SAME LOCATION AS EX WATER METERS PER DETAIL AT ALL LOCATIONS ON THE NEW WATER SERVICE ALIGNMENT.
3. THE SIZE OF THE EX POTABLE WATER PIPE ON SACRAMENTO STREET IS UNCONFIRMED. CONTRACTOR SHALL POTHOLE TO CONFIRM SIZE, LOCATION AND MATERIAL.
4. WATER SERVICES TO 781 & 783 PHILIPS COURT ARE ASSUMED TO BE SERVED OFF MAIN IN PHILLIPS COURT. CONTRACTOR TO COORDINATE WITH CITY AND CONFIRM CONNECTION BEFORE ABANDONING 2" MAIN.
5. CENTER 20-FT PIPE SECTION OF DR-14 UNDER SEWER LINE.
6. EMPTY BOX NOT TO BE REINSTALLED. REMOVE AND RESTORE SITE.
7. CONTRACTOR SHALL 2" MAT GRIND AND PLACE 2" HMA PAVEMENT OVER THE TRENCH FROM EDGE-OF-PAVEMENT TO ROAD CENTERLINE (INCLUDING CENTERLINE STRIPE) WORK SHALL BE IN ACCORDANCE WITH THE CALTRANS ENCROACHMENT PERMIT AND STANDARD SPECIFICATIONS



REV	DATE	BY	DESCRIPTION

SCALE: N/A

WARNING 0 1/2 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

DESIGNED A.J.M
DRAWN J.A.C.
CHECKED S.M. ROGERS

DOMENICHELLI & ASSOCIATES
1101 Investment Blvd. Suite 115
El Dorado Hills, CA 95762
Ph: (916) 933-1997
Fax: (916) 933-4778

CITY OF PLACERVILLE
3101 CENTER STREET
PLACERVILLE, CA 95667
PHONE: (530) 642-5250

SARA M. ROGERS No. C64226 Exp. 6/30/17 CIVIL STATE OF CALIFORNIA REGISTERED PROFESSIONAL ENGINEER

PARDI WAY/ BIG CUT ROAD/ SACRAMENTO STREET WATERLINE REPLACEMENT PROJECT

PLAN & PROFILE - LINE D
STA 1+00 - 11+64.14

SHEET 10
10 OF 17

\\DASERVER\PROJECTS\PROJECT FILES\PLA-002 - PARDI WATER LINE\DRAWINGS\PLA-002 PARDI-10 P&P LINE D.DWG

20160419.152305

PARDI WAY/ BIG CUT ROAD/ SACRAMENTO STREET WATERLINE REPLACEMENT PROJECT

CONTRACTOR TO POTHOLE EX FH TO DETERMINE HOW IT IS SUPPLIED. CONTRACTOR TO VERIFY WITH CITY IF RECONNECTION OR ABANDONMENT WILL BE NECESSARY.

5/17 NEW WATER SAMPLING STATION

NEW 12" GV, EX 6" GV, EX 8" GV

CITY CEMETERY

CONNECT TO EXISTING INTRACT SEE NOTE 5

3064–3076 LILLIAN COURT (NOTE 5)

761 CHAMBERLAIN

LILLIAN COURT

779 CHAMBERLAIN NOTE 3 TYP

INSTALL NEW SERVICE LINE, METER, AND BOX 1/17 NOTE 4 TYP

791 CHAMBERLAIN NOTE 3

NEW PW PIPE, LINE D (NOTE 6)

11.25° FITTING

1' TO EOP TYP

795 CHAMBERLAIN

799 CHAMBERLAIN

803 CHAMBERLAIN

CHAPEL STREET

METER AND INTRACT SERVE 3058 CHAPEL STREET

3084 SACRAMENTO

SACRAMENTO STREET (RT. 49)

OPTIONAL LINE CC EXTENSION. SEE SHEET 12

NEW 12" PW TIE–IN POINT 1/15 NOTE 2

NEW 12" GV TO WEST EX 4" GV TO NORTH

EX 4" GV, 2 EX 6" GV TO BE ABANDONED

REMOVE EX FH AND, INSTALL NEW FH 3/17 NOTE 7

NOTE 1 1/16 NEW 12" PW TIE–IN POINT

EX 6" GV, EX 8" GV

45° FITTING

ABAN EX 6" PW

CHAMBERLAIN STREET

ABANDON EX 6" PW

3/17 REMOVE EX FH AND INSTALL NEW FH

NEW METER, 766 CHAMBERLAIN

INSTALL NEW METER 1/17 TYP

NEW METER, 764 CHAMBERLAIN (NOTE 9)

SANITARY SEWER CLEAN OUT

788–794 CHAMBERLAIN

NOTE 8 5/15 SEWER CROSSING

NEW 12" PW PIPE, LINE CC

EX 8" PW

750 CHAMBERLAIN (NIC)

NEW INTRACT PIPE (NOTE 3) TYP OF 7

776 CHAMBERLAIN

766 CHAMBERLAIN

2/17 INSTALL NEW 2" ARV

3100 SACRAMENTO

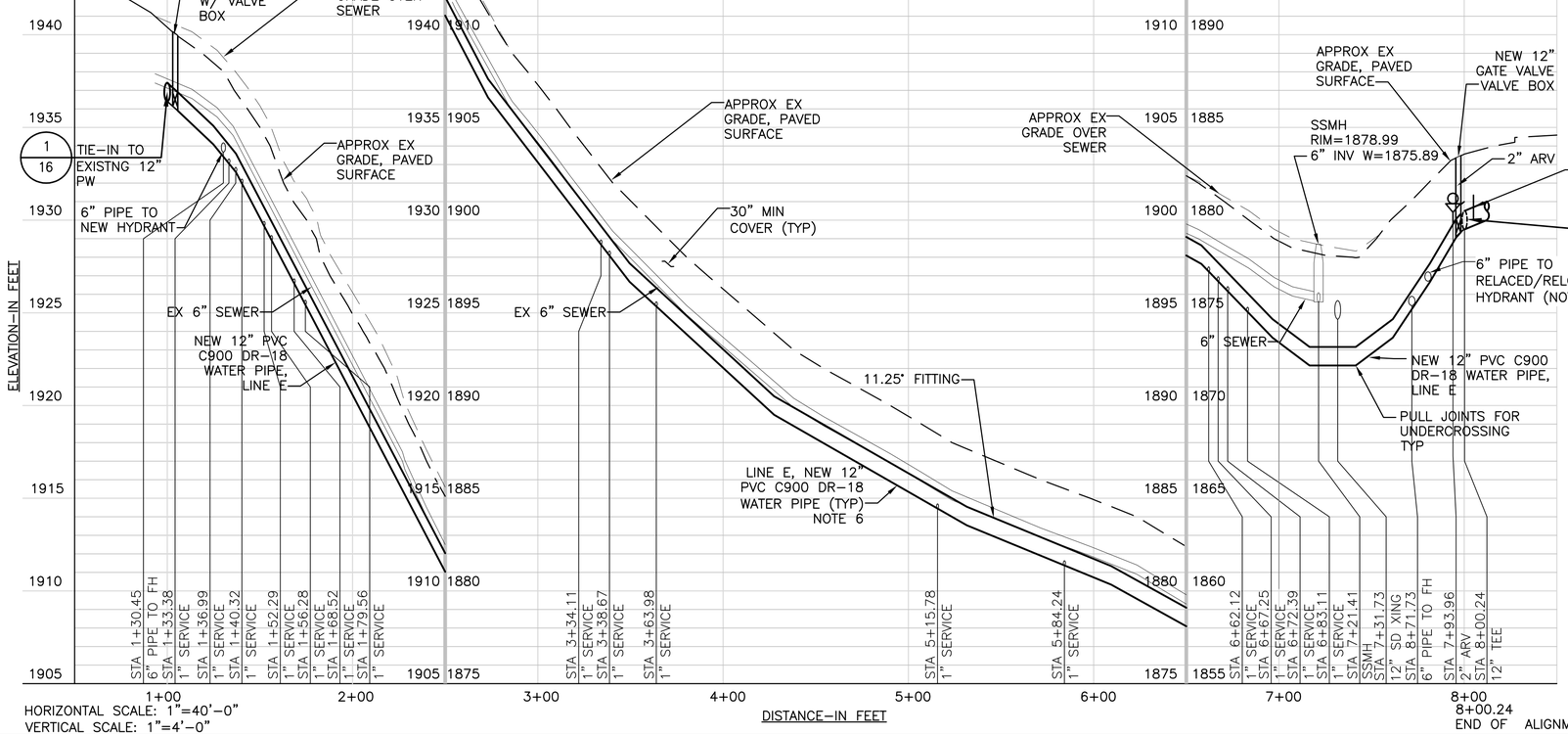
EX 12" PW TO REMAIN IN SERVICE

764 CHAMBERLAIN

ABANDON WATER METER SERVICE TYP OF 7, SEE SHEET 5 5/16

NOTES:

1. THE EXACT CONFIGURATION OF THE EX VALVING IS UNDETERMINED. THE CONTRACTOR SHALL POTHOLE TO VERIFY VALVE ARRANGEMENT AND THE ENGINEER SHALL DETERMINE FINAL TIE–IN POINT FOR THE NEW 12" POTABLE WATER PIPE.
2. THE 12" POTABLE WATER PIPE, LINE "D", IS PART OF THIS PROJECT. LINE "E" WILL TIE–IN TO LINE "D" IF IT HAS BEEN INSTALLED PER DETAIL.
3. METER LOCATIONS ARE APPROXIMATE. REFER TO METER SERVICE TABLE AND METER LOCATION SHEET.
4. INSTALL NEW PIPING, METER AND METER BOX AT SAME LOCATION AS EX WATER METERS PER DETAIL AT ALL LOCATIONS ON THE NEW WATER SERVICE ALIGNMENT.
5. THE POTABLE WATER SUPPLY FOR THESE PROPERTIES IS SUPPLIED BY METERS ON THE FENCELINE OF THE CITY CEMETERY. CONTRACTOR SHALL VERIFY THE QUANTITY OF SERVICES AND THEIR LOCATIONS BY POTHOLING. ALL METERS SHALL BE LOCATED AT THE NEW LAWN AREA OUTSIDE OF THE FENCED CEMETERY AND SERVICE LINES SHALL BE INSTALLED RECONNECTING TO THE EX INTRACT LINES. EX SERVICE CONNECTIONS SHALL BE LOCATED AND POTHOLED AT THE MAIN AND ABANDONED PER CITY STANDARDS.
6. MAINTAIN 10' CLEAR BETWEEN WATER AND SEWER PIPES. PIPE CLOSER THAN 10' TO THE EX SEWER SHALL BE DR14 FULLY RESTRAINED.
7. FINAL LOCATION OF ALL NEW FIRE HYDRANTS SHALL BE FIELD VERIFIED AND APPROVED BY CITY.
8. CENTER 20–FT DR–14 PIPE SECTION UNDER SEWER MAIN.
9. INSTALL NEW METERS IN EXISTING DRIVEWAY SLURRY SEAL APPROXIMATELY 1700–SF OF DRIVEWAY UPON COMPLETION OF WATER SERVICE INSTALLATION.



HORIZONTAL SCALE: 1"=40'–0"
VERTICAL SCALE: 1"=4'–0"



SCALE: 1"=40'

\\DASERVER\PROJECTS\PROJECT FILES\PLA-002 - PARDI WATER LINE\DRAWINGS\PLA-002 PARDI-11 P&P LINE E.DWG

20160420.100252

PARDI WAY/ BIG CUT ROAD/ SACRAMENTO STREET WATERLINE REPLACEMENT PROJECT

REV	DATE	BY	DESCRIPTION

SCALE: N/A

WARNING 0 1/2 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

DESIGNED A.J.M
DRAWN J.A.C.
CHECKED S.M. ROGERS

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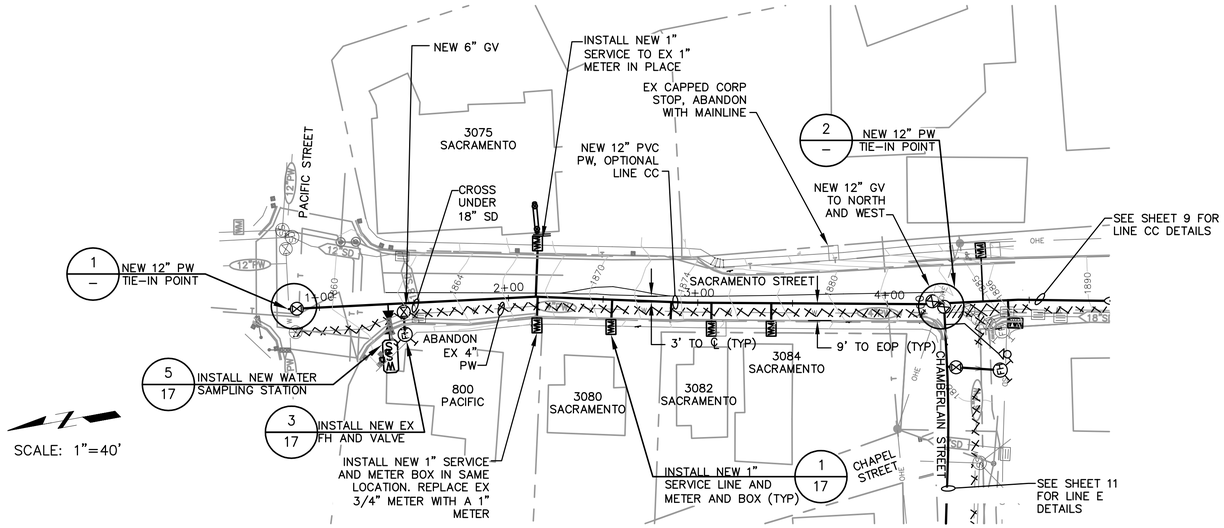
CITY OF PLACERVILLE
3101 CENTER STREET
PLACERVILLE, CA 95667
PHONE: (530) 642–5250

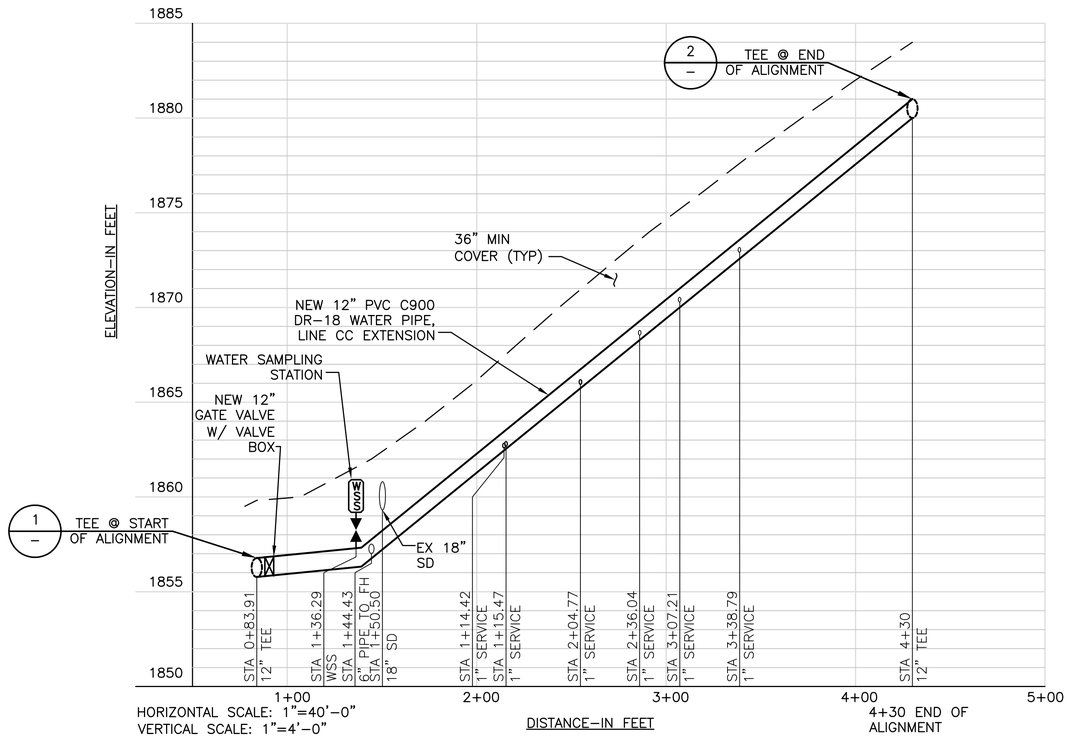
SAMA M. DOMENICHELLI 64226 Exp. 6/30/17 CIVIL STATE OF CALIFORNIA

PARDI WAY/ BIG CUT ROAD/ SACRAMENTO STREET WATERLINE REPLACEMENT PROJECT

PLAN & PROFILE - LINE E
STA 1+00 - 8+00.24

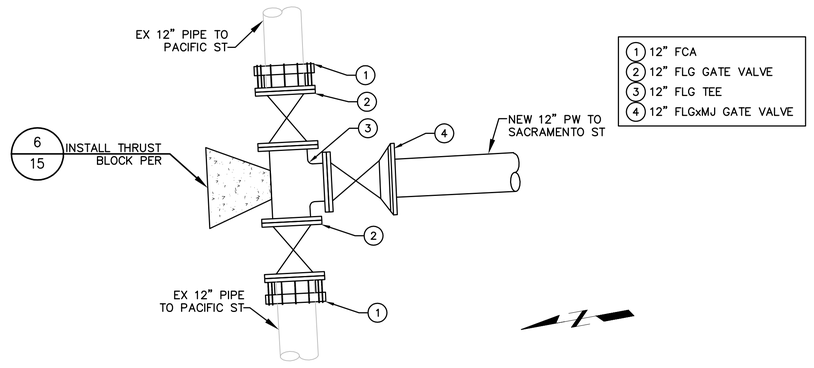
SHEET 11
11 OF 17



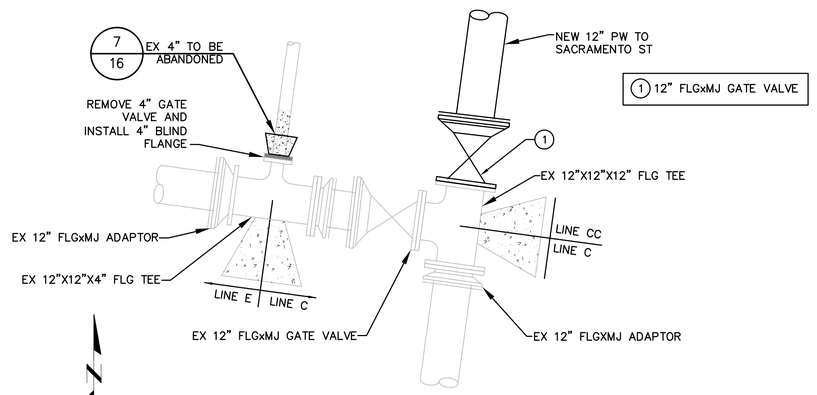


NOTES:

1. INSTALL NEW PIPING TO EX WATER METERS PER DETAIL AT ALL LOCATIONS SHOWN ON THE NEW WATER SERVICE ALIGNMENT. (1 / 17)
2. CONTRACTOR SHALL POTHOLE UTILITY LINES TO VERIFY LOCATION AND DEPTH. NEW WATER MAIN SHALL BE INSTALLED OVER THE TOP OF EX SEWERS AND STORM DRAIN IF POSSIBLE. WATER MAIN CROSSING SHALL COMPLY WITH SWRCB TITLE 22 STORM DRAIN AND SEWER SEPARATION REQUIREMENTS, ANY DEVIATION MUST BE APPROVED BY SWRCB.
3. CONTRACTOR SHALL 2" MAT GRIND AND PLACE 2" HMA PAVEMENT OVER THE TRENCH TO ROAD CENTERLINE (INCLUDING CENTERLINE STRIP) WORK SHALL BE IN ACCORDANCE WITH THE CALTRANS ENCROACHMENT PERMIT AND STANDARD SPECIFICATIONS.



DETAIL 1 / – SCALE: 1/2"=1'-0"



DETAIL 2 / – SCALE: 1/2"=1'-0"

REV	DATE	BY	DESCRIPTION

SCALE: N/A

WARNING 0 1/2 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

DESIGNED A.J.M
DRAWN J.A.C.
CHECKED S.M. ROGERS

DOMENICHELLI & ASSOCIATES
1101 Investment Blvd. Suite 115
El Dorado Hills, CA 95762
Ph: (916) 933-1997
Fax: (916) 933-4778

CITY OF PLACERVILLE
3101 CENTER STREET
PLACERVILLE, CA 95667
PHONE: (530) 642-5250

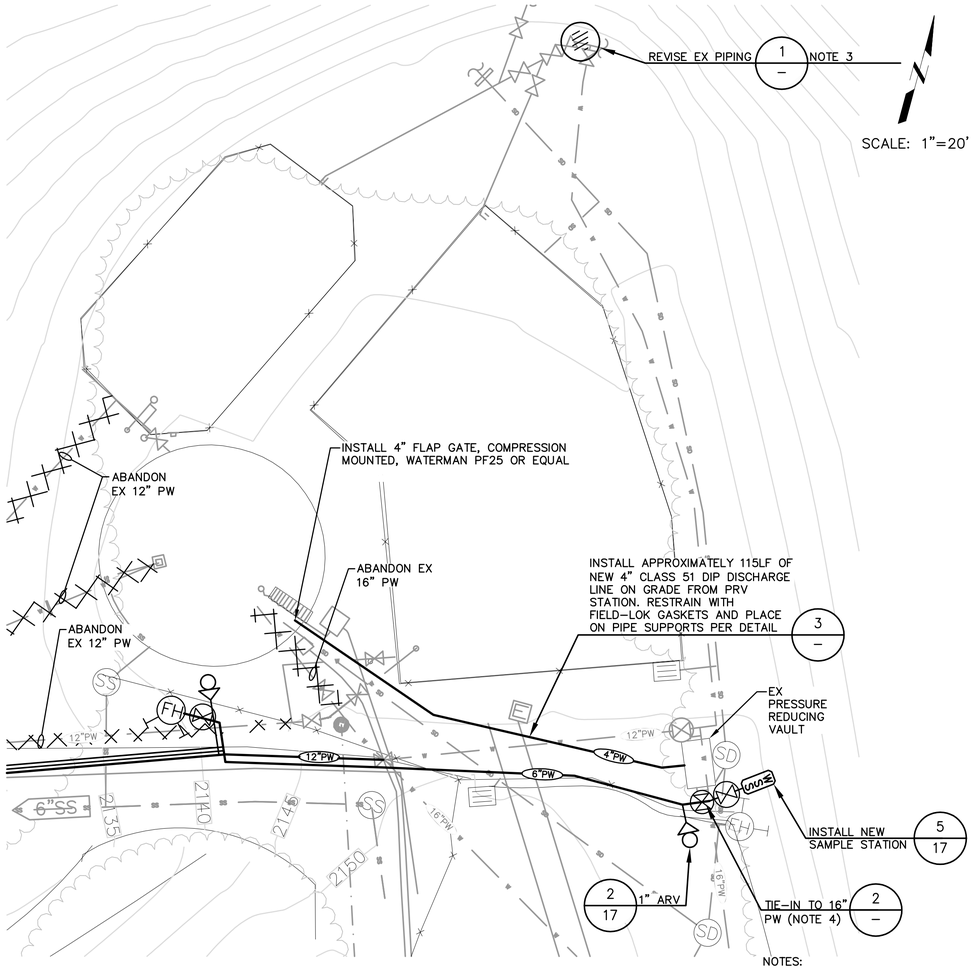
SHAUN M. MCGOWAN No. C64226 Exp. 6/30/17 CIVIL STATE OF CALIFORNIA

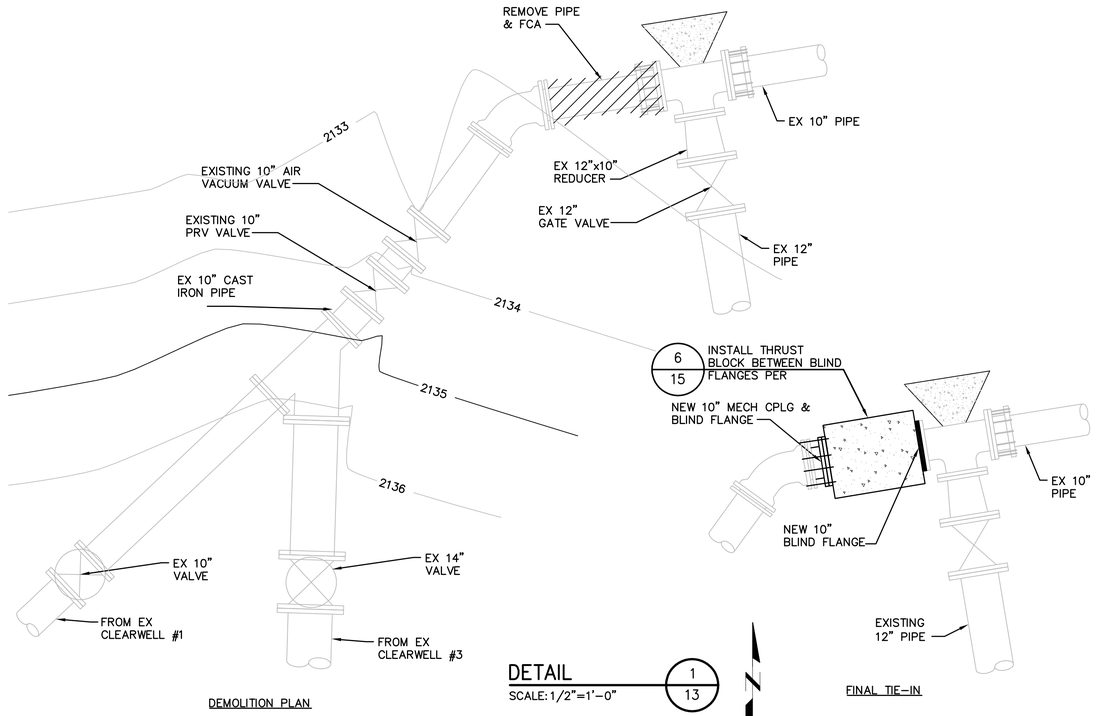
PARDI WAY/ BIG CUT ROAD/ SACRAMENTO STREET WATERLINE REPLACEMENT PROJECT
PLAN & PROFILE - OPTIONAL LINE CC EXTENSION
STA 0+83.91 - 4+30

SHEET 12
12 OF 17

\\DASERVER\PROJECTS\PROJECT FILES\PLA-002 - PARDI WATER LINE\DRAWINGS\PLA-002 PARDI-12 P&P LINE CC EXTENSION.DWG
20160420.100437

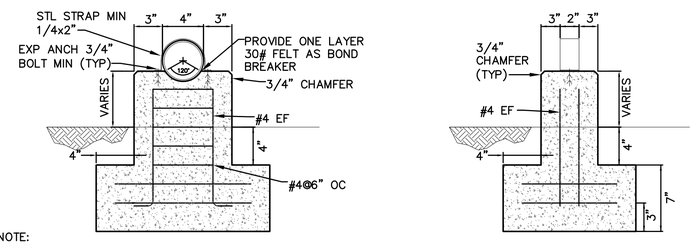
PARDI WAY/ BIG CUT ROAD/ SACRAMENTO STREET WATERLINE REPLACEMENT PROJECT





NOTES:

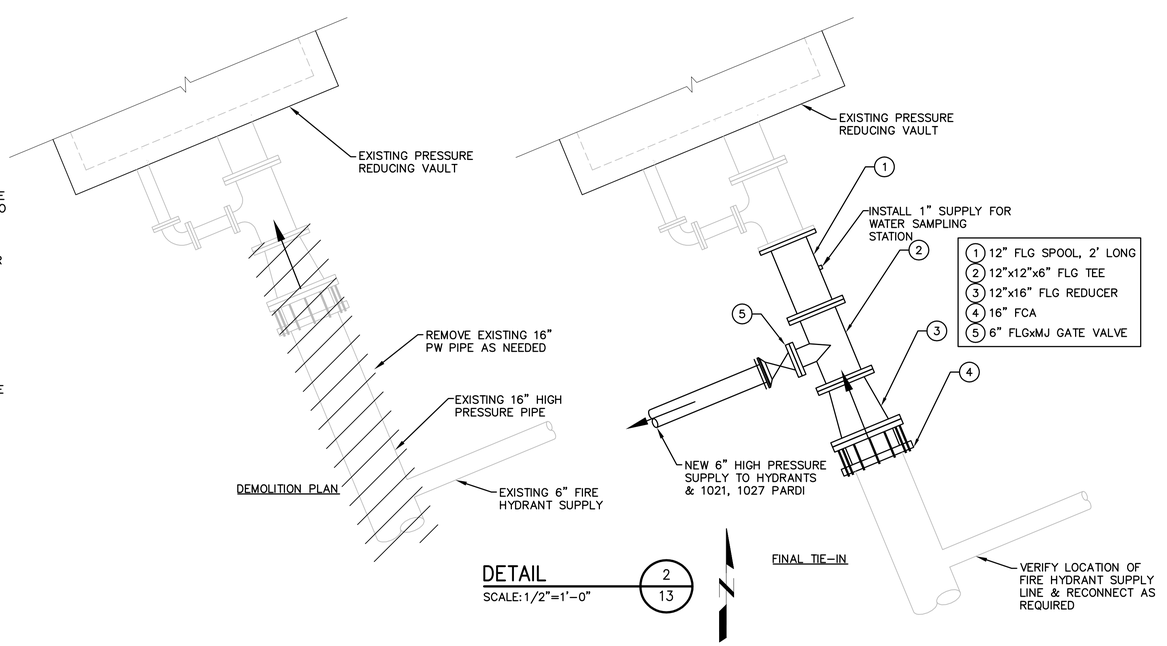
1. THE DISCHARGE CONFIGURATION OF THE PRV PRESSURE RELIEF VALVE IS UNKNOWN. CONTRACTOR RESPONSIBLE FOR MAKING CONNECTION TO THE PRESSURE RELIEF VALVE. CONTRACTOR SHALL INSTALL A FLOTECT V4-2-U-1-1-1 OR APPROVED EQUAL WITH THREAD CONNECTION TO TOP OF PIPE. DISCHARGE PIPE SHALL BE 4" CLASS 51 DIP WITH PF25 COMPRESSION MOUNTED CAST IRON FLAP GATE OR APPROVED EQUAL.
2. TERRAIN OF THE 4" DISCHARGE PIPE IS UNEVEN AND OBSCURED BY DEBRIS AND OBSTACLES. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ANY OBSTRUCTIONS AND ESTABLISHING AN ALIGNMENT THAT WILL ACCOMMODATE THE ABOVE GROUND DISCHARGE PIPE.
3. THIS IS IN A STEEP PRECARIOUS LOCATION WITH LIMITED ACCESS.
4. NEW 6" PW, CONNECT TO THE 16" PIPE ON THE HIGH PRESSURE SIDE OF THE PRV, ADD A GATE VALVE AND VALVE BOX ON THE 6" PIPE NEAR THE CONNECTION.



NOTE:

1. INSTALL TWO SUPPORTS PER EACH SEGMENT OF PIPE
2. THE HEIGHT OF THE PIPE SUPPORT MAY VARY. CONTRACTOR TO DETERMINE APPROXIMATE HEIGHT AND REINFORCEMENT.
3. STRUCTURAL CONCRETE SHALL HAVE A 3000PSI COMPRESSIVE STRENGTH MINIMUM AND BE IN COMPLIANCE WITH STANDARD SPECIFICATIONS SECTION 51.

DETAIL 3/12
SCALE: NTS



DETAIL 2/13
SCALE: 1/2"=1'-0"

REV	DATE	BY	DESCRIPTION

SCALE: N/A

WARNING 0 1/2 1
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DRAWN J.A.C.
CHECKED S.M. ROGERS

DOMENICHELLI & ASSOCIATES
1101 Investment Blvd. Suite 115
El Dorado Hills, CA 95762
Ph: (916) 933-1997
Fax: (916) 933-4778

CITY OF PLACERVILLE
3101 CENTER STREET
PLACERVILLE, CA 95667
PHONE: (530) 642-5250

REGISTERED PROFESSIONAL ENGINEER SARA M. ROGERS 64226 Exp. 6/30/17 CIVIL STATE OF CALIFORNIA

PARDI WAY/ BIG CUT ROAD/ SACRAMENTO STREET WATERLINE REPLACEMENT PROJECT

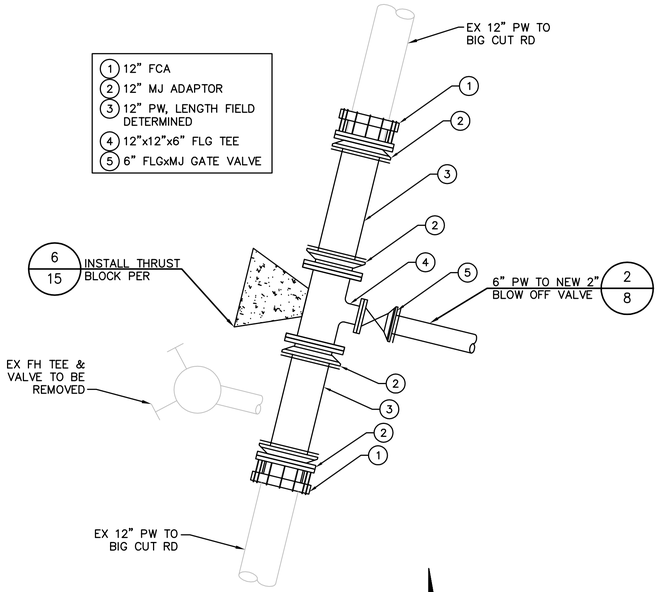
4-INCH PRV DRAIN PIPE

SHEET 13
13 OF 17

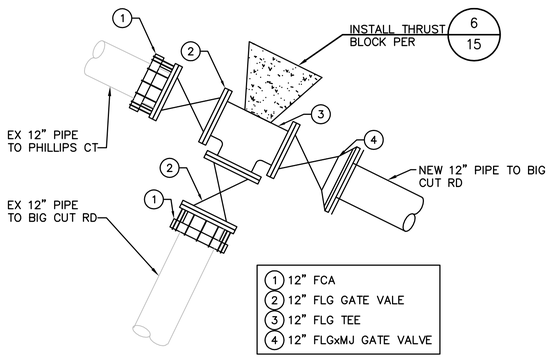
\\DASERVER\PROJECTS\PROJECT FILES\PLA-002 - PARDI WATER LINE\DRAWINGS\PLA-002 PARDI-13 4-INCH PRV DRAIN PIPE.DWG

20160328.171822

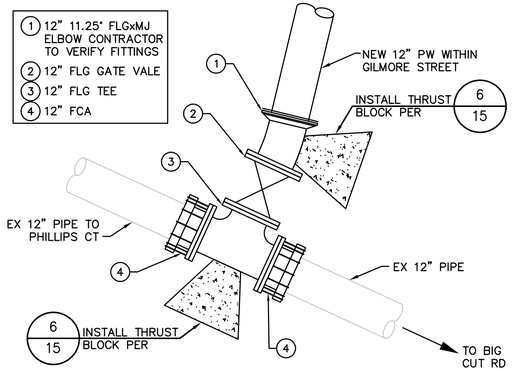
PARDI WAY/ BIG CUT ROAD/ SACRAMENTO STREET WATERLINE REPLACEMENT PROJECT



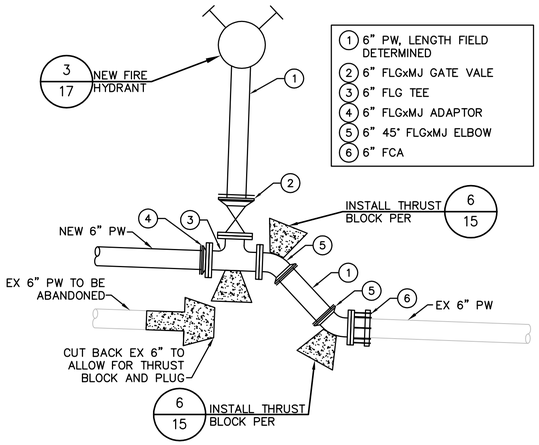
DETAIL 1/8
SCALE: 1/2"=1'-0"



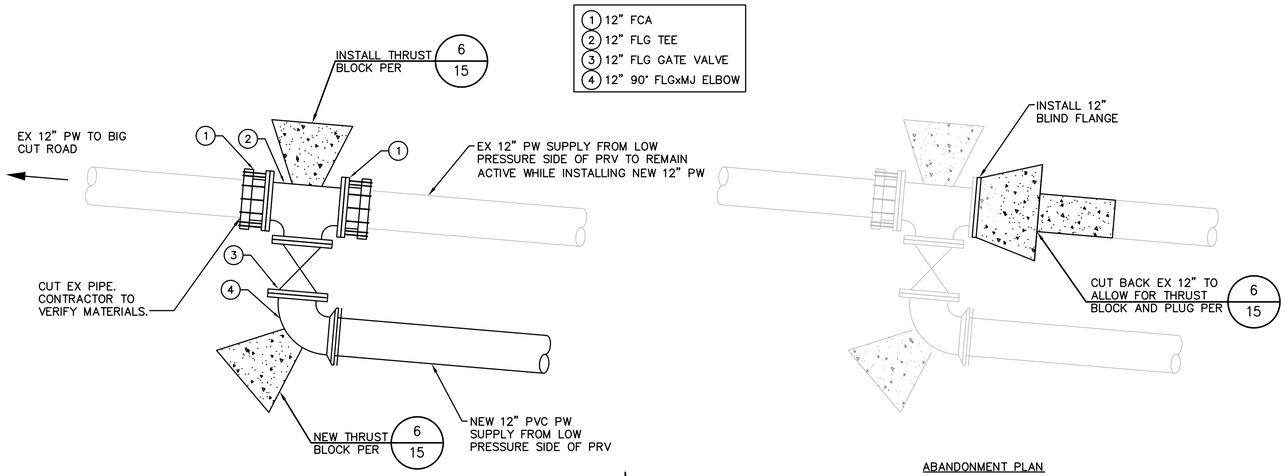
DETAIL 3/8
SCALE: 1/2"=1'-0"



DETAIL 4/9
SCALE: 1/2"=1'-0"



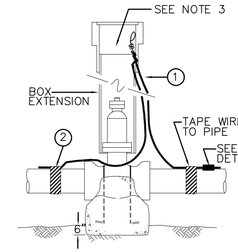
DETAIL 5/9
SCALE: 1/2"=1'-0"



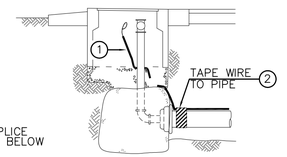
FINAL TIE-IN

ABANDONMENT PLAN

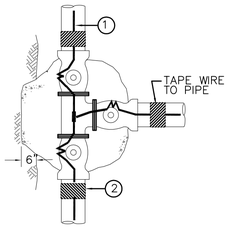
DETAIL 2/7
SCALE: 1/2"=1'-0"



VALVE BOX ELEVATION



END-OF-LINE BLOW-OFF ELEVATION



TEE W/3 GATE VALVES – PLAN

ITEM #	DESCRIPTION
1	#10 SOLID A.W.G. COPPER TRACER WIRE (DIR. BUR.) WITH THERMO-PLASTIC INSULATION. PLACE ON OUTSIDE OF RISER
2	WRAP TAPE

CONSTRUCTION NOTES

1. LOCATING WIRE SHALL BE INSTALLED WITH ALL PIPE. WIRE TO BE TAPED TO BASE OF CURB STOP.
2. LOCATE WIRE DIRECTLY ON TOP OF THE PIPE AND TAPE TO PIPE. (FOUR PLACES EVERY FULL PIPE SECTION.) WESTERN UNION SPLICE WITH GEL PACK, SOLDER OR OTHER EID APPROVED METHOD, NO ACID.
3. STRIP APPROXIMATELY 3 INCHES OF INSULATION AT THE TERMINATION OF THE WIRE IN THE VALVE OR METER BOX.
4. LEAVE 2 FEET OF TRACING WIRE AT TERMINATING ENDS.
5. INSTALL AN EXTRA VALVE BOX IF NECESSARY WHERE LOCATION WIRE IS TERMINATED AND SHOW ON THE PLANS.
6. THE CONTRACTOR SHALL TEST THE CONTINUITY OF THE FINISHED INSTALLATION.



SPLICE DETAIL

TRACER WIRE DETAIL 6/TYP
SCALE: NTS

REV	DATE	BY	DESCRIPTION

SCALE: N/A

WARNING 0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

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DRAWN J.A.C.
CHECKED S.M. ROGERS

DOMENICHELLI & ASSOCIATES
1101 Investment Blvd. Suite 115
El Dorado Hills, CA 95762
Ph: (916) 933-1997
Fax: (916) 933-4778

CITY OF PLACERVILLE
3101 CENTER STREET
PLACERVILLE, CA 95667
PHONE: (530) 642-5250

REGISTERED PROFESSIONAL ENGINEER SARA M. ROGERS 64226 Exp. 6/30/17 CIVIL STATE OF CALIFORNIA

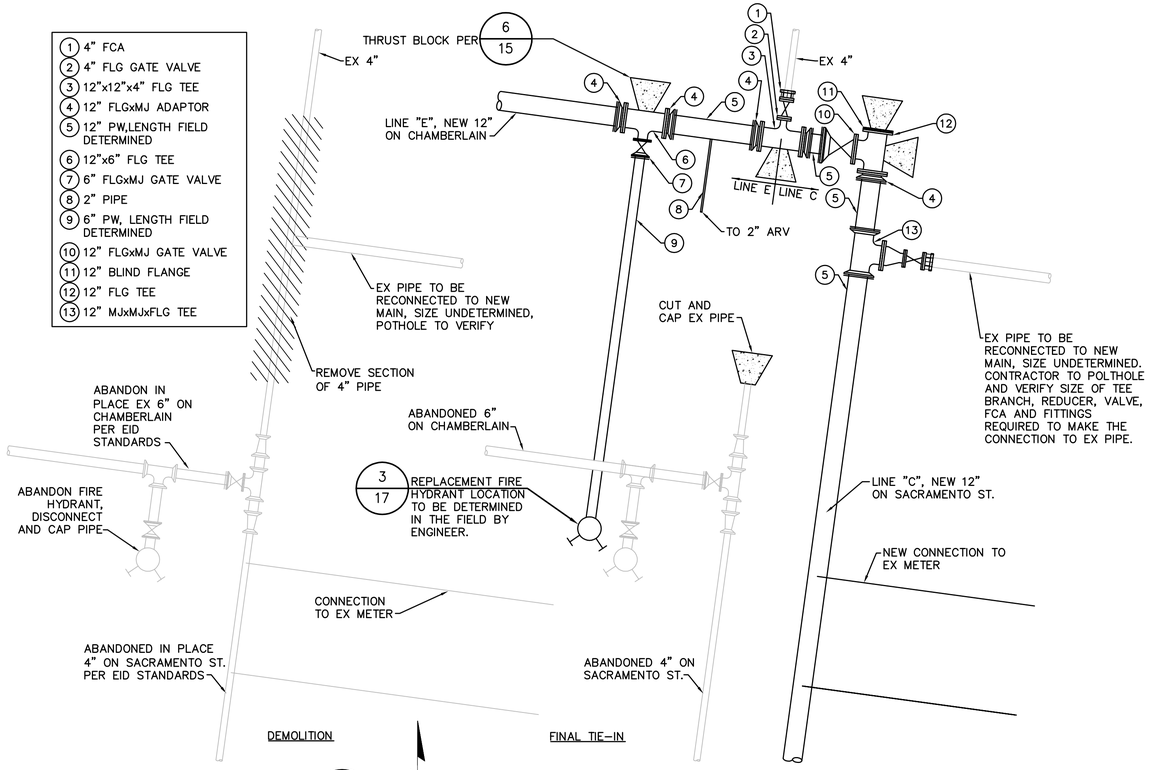
PARDI WAY/ BIG CUT ROAD/ SACRAMENTO STREET WATERLINE REPLACEMENT PROJECT

DETAILS 1

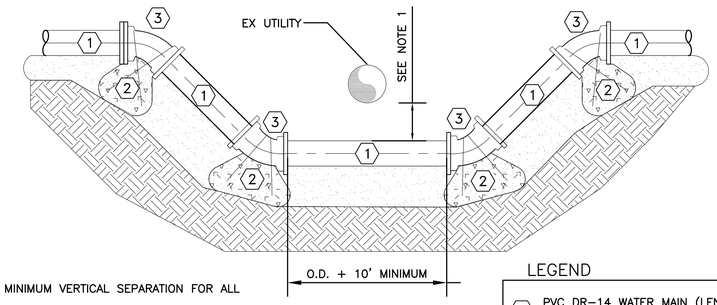
SHEET 14
14 OF 17

20160328.171944
\\DASERVER\PROJECTS\PROJECT FILES\PLA-002 - PARDI WATER LINE\DRAWINGS\PLA-002 PARDI-14 DETAILS 1.DWG

PARDI WAY/ BIG CUT ROAD/ SACRAMENTO STREET WATERLINE REPLACEMENT PROJECT



DETAIL 1/9,11
SCALE: 1/4"=1'-0"



NOTES:

1) MAINTAIN 12" MINIMUM VERTICAL SEPARATION FOR ALL UTILITIES.

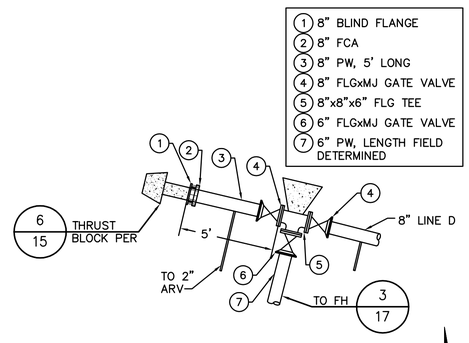
2) CONTRACTOR TO PROTECT AND PREVENT DAMAGING ALL EXISTING UTILITIES BEING CROSSED. DAMAGED UTILITIES SHALL BE REPAIRED AT CONTRACTOR EXPENSE.

WATER PIPELINE UTILITY CROSSING

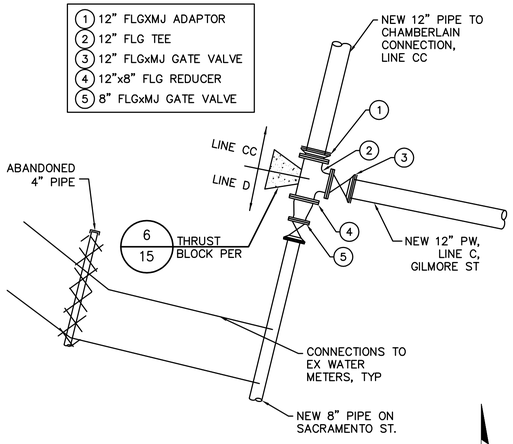
LEGEND

1. PVC DR-14 WATER MAIN (LENGTH FIELD DETERMINE). DIP WITH HOT DIP BITUMINOUS COATING IF APPROVED BY CITY ENGINEER.
2. USE MEGA LUG RESTRAINTS FOR ALL MJ FITTINGS. THRUST BLOCK WITH 2-#5 REBAR STRAPS PER DETAIL
3. 45° MJ ELBOW W/MEGA LUG RESTRAINT

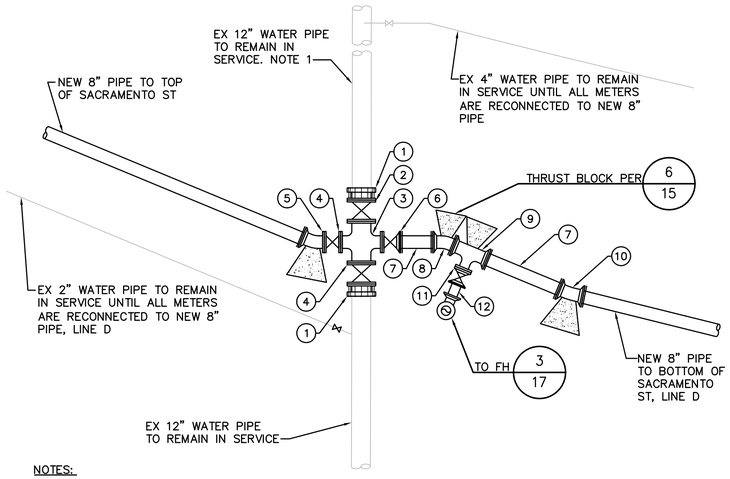
DETAIL 5/9,10,11
SCALE: NTS



DETAIL 3/10
SCALE: 1/4"=1'-0"



DETAIL 2/9,10
SCALE: 1/4"=1'-0"

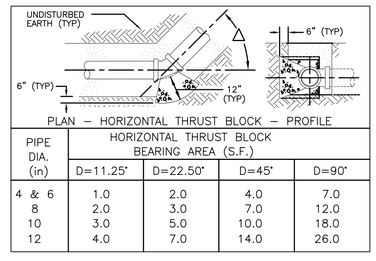


NOTES:

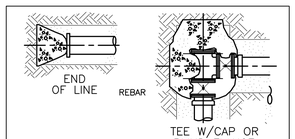
1. DO NOT PRESSURIZE THE 8" SACRAMENTO STREET PIPE UNTIL THE THRUST BLOCK IS IN PLACE AND CURED FOR AT LEAST 4 HOURS.

DETAIL 4/10
SCALE: 1/4"=1'-0"

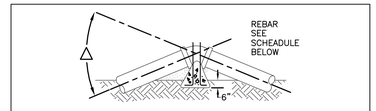
1 12"FCA
2 12" FLG GATE VALVE
3 12"x8" CROSS
4 8" FLG GATE VALVE
5 8" 22.5° FLGxMJ ELBOW
6 8" FLGxMJ GATE VALVE
7 8" PW, LENGTH FIELD DETERMINED
8 8" 22.5° MJxPE ELBOW
9 8"x8"x6" MJxMJxFLG TEE
10 8" 11.25° MJ ELBOW
11 6" FLGxMJ GATE VALVE
12 6" PW, LENGTH FIELD DETERMINED



PIPE DIA. (in)	HORIZONTAL THRUST BLOCK BEARING AREA (S.F.)			
	D=11.25°	D=22.50°	D=45°	D=90°
4 & 6	1.0	2.0	4.0	7.0
8	2.0	3.0	7.0	12.0
10	3.0	5.0	10.0	18.0
12	4.0	7.0	14.0	26.0



PIPE DIA. (in)	THRUST BLOCK BEARING AREA (S.F.)
4 & 6	5.0
8	8.0
10	13.0
12	18.0



PIPE DIA. (in)	VERTICAL THRUST BLOCK VOL. OF CONCRETE (C.Y.)			
	D=11.25°	D=22.50°	D=45°	D=90°
4 & 6	0.4	0.7	1.4	2.6
8	0.6	1.2	2.4	4.5
10	0.9	1.8	3.6	6.8
12	1.3	2.6	5.1	9.5

REBAR SIZES (VERTICAL THRUST ONLY)		
PIPE SIZE	D	REBAR
4-10	0° to 90°°	#5
12	0° to 22.5°	#5
12	45°	#7
12	90°	#8

REBAR SIZES (HORIZONTAL THRUST ONLY)	
PIPE SIZE	REBAR
UP TO 10"	#4
12"	#5

NOTES:

1. THRUST BLOCK DESIGN IS BASED ON TEST PRESSURE=200psi, SOIL BEARING PRESSURE=1500lbs/SF. INSTALLATIONS USING HIGHER PRESSURE OR LOWER SOIL BEARING PRESSURE SHALL BE ADJUSTED ACCORDINGLY, AND SUBMITTED FOR APPROVAL BY ENGINEERING DEPARTMENT.
2. THRUST BLOCKS SHALL BE CONSTRUCTED OF CALTRANS CLASS "B" CONCRETE.
3. THRUST BLOCKS SHALL BE PLACED AGAINST UNDISTURBED SOIL.
4. JOINTS, NUTS AND BOLTS SHALL BE KEPT CLEAR OF CONCRETE AND BE ABLE TO BE OPERATED WITHOUT DISTURBING THRUST BLOCK(S).
5. REBAR SHALL BE SHAPED WITH 90° BEND AT END, AND MINIMUM OF 3" CLEARANCE FROM SOIL.
6. COAT EXPOSED REBAR WITH 80 MILS OF COLD-APPLIED BITUMASTIC WATER PROOFING COMPOUND. WRAP EXTERIOR OF VALVE AND ACTUATOR WITH 8 MIL POLYETHYLENE SHEETING AND TAPE PER EID SPECIFICATION.
7. ALL REBAR SHALL BE GRADE 60 STEEL.

THRUST BLOCK DETAIL (TYP) 6/TYP
SCALE: NTS

REV	DATE	BY	DESCRIPTION

SCALE: N/A

WARNING 0 1/2 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

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DRAWN J.A.C.
CHECKED S.M. ROGERS

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Ph: (916) 933-1997
Fax: (916) 933-4778

CITY OF PLACERVILLE
3101 CENTER STREET
PLACERVILLE, CA 95667
PHONE: (530) 642-5250

MARK M. SKINNER 54226 Exp. 6/30/17 CIVIL STATE OF CALIFORNIA

PARDI WAY/ BIG CUT ROAD/ SACRAMENTO STREET WATERLINE REPLACEMENT PROJECT

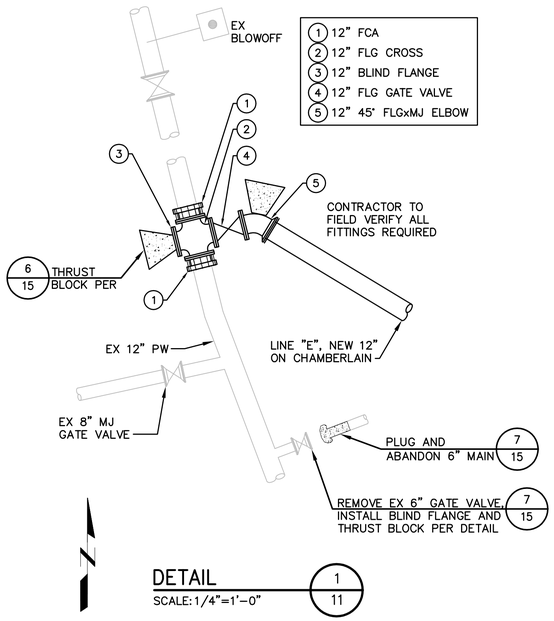
DETAILS 2

SHEET 15
15 OF 17

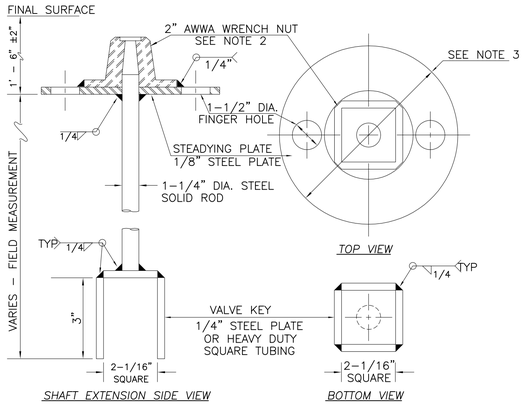
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20160328.172008

PARDI WAY/ BIG CUT ROAD/ SACRAMENTO STREET WATERLINE REPLACEMENT PROJECT

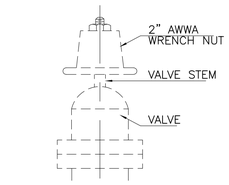


DETAIL 1/11
SCALE: 1/4"=1'-0"



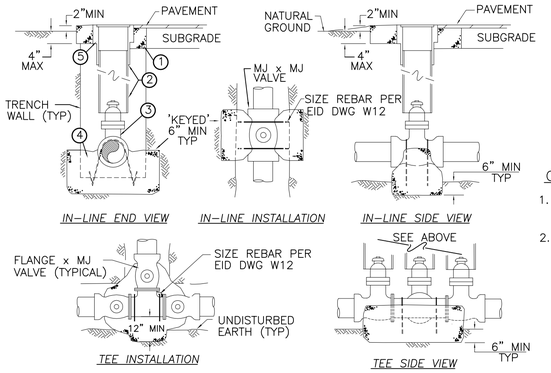
CONSTRUCTION NOTES

1. AN EXTENSION SHALL BE REQUIRED WHEN THE VALVE OPERATING NUT IS 30" OR MORE BELOW THE FINAL SURFACE OR AS SPECIFIED.
2. WRENCH NUT SHALL BE AS SPECIFIED IN AWWA C500. PEEN TOP OF SHAFT TO SECURE THE NUT, OR ATTACH BY WELDING.
3. STEADYING PLATE DIAMETER SHALL BE EQUAL TO THE INSIDE DIAMTER OF THE VALVE BOX EXTENSION MINUS 3/4".
4. SHAFT EXTENTSION SHALL BE PERPENDICULAR TO PIPE AND CONTRACTOR MUST DEMONSTRATE FREE MOVEMENT OF EXTENSION ASSEMBLY PRIOR TO SIGN-OFF.
5. TOP OF SHAFT EXTENSION MUST BE BETWEEN 18"-30" FROM THE TOP OF 8" RISER PIPE AND ALLOW FOR PROPER INSTALLATION OF DEBRIS CAP IN 8" RISER.



OPERATING NUT & VALVE KEY ASSEMBLIES AT VALVE

EXTENSION INSTALLATION VALVE OPERATING SHAFT 2/10
SCALE: NTS

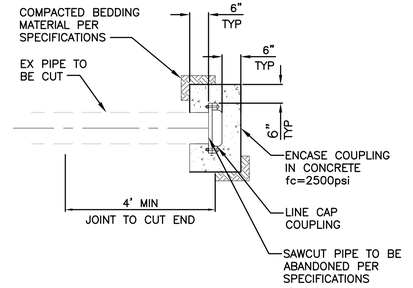


ITEM #	DESCRIPTION
1	6"X6" CONCRETE COLLAR WITH 2" HMA OVERLAY IF WITHIN PAVED AREA.
2	8" PVC-C900 PIPE RISER ONE PIECE
3	GATE VALVE
4	G5 CONCRETE VALVE BOX WITH IRON LID

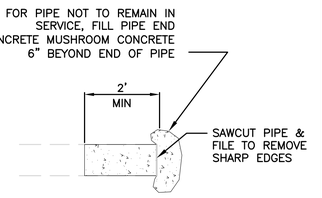
CONSTRUCTION NOTES

1. CENTER AND PLUM RISER OVER VALVE NUT.
2. SHAFT EXTENSION REQUIRED WHERE TOP OF NUT IS MORE THAN 3' BELOW FINISH GROUND. SHAFT SHALL BE 1-1/4" DIA. WITH A SELF-CENTERING DEVICE. SEE EID DWG W14.

GATE VALVE INSTALLATION 5/10
SCALE: NTS

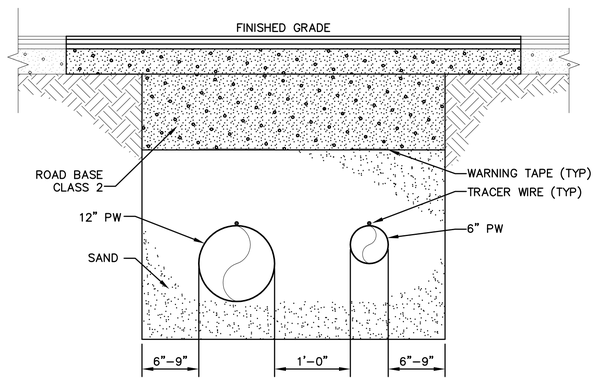


FOR PIPE TO REMAIN IN SERVICE



FOR PIPE TO BE ABANDONED

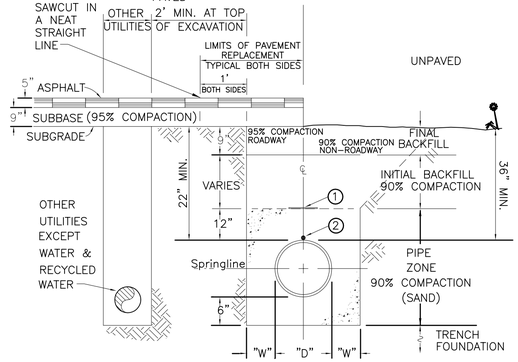
TYPICAL PIPE CAPPING DETAILS 7/11
SCALE: NTS



NOTES:

1. SEE DETAIL 4/- FOR ALL OTHER DIMENSIONING, MATERIALS AND CLEARANCES.

SECTION 3/7
SCALE: NTS



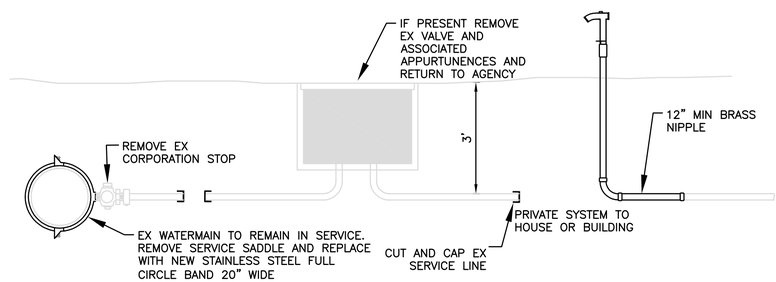
CONSTRUCTION NOTES

1. PERMITS SHALL BE REQUIRED FOR ANY EXCAVATION OVER 5 FEET IN DEPTH, INTO WHICH A PERSON IS REQUIRED TO DESCEND OR ANY EXCAVATION LESS THAN 5 FEET IN DEPTH IN SOILS WHERE HAZARDOUS GROUND MOVEMENT MAY BE EXPECTED AND INTO WHICH A PERSON IS REQUIRED TO DESCEND.
2. PIPE TO BE LAID WITH LABEL UP ON EACH JOINT.
3. ROAD REPAIR SHALL CONFORM TO CITY AND CALTRANS PERMIT CONDITIONS AND SPECIFICATIONS.
4. COMPACTION IS RELATIVE TO ASTM 1557.
5. ENCROACHMENT PERMIT CONDITIONS TAKE PRECEDENCE WHEN MORE RESTRICTIVE.
6. SEWER UTILITIES ARE NOT PERMITTED WITHIN 10' HORIZONTALLY AND/OR 1' VERTICALLY OF WATER FACILITIES WITHOUT WRITTEN AUTHORIZATION.
7. RECYCLED WATER AND STORM DRAIN UTILITIES ARE NOT PERMITTED WITHIN 4' HORIZONTALLY AND/OR 1' VERTICALLY OF WATER FACILITIES.
8. PIPE SIZES BELOW 6" REQUIRE A MINIMUM TRENCH CLEARANCE OF 6" ON EACH SIDE OF PIPE.
9. PIPE ZONE EXCAVATION LIMITS ARE NOT TO BE EXCEEDED. PIPE ZONE TRENCH WALLS ARE TO BE VERTICAL, SEE EID STANDARD DRAWING W10A FOR UNSTABLE CONDITIONS.
10. RECYCLED WATER AND STORM DRAIN UTILITIES ARE NOT PERMITTED WITHIN 4' HORIZONTALLY AND/OR 1' VERTICALLY OF WATER FACILITIES.
11. INSTALL #10 TRACER WIRE ON ALL APPURTENANCES. INSTALL A PULL BOX AT EVERY 1000 FEET INTERVAL OF TRACING WIRE ALONG THE MAIN PIPE.
12. ROAD REPAIR AND PERMANENT PAVING SHALL MATCH EX SECTIONS. PUBLIC ROAD AC SECTION SHALL BE A MINIMUM OF 5" THICK OVER 9" OF AB.
13. ASSUME UP TO 10" OF EX AC PAVEMENT FOR CUTTING.
14. PIPE ZONE BACKFILL SHALL BE SAND. TRENCH SECTION BACKFILL SHALL BE CLASS 2 AB. WHERE UNDERMINING OR CRAGS OCCUR IN TRENCH WALL, CONTRACTOR WILL COLLAPSE OR FILL THESE AREAS WITH CLSM OR EQUIVALENT. FINAL BACKFILL IN UNPAVED AREAS SHALL BE 12" NATIVE SOIL.

TRENCH WIDTH TABLE		
PIPE SIZE	W (min.)	W (max.)
6"	18"	24"
8"	20"	26"
12"	24"	30"

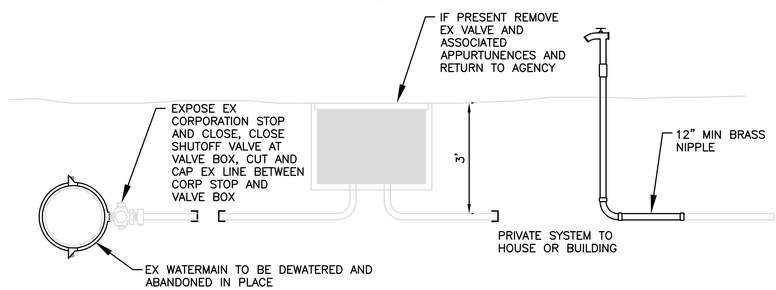
WATER TRENCH SECTION 4/7,8,9,10,11,12
SCALE: NTS

ITEM #	DESCRIPTION
1	12" WIDE BLUE NON-METALLIC WARNING TAPED MARKED "WATER"
2	TRACER WIRE, #10 AWG. DIR. BUR. PER DETAIL 6/14



EXISITING SERVICE ABANDONMENT TYPE 1 (EX MAINLINE TO REMAIN IN SERVICE)

DETAIL 5/6
SCALE: NTS



EX SERVICE ABANDONMENT TYPE 2 (EX MAINLINE TO BE ABANDONED IN PLACE)

DETAIL 6/6
SCALE: NTS

REV	DATE	BY	DESCRIPTION

SCALE: N/A

WARNING 0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

DESIGNED A.J.M
DRAWN J.A.C.
CHECKED S.M. ROGERS

DOMENICHELLI & ASSOCIATES
1101 Investment Blvd. Suite 115
El Dorado Hills, CA 95762
Ph: (916) 933-1997
Fax: (916) 933-4778

CITY OF PLACERVILLE
3101 CENTER STREET
PLACERVILLE, CA 95667
PHONE: (530) 642-5250

REGISTERED PROFESSIONAL ENGINEER SARA M. SCHNEIDER No. C74226 Exp. 6/30/17 CIVIL STATE OF CALIFORNIA

PARDI WAY/ BIG CUT ROAD/ SACRAMENTO STREET WATERLINE REPLACEMENT PROJECT

DETAILS 3

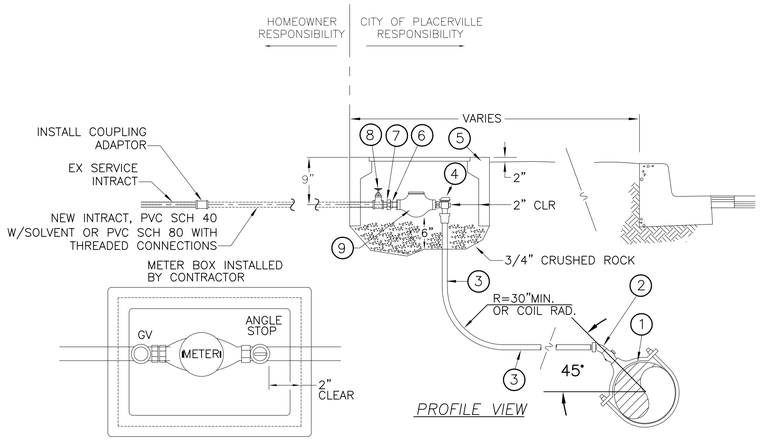
SHEET 16

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PARDI WAY/ BIG CUT ROAD/ SACRAMENTO STREET WATERLINE REPLACEMENT PROJECT



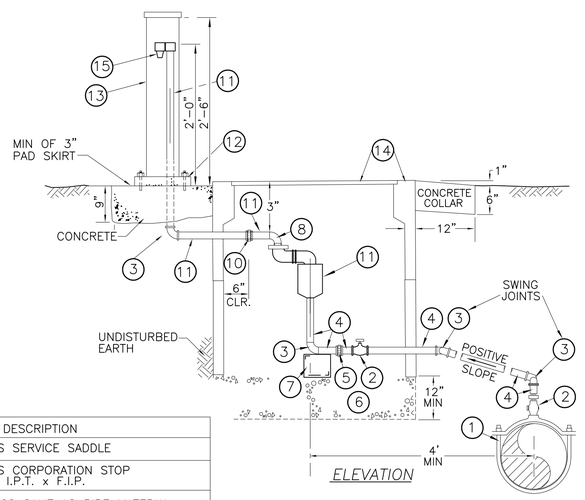
ITEM #	DESCRIPTION
1	BRONZE SERVICE SADDLE, 1" AWWA I.P.T.
2	1" CORPORATION STOP, AWWA I.P.T.x F.L.P. W/45° STREET ELBOW, COMPRESSION FITTING
3	1" BLUE P.E. TUBING, CTS CONTINUOUS WITH TRACER WIRE
4	1" ANGLE METER STOP, METER CPLG NUT x STAB TYPE END
5	B16 CONCRETE METER BOX W/ IRON PORTED LID
6	METER COUPLING
7	BRASS NIPPLE CLOSE
8	BRASS GATE VALVE
9	SENSUS SRII METER (ALL BRONZE SEALED–REGISTER, POSITIVE DISPLACEMENT TYPE WITH MAGNETIC DRIVE WITH STRAINER.

CONSTRUCTION NOTES

1. SERVICE SADDLE SHALL NOT BE INSTALLED WITHIN 36" OF VALVE, JOINT OR FITTING.
2. SET TOP OF METER BOX FLUSH WITH SIDEWALK OR AS SHOWN.
3. ALL TAPS SHALL BE MADE WITH MACHINE GUIDE OR PILOT TAP.
4. THE WATER SERVICE SHALL EXTEND PERPENDICULAR TO THE CENTERLINE OF THE STREET FROM THE WATER MAIN TO THE METER STOP.
5. P.E. TUBING SHALL BE CONTINUOUS WITH TRACER WIRE
6. ALL FITTINGS SHALL BE BRONZE.
7. REFER TO EID STANDARD DWG W21A FOR CUT/FILL SLOPES

1" SERVICE & METER BOX INSTALLATION FOR 1" METERS

SCALE: NTS — 1 TYP



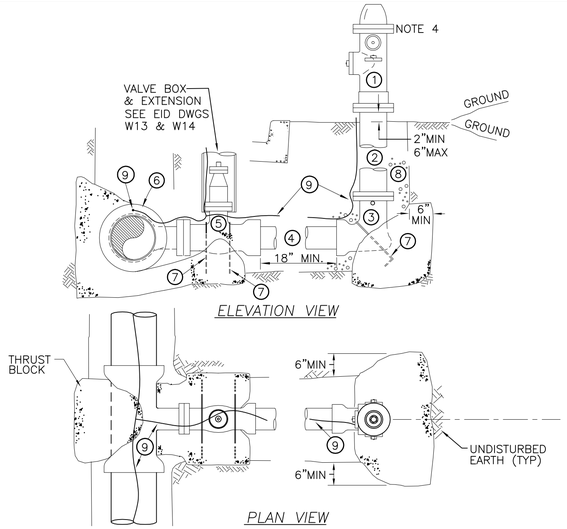
ITEM #	DESCRIPTION
1	BRASS SERVICE SADDLE
2	BRASS CORPORATION STOP AWWA I.P.T. x F.I.P.
3	FITTINGS SAME AS PIPE MATERIAL
4	SCH. 40 BRASS, DOUBLE WRAPPED WITH PVC TAPE
5	BRASS UNION
6	3/4" CLEAN DRAIN ROCK
7	SUPPORT BLOCK, BRICK
8	STREET ELBOW
9	COMBINATION AIR VALVE UNLESS OTHERWISE SPECIFIED ON PLANS
10	UNION PVC
11	PVC SCH. 80
12	ENCLOSURE ANCHORED IN CONC. W/4 HOLLOW BOLTS
13	PLACER WATER WORKS MODEL PM/AV32M ENCLOSURE – BLUE
14	CONCRETE BOX W/ STEEL LID, SEE NOTE 6
15	VENT W/ 20–MESH S.S. SCREEN

CONSTRUCTION NOTES

1. SIZE OF PIPING SHALL MATCH SIZE OF AIR VALVE.
2. ENGINEER TO SPECIFY TYPE & SIZE OF VALVE.
3. AIR VALVES LARGER THAN 2" SHALL BE BY SPECIAL DESIGN.
4. AIR VALVE SHALL BE PLACED OUTSIDE OF TRAFFIC AREAS.
5. CENTER VALVE IN LONGITUDINAL DIRECTION IN BOX.
6. CHRISTY B36 FOR 1" ARV, B40 FOR 2" ARV.
7. SERVICE SADDLE SHALL NOT BE INSTALLED WITHIN 36" OF VALVE, JOINT OR FITTING

1" & 2" AIR VALVE ASSEMBLY

SCALE: NTS — 2 TYP



ITEM #	DESCRIPTION
1	FIRE HYDRANT BODY
2	FIRE HYDRANT BURY
3	HYDRANT SHOE, FLANGE OR MJ CONNECTION
4	6" PIPE, D.I. OR P.V.C. DR–14
5	6" GATE VALVE, FL x MJ

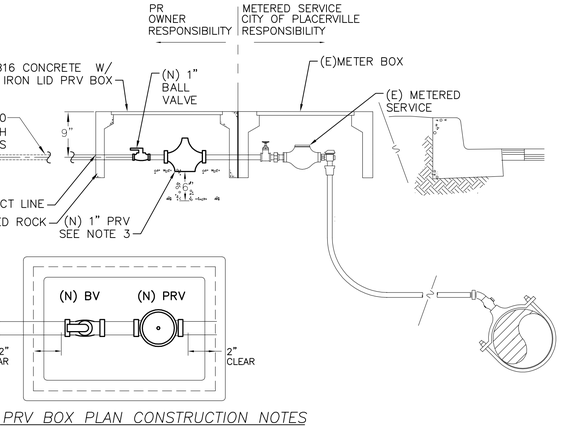
ITEM #	DESCRIPTION
6	TEE, MJ x MJ x FL
7	No. 4 REBAR
8	3/4" MINUS DRAIN ROCK AS DIRECTED BY EID
9	#10 TRACER WIRE

CONSTRUCTION NOTES

1. USE TAPPING SLEEVE AND VALVE ON EXISTING MAINS 8" AND LARGER.
2. INSTALL GUARD POSTS AS DIRECTED.
3. REFER TO EID STANDARD DWG W18 FOR FIRE HYDRANT LOCATIONS.
4. FIRE HYDRANT SHALL BE PAINTED "FIRE ENGINE RED". SUBMIT COLOR SAMPLE TO CITY FOR APPROVAL.
5. INSTALL BLUE REFLECTOR PER LOCAL FIRE DEPARTMENT STANDARDS.

TYPICAL FIRE HYDRANT INSTALLATION

SCALE: NTS — 3 TYP

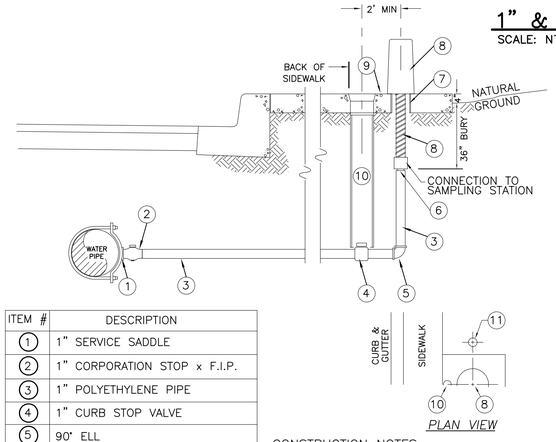


PRV BOX PLAN CONSTRUCTION NOTES

1. SET TOP OF PRV BOX FLUSH WITH EXISTING METER BOX OR AS SHOWN.
2. ALL FITTINGS SHALL BE BRONZE
3. 1" PRESSURE REDUCING VALVE TO BE CLA–VAL 990 OR APPROVED EQUAL.

INDIVIDUAL PRV INSTALLATION

SCALE: NTS — 4 TYP



ITEM #	DESCRIPTION
1	1" SERVICE SADDLE
2	1" CORPORATION STOP x F.I.P.
3	1" POLYETHYLENE PIPE
4	1" CURB STOP VALVE
5	90° ELL
6	ADAPTOR, INSULATED
7	3" PVC SLEEVE
8	ECLIPSE No. 88 SAMPLING STATION, OR APPROVED EQUAL SEE NOTE 2, BRASS ONLY
9	18"x18"x6" CONCRETE PAD
10	VALVE–BOX W/ EXTENSIONS AS REQUIRED.
11	MARKER POST PER EID DWG W28 EACH SIDE, WHEN REQUIRED

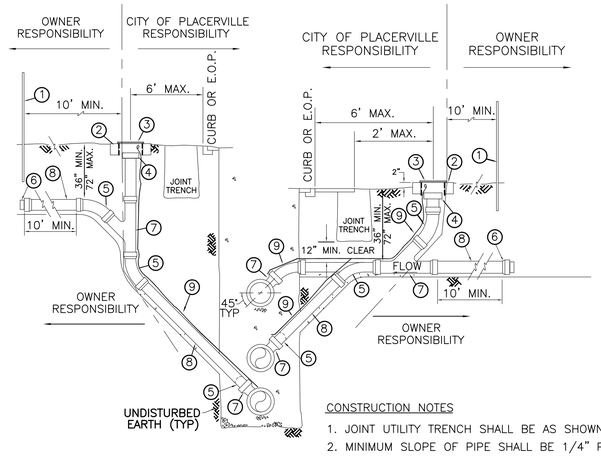
CONSTRUCTION NOTES

1. CONCRETE PAD SHALL BE PLACED ABOVE GRADE IN ALL CASES.
2. BRASS PIPE OF SAMPLING STATION SHALL BE DOUBLE WRAPPED WITH PVC TAPE (10 MIL. MIN).
3. SERVICE SADDLE SHALL NOT BE INSTALLED WITHIN 36" OF VALVE, JOINT OR FITTING.

SAMPLE STATION

SCALE: NTS — 5 TYP

ITEM #	DESCRIPTION
1	LOCATION POST – GREEN METAL TEE POST IN UNDEVELOPED AREAS
2	4"x4" CONCRETE PAD, MAXIMUM
3	8" I.D. G5 CONCRETE BOX W/IRON LID MARKED SEWER
4	LOOSE CAP (AFTER TESTING) GEMCO OR APPROVED EQUAL
5	LONG–RADIUS SWEEP
6	PLUG OR CAP
7	WYE, MINIMUM 4"
8	PVC PIPE, 4" MIN. DIA.
9	TRACING WIRE



CONSTRUCTION NOTES

1. JOINT UTILITY TRENCH SHALL BE AS SHOWN ON PLANS.
2. MINIMUM SLOPE OF PIPE SHALL BE 1/4" PER FOOT.
3. A MINIMUM OF 6" OF EID APPROVED COMPACTED BEDDING MATERIAL UNDER SERVICE CONNECTIONS
4. IF CLEANOUT DOES NOT EXIST, CITY RESPONSIBILITY ENDS AT PROPERTY LINE.

SEWER SERVICE CONNECTION

SCALE: NTS — 6 TYP

REV	DATE	BY	DESCRIPTION

SCALE: N/A

WARNING 0 1/2 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

DESIGNED A.J.M
DRAWN J.A.C.
CHECKED S.M. ROGERS

DOMENICHELLI & ASSOCIATES
1101 Investment Blvd. Suite 115
El Dorado Hills, CA 95762
Ph: (916) 933–1997
Fax: (916) 933–4778

CITY OF PLACERVILLE
3101 CENTER STREET
PLACERVILLE, CA 95667
PHONE: (530) 642-5250

REGISTERED PROFESSIONAL ENGINEER SARA M. ROGERS No. 24226 Exp. 6/30/17 CIVIL STATE OF CALIFORNIA

PARDI WAY/ BIG CUT ROAD/ SACRAMENTO STREET WATERLINE REPLACEMENT PROJECT

DETAILS 4

SHEET 17

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PARDI WAY/ BIG CUT ROAD/ SACRAMENTO STREET WATERLINE REPLACEMENT PROJECT